

INNOVATIONS IN SCIENCE: THE CHALLENGES OF OUR TIME

Monograph

**VARNA FREE UNIVERSITY “CHERNORIZETS HRABAR” (BULGARIA)
CHERNIHIV NATIONAL UNIVERSITY OF TECHNOLOGY (UKRAINE)
SHEI “UNIVERSITY OF EDUCATIONAL MANAGEMENT” OF NAES OF
UKRAINE (UKRAINE)
CENTER FOR STRATEGIC INITIATIVES AND PROGRESSIVE
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The collective monograph is devoted to the actual issues concerning the modern development of education and science. In particular, the monograph examines the theoretical, applied and practical aspects of various spheres of the science, as a commitment to development in civic society.

Recommended for scholars, researchers, postgraduates and students of higher education institutions, as well as for all those interested innovative development of various fields of fundamental and applied science.

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Welcome speech of the Rector of Varna Free University "Chernorizets Hrabar", Varna, Bulgaria to the participants in the Third International Scientific and Practical Forum "Innovations in Science: Challenges of our time"

Galya Gercheva,

Rector of Varna Free University
"Chernorizets Hrabar",
DSc., Professor of Psychology,
a Master in Psychology from St.
Petersburg State University,
specialized in Finland, Great
Britain and Russia, member of the
Psychology Society and the Union
of Scientists in Bulgaria



Innovation, creativity, digitization and internationalization are turning into key concepts characterizing today's globalizing world. They permeate the essence of modern education and science because of their focus on meeting society's pursuit of development.

Science is called to take responsibility for the progress of society in all spheres of its being; one of its main obligations is related to the education of young people. The formation of knowledge, skills and competencies among young people today is a guarantee for their successful future.

For the academic community of Varna Free University "Chernorizets Hrabar", internationalization as an opportunity to bring together scholars and lecturers from different countries, such as generating new policies and approaches for enhancing the quality and efficiency of higher education as an opportunity for mobility of students and lecturers is of particular importance. For the academic community of Varna Free University "Chernorizets Hrabar", internationalization as an opportunity to bring together scholars and lecturers from different countries, such as generating new policies and approaches for enhancing the quality and efficiency of higher education as an opportunity for mobility of students and lecturers is of particular importance.

International scientific forums are a prerequisite for the exchange of scientific and educational knowledge, ideas, traditions and experience; to create professional and personal contacts contributing to future joint research initiatives and successful professional realization. So the Third International Scientific and Practical Forum "Innovations in Science: the Challenges of the Present" has become a traditional annual international scientific and cultural bridge between the universities from different countries participating in it.

On my own behalf and that of the entire academic community of Varna Free University "Chernorizets Hrabar" I welcome the participants in the forum, wishing them more and more personal and professional success!

Prof. D.Sc. Galya Gercheva

Welcoming words of the Rector of Chernihiv National University of Technology to the Forum participants

Serhiy Shkarlet,
Rector of Chernihiv National
University of Technology,
Doctor of Economics, Professor,
Honoured worker of science
and technology of Ukraine



Modern trends of education and science development require involvement of not only the best national practices, but also of the international community experience and achievements in these spheres. The formation of efficient educational and scientific system in Ukraine is one of the goals of our today's development. We believe that strengthening the scientific and educational links with international partners will contribute to this process, while sharing traditions and experience of scientific and educational activities at our universities may be mutually beneficial and result in innovative ideas of improving educational services and scientific research projects. What is more, we are speaking of building cultural bridges and destroying existing stereotypes, as universities are now the centres of internationalization, uniting people of various nations within its walls and inviting international students and colleagues to carry out its activities along with the world educational and scientific priorities, such as academic mobility, students' autonomy, interdisciplinary approach etc.

Chernihiv National University of Technology aims to bring the educational and scientific activities to a new level, introducing the successful practices of international partners according to the national priorities, building its own policy of university development. We are working to support our students in becoming qualified, skilled, promising specialists, competitive in the labour market of Ukraine, as well as in the international labour market.

The III International Scientific and Practical Forum "Innovations in science: the challenges of our time" brings together specialists in various spheres: from Law and Economics to Engineering and Medicine. I am sure this will become the ground for productive communication and ideas exchange to find the answers to the questions that our institutions are facing now in the conditions of reforms and transformative changes in the spheres of education and science. I would like to express my gratitude to all the participants and Forum partners for your involvement in this wonderful event. On behalf of the Organizing Committee of the Conference and the staff of Chernihiv National University of Technology, I wish all the participants success in the educational-scientific activity, strengthening scientific community, building personal contacts and opening new professional horizons.

Sincerely yours and best regards
Serhiy Shkarlet

Welcoming words of the Rector of State Higher Educational Institution UNIVERSITY OF EDUCATIONAL MANAGEMENT National Academy of Educational Sciences of Ukraine

MYKOLA KYRYCHENKO,
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Contest and Personnel Commission of University



The main trend in modern education is the wide-expanding implementation of the "life-long learning" educational model, that allows a person to adapt and develop their competences and professional skills in line with rapid changes in economics, technology and labor markets. Today, the consumers of educational services prefer to choose themselves when and in what way they want to study. In education, the motives of personal growth and variation learning are intensified.

The challenges facing modern education and science can not be overcome without going beyond the old educational models without breaking old stereotypes and without the development and implementation of innovative forms of education. On the one hand, the growing diversity of personal inquiries of a person, and on the other hand, the dynamics of labor market requirements, due to the acceleration of socioeconomic changes, can not be met within the existing forms of traditional education. The problem of inconsistency of the formed education system with the new needs of society and people is getting worse.

In these conditions, a new view is needed on the role and importance of education, which must meet the contemporary educational needs of society and human due to the widespread implementation of educational innovations. Today, actual and real possibility for Ukraine is the realization of modern educational models based on achievements of technical progress with the possibility to study continuously throughout life. This requires the state to support and develop the subsystems of such a model: non-formal and informal education, online education, and mixed forms of learning. At the national level, life-long learning should be defined as a full-fledged educational field with appropriate attention to quality control and quality assurance in recognition of the various forms of education.

In this context, for more than three consecutive years, representatives of the scientific and educational elite of Ukraine and the member states of the European Union are going to the Varna Free University to discuss the issue of introducing innovations in science and education.

The result of such Forums is a collective monograph, which had been prepared by representatives from Ukraine, Georgia, Slovakia, Bulgaria, Poland and the United States of America. In the process of preparing a collective monograph, the scientists conducted a comprehensive analysis of the modern development of the

education system, life-long learning, management education, analyzes the impact of science and education on various branches of the economy, and determines the ways of developing education and science.

The proposed collective monograph is a joint international work of scholars that will be useful to anyone who is interested in innovation, because modern science and education should be for life - this is the slogan of the civilized world. Moreover, all knowledge embodied in a person should work to solve the problems that it faces in the modern information society of the globalized world.

Sincerely yours and best regards
Mykola Kyrychenko

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PART I
**EDUCATIONAL,
PHILOLOGICAL AND
PSYCHOLOGICAL
SCIENCES**

*Innovations in Science: the Challenges of
Our Time*

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Challenges of the Fourth Industrial Revolution to Higher Education

I follow with interest all of the topics of discussion concerning the higher education in Bulgaria. Even though they are late, they provide valuable insights into the state and problems within the system. If there is a lack of something that I find in those topics, it is the view towards the future and the vision for self-academic behavior in the realities and challenges of this complex period, marked with the consequences of the affected on a global scale and multiplied crisis – financial, economic, demographic and international relations crisis. This highlights a number of factors and risks that have an impact on both the growth trends of higher education system and its geopolitical specific features.

The upcoming period coincides with the start of the Fourth Industrial Revolution, which in turn generates a dynamic process of revolutionary changes in the organization of public production and business models. A new educational, scientific and innovative ecosystem in the process of development is expected to meet the challenges of Industry 4.0 and Big Data / “skills revolution”. The EU’s new vision for science and education is focused on the transition from the transfer of knowledge to open science and open innovation, the creation of a singular digital space and digital hub networks. This undoubtedly means new factors and indicators for competitiveness of universities, which become priorities of their strategic development.

I will save the widely commented information about the state and trends of the different elements of the environment – geopolitics, economics, social aspects, etc. I will try to emphasize their consideration as a context of the higher education system itself and its factor-determined trends. We are talking about years of accumulated crisis situations in key spheres of society with which higher education and science are in organic interaction.

The consequences of the demographic crisis are, of course, the first.

Like the rest of Europe, the last two decades in Bulgaria are characterized by a decline in birth rates and an aging population. There is a significant drop in the candidate student age, for which the period 2007-2017 exceeds 40%. This dynamics is reinforced by the emigration process observed throughout the Eastern European Region. It is expected that the number of potential candidate students will stabilize in 2016-2017 and will register a slight growth after 2018, but will remain within the range of 60-65 annually for the period of 2018-2023, which is significantly below the capacity of the system.

In the coming years labor supply will continue to be predetermined by these negative demographic trends. In the medium term, the tendency to

reduce the relative share of the working-age population, the leak of youth and highly skilled labor will remain sustainable. The problem is not only the troublesome reduction in young Bulgarians who work in their home country, but also the widespread demotivation among the young generation for employment in important spheres of the country's economy. The discrepancy between the personnel trained in the higher education system and the demand for labor is neither a one-sided, nor an elementary problem. It is the result of a number of serious labor market disproportions.

In the period of the financial and economic crisis, the configuration and structure of the labor market in Bulgaria changed in an extremely unfavorable direction. On one hand, there is a diminishing decline in business activity in promising future sectors of the real economy, and on the other hand, most SMEs, which dominate the Bulgarian economy, do not have a high-tech profile and do not seek young specialists with academic education. A considerable share of the jobs in the crisis of Bulgarian labor market are predominantly of low quality and highly undervalued pay. Therefore, persistent internal balances appeared in the national and regional labor markets. From this, the stated public need for specialists with higher education has become equally inaccurate and shortsighted. Cyclical unemployment has become a sustainable structural phenomenon, the overcoming of which requires special efforts and technological time for change. The length of stay in the labor market in the labor market has been prolonged, and the prospects for a successful start and professional career of graduating students and graduates from vocational schools have become uncertain. For the next few years, the unemployment among youth is going to be the most significant problem. The bad thing is that there is another, no less harmful effect. Gradually, a career as a value gave way to quick earnings, if possible without paying taxes and social security. The so-called gray economy has attracted many young people, some of whom are still on the student bench. Employment in this segment creates non-standard sub-cultures, environments and motivations for realization based on deviations from legal norms and social standards typical for Europe and the other social countries. The cause for this is not so much in the education and upbringing of young people as in the counterproductive impact of another factor – the devaluation of labor and the lack of adequacy between pay and the workplace.

For more than two decades in Bulgaria as a prerequisite for financial stability under the conditions of the Currency Board and as a factor for attracting foreign investments, the doctrine of maintaining a low level of wages was imposed. The potential underlying this concept has already been exhausted, and not by accident, serious analysts advise us to quickly change our income policy because the price we pay for it is too high and is measured by the growing shortage of teachers, doctors, engineers, .

It is likely that universities are also responsible for the declining interest of young people in education and science, but we cannot overlook the effect of

chronic over-funding of higher education and science, even if they are a “priority of the nation”. Low payouts demotivate young professionals because they automatically turn them into a poor working class, with very narrow prospects for personal growth in the service and income hierarchy. Let us ask ourselves, what would young people expect after completing their higher education? I will highlight at least four things that polls show - professional challenges, clear paths and support for career development, adequate pay, a favorable and secure living environment, and meeting needs. If we ignore this fact, we will continue to count the suitcases in Terminal 2. Therefore, here I will also raise the question of the socio-cultural context of higher education development, which is built on four different elements:

1. quality of life;
2. unemployment;
3. social stratification;
4. people’s values and expectations

From their analysis, the conclusions are not very optimistic:

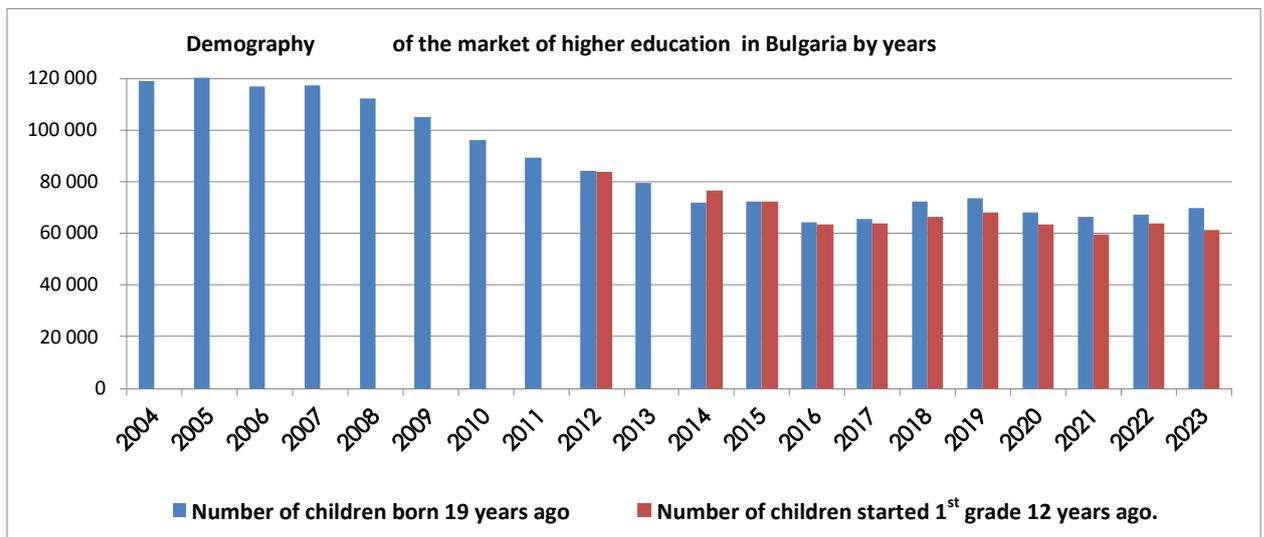
- ✓ Bulgaria continues to be one of the poorest countries in Europe;
- ✓ Survival care increases the share of people with decreasing chances to receive education and to satisfy other groups of cultural needs;
- ✓ The property and financial stratification of the society will remain dominant in the next period. The differentiation will also be reflected in the costs that households are willing to make for education and culture.

Despite these negative trends, I will support the shared view in the discussion that it will be a gross mistake if we allow education – and especially higher education – to “shrink” to the scale of the demographic collapse. Decapitalizing this sector will bring more harm to society, even from the bad privatization model. It is more important to make sense of possible alternatives and approaches to adapting universities to the challenges of the environment, to generate new ideas for risk management with a view to sustainable development of the system and preservation of its unique academic identity. In the context of globalization, it is natural to look for offsetting deficits on the national market of the international one. The chance for higher education is to preserve its potential by protecting its competitiveness on a global scale by attracting the attention of consumers from other countries and enriching the menu of the offered educational services. Cross-border higher education is fueled by the increase in worldwide demand for higher education and is characterized by increased student mobility, courses and programs, and greater mobility for institutions across national borders.

Nevertheless, this process is also not easy and requires at least two things universities – guarantees from a qualitative and convertible educational and scientific product and a good orientation in the trends of the global educational market. The state is expected to implement systematically policies to make **Bulgaria an attractive educational destination.**

Globally, the international student **mobility largely reflects the South-North phenomenon**. The two main trends are entry of Asian students into the major academic systems of North America, Western Europe and Australia, as well as cross-border mobility within the European Union. Do we have an answer for the question at hand here “Where can Bulgaria be in this process”.

According to the annual Education at a Glance report published in September 2017 by the Organization for Economic Co-operation and Development (OECD), differences in access to higher education remain high and the ability of foreign competitors to overcome poorly funded in-country higher education systems. ICT-based higher education is likely to become the most significant driving force of cross-border provision of educational services. Somewhere on this plane, Bulgaria should look for its new educational market.



Source: National Statistical Institute (birth rate); media (first graders)

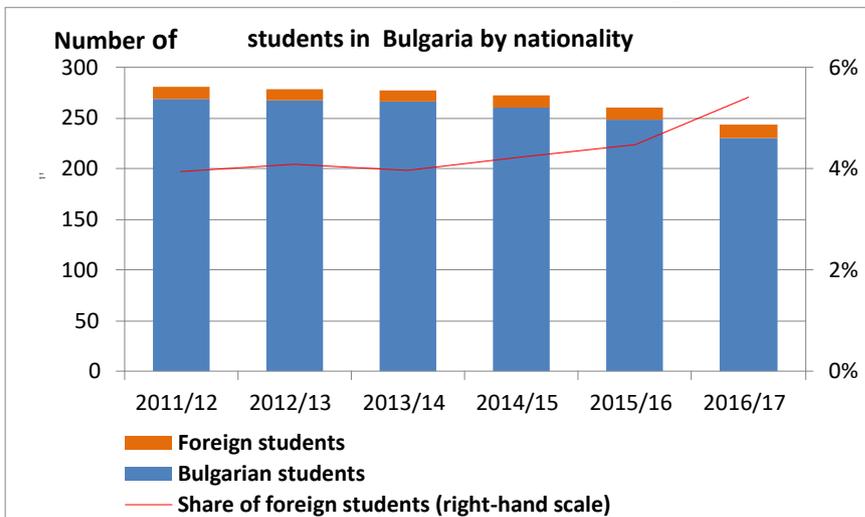
One of the most noticeable trends over the last few decades on a global scale is the **growth of private higher education**. At present, about 30% of excellent students are trained in private institutions. In general, the private sector responds to different segments of demand. I point out this fact to show my concern about the still underestimated private higher education institutions in Bulgaria and even the open discrimination of their students in not one of their peer-oriented policies.

It is important for education to respond with flexibility to the needs of different social groups and their level of solvent demand. A decisive condition for this, of course, remains the proven quality. Higher education should increase its responsibility for developing skills and qualifications that are adequate to demand. It is particularly important to shorten the duration of the training, as well as to improve the methodology for recognition of prior education. Highly valued will be the education allowing for the flexible

realization in several professional fields as well as a portfolio of certificates for additional skills and professional competence.

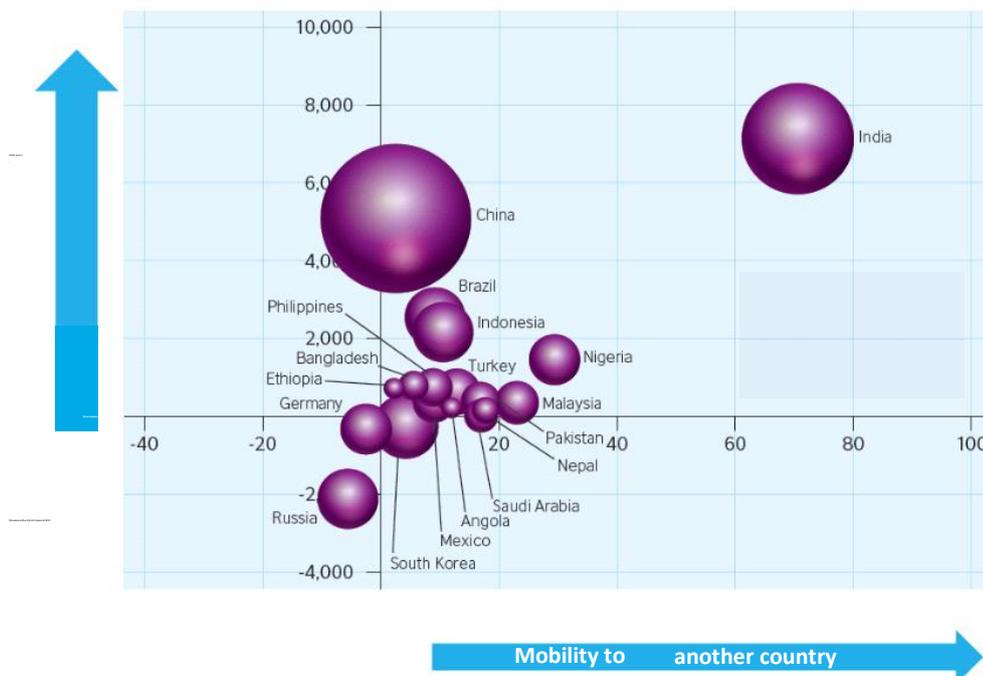
🌐 The number of **foreign students in Bulgaria** has increased to over 13,000 in the last 2016/2017 school year, which represents 5.4% of the total number of students in the country. The following Figure – 4 – illustrates these trends.

Number of students in Bulgaria by nationality

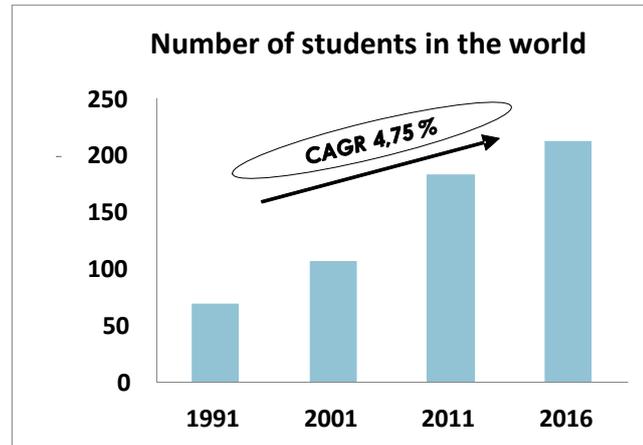


Source: National Statistical Institute

Main sources of international mobile students by 2020 – key countries

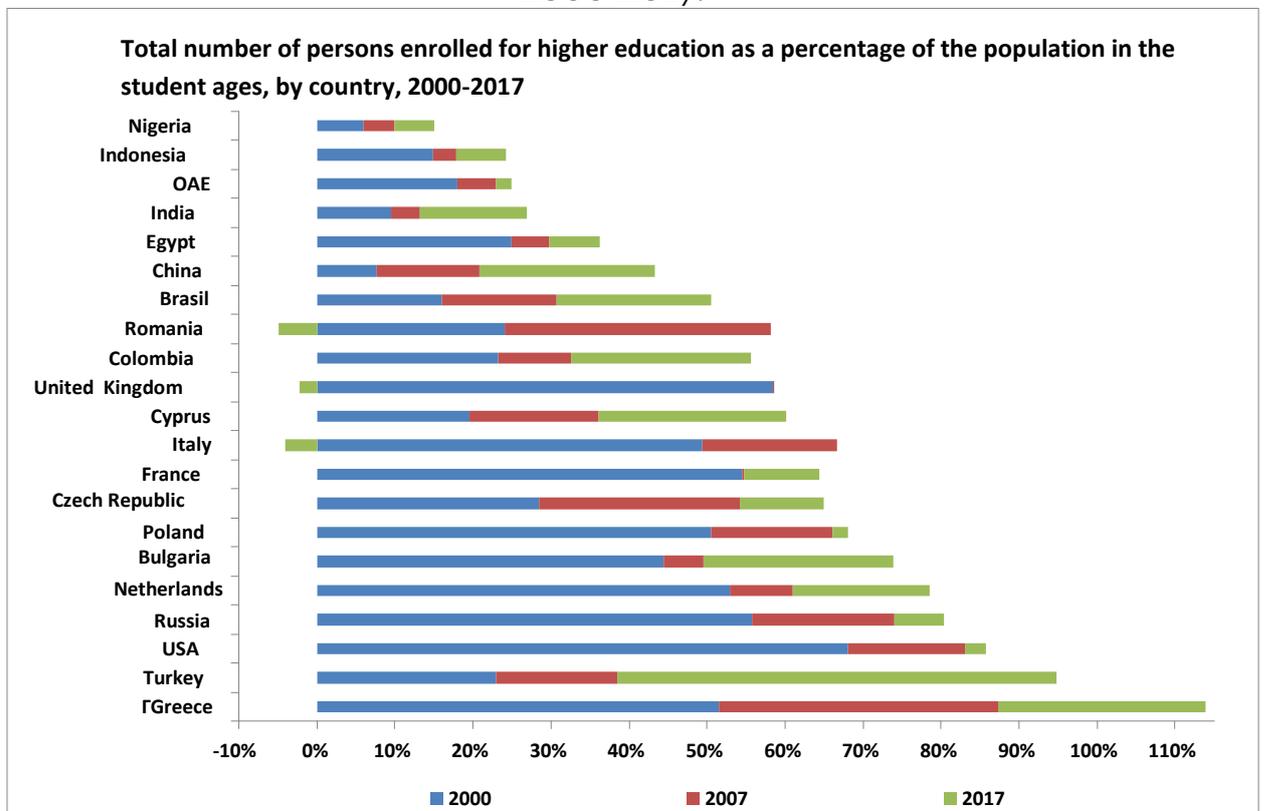


Change of the mobile students to another country 2012-2020, in thousands



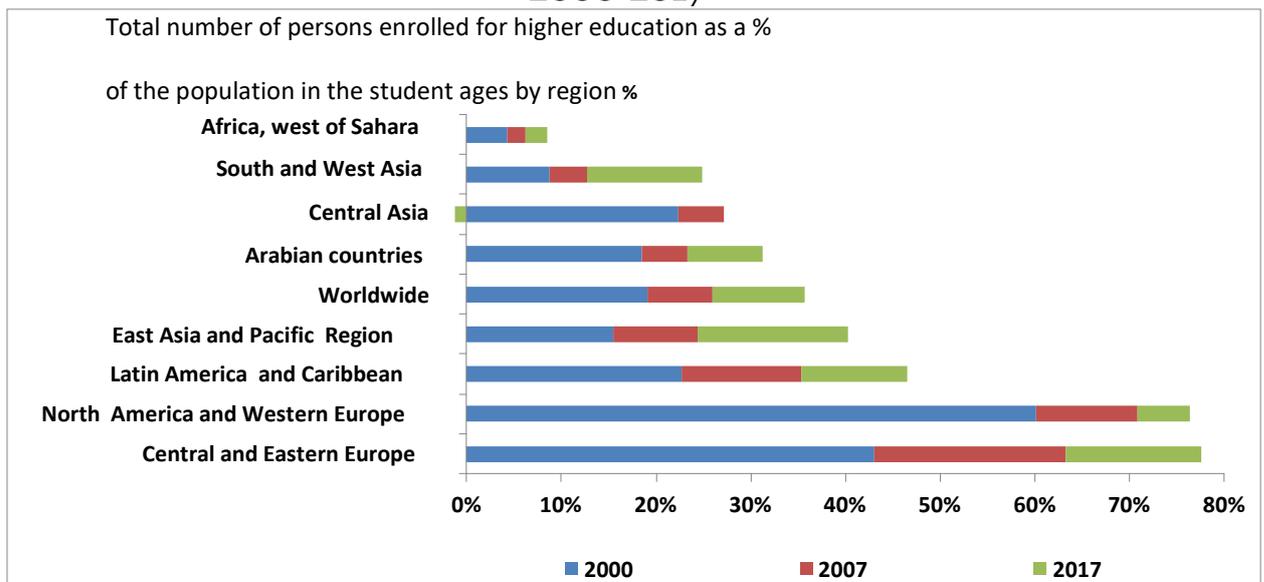
Source: World Bank

Total number of persons enrolled for higher education as a percentage of the population in the student ages, by country, 2000-2017.



Sources: UNESCO, SORTIS analysis

Total number of persons enrolled for higher education in percentage of the population in the student ages by region, 2000-2017



Sources: UNESCO, SORTIS analysis

Increased supply: Opportunity to strengthen the link between education and business: Education in Bulgaria, especially in public schools, tends to be rather theoretical and somewhat out of the labor market. The VFU uses this gap to differentiate among its competitors by increasing the practical knowledge and experience provided to students by further certifying the knowledge and skills that enhance, through further certification of knowledge and skills, which will promote professional capabilities.

- **International market:** In certain regions of Asia and Africa, where the share of international mobile students is, the highest in the world, there is an unmet need for higher education. The market in these is expected to continue to grow in a positive direction over the next decade. Of particular importance for VFU is the recognition of Bulgaria and Varna as a preferred educational destination.
- **Fourth Industrial Revolution:** A dynamic process of revolutionary changes in the organization of public production and business models takes place in the world. A new educational, scientific and innovation system is in the process of being built. The new EU vision for successful implementation of these processes places emphasis on the transition from the transfer of knowledge to open science and open innovation.

What changes industries and the business models?

<p>Influence that is noticed</p> <ul style="list-style-type: none"> • Increasing geopolitical instability • Mobile Internet and Cloud technologies • Big Data • Crowdsourcing, economics of sharing, partner platforms • Demo Figure is growth and growth of the middle class in emerging markets • Changed work environment and flexible working conditions • Urbanization 	<p>2015 – 2017</p> <ul style="list-style-type: none"> • New energy sources and technologies • Internet for things • Aging population • Issues for users from an ethical or personal nature • Increasing economic power of women 	<p>2018-2020</p> <ul style="list-style-type: none"> • Development of robotics and autonomous transport • Artificial intelligence • New materials, biotechnologies and genomics
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What do employers expect in the context of the changed work environment?

Changes in the structure of the claimed public need for staff,
 Modified nomenclature of specialties,
 Timely satisfaction of human resources needs.

Top seven abilities in 2020

- Complex problem solving;
- Critical thinking;
- Creativity and innovation;
- Personnel and staff management;
- Ability to manage new technologies;
- Portfolio of language competencies;
- Coordinated efforts;

In the future, it is expected that the student community will represent an increasingly diverse mix with a larger number of international, adult, part-time and distance students.

In the context of the risks and chances of sustainable development of the professional fields, it will optimize its academic profile, differentiate its competitive advantages and position itself in areas corresponding to the capacity and the presence of a critical mass of its own teachers. It will work actively for its integration into the national and regional educational, scientific, innovation ecosystem, and the creation of effective partnerships for education, research and artistic creativity.

It will realize sustainable and efficient management based on the balance between market – product – capacity – economic and social result. The focus

of management will be the project approach based on clearly defined processes, personalized responsibilities and performance indicators.

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About Innovations in Risk Studies and Treatment

***Humanity has been facing a number of challenges.
It responds via a number of decisions.
This line of decisions is named “culture”.***
José Ortega y Gasset

Risk is something that has not been present in the daily life of humans, and has not been identified via a specific term. Upon occurrence, it promptly gets recognition (becomes socialized”); it is fixed in a symbolic form and by changing the methods, mechanisms, results and the content of human activity, it leads to improvement of actual practice. In this sense, the emergence of the term ‘risk’ and the history of enrichment of the content meant, it is a perfect match of the complex, multicomponent cultural phenomenon currently referred to as ‘innovation’.

Risk is a word that phonetically and semantically exists in all modern languages. What is indicated by risk - the possible occurrence of anything undesirable, bad, harmful, even fatal, when entering an unknown spatial and temporal environment, has always been realized by man. It has been subjected to treatment using various techniques - fortune telling and seeking protection from the gods, respect for different types «taboo», construction of protective facilities, spying. This can also include the prototypes of the modern insurance to be seen in mutual funds established by Jewish guilds established over two thousand years ago.

The most frequently occurring historical evidence where the term ‘risk’ can be found are maritime insurance documents date however back to the 14th century. Not surprisingly, these are maritime insurance documents drawn up in Venice and Genoa in Italian, and later in commercial books written in other Romance languages (Catalan). The word risk there is used as synonym of a potential hazard, respectively – ‘damage that can be expected to occur in the event of adverse outcome of a transaction’¹ or “any risk provided that a vessel shall suffer a damage, the insurer shall pay within four months from the date when such damage had been notified“.²

According to Maslow, what comes next in priority after food is security. From the psychological aspect, man is trying not just to avoid hazards, but also to ensure possibilities for active actions beyond the sphere of immediate defense and survival. In this sense, satisfying the need for security is a fundamental condition for its full realization. This need, and any other is bound by the ways and means for its satisfaction. They are part of the

¹ Rammstedt, O. Wieviel Unsicherheit vertragt der Mensch?, Vorwärts 52, 1980

² Meder, L. Handel Buch, Nurnberg, 1974

contents of the need for security that involves creating and maintaining a secure living environment³. In this context, the term "risk" can also be explained at a certain level of socio-economic development. It identifies the specific hazard (the "uncertainty of the expected outcome in trade"), as the object of the insurance effect aimed at satisfying the need for commercial navigation.

The next important step towards revealing the contents of the term risk is made by German insurers. German insurance contracts of the 16th century specify that every risk is a hazard, but not every danger is a risk. Damage (injury) is recognized as a consequence of a risk assumed only if caused by a decision and the related action on behalf of the carrier. Four centuries later, another German sociologist, Niklas Luhmann, paid special attention to the need to clearly distinguish the risk from the hazard. Danger to Luham is "any potential drawback that deserves attention", while risk should be mentioned only when one's own decision is a reason absolute absolutely necessary for occurrence of a possible damage".⁴

From a psychological point of view, activating the security need is a complex of mutually agreed processes. Its incitement power manifests itself either as negative emotional experiences (fear, anxiety, and tension) or in the form of positive emotions when people face abstract or real hazards but are in a protected position.⁵

The solution, which, thanks to German insurers, is given the status of a characteristic feature defines risk as a type of hazard that the decision-maker himself causes. However, the ability of people to rethink and change their decision gives them the opportunity to deliberately impact the real hazards (manage them) by avoiding, limiting, minimization and transferring (insurance is a typical form of risk transfer). This is the reason, initially in the insurance business and later in the economic research, whereby the focus of risk studies is placed on the preparation and decision-making.⁶

A retrospective review of the course of risk studies clearly illustrates the complex structure of knowledge about it, which binds together in a single set, the two oppositely directed processes. Complexity derives from the theoretical form of organization of scientific knowledge. Any scientific theory (from Greek theory - study) that explains one aspect or another, of reality by reproducing the objective logic of things in the concepts constructed therein and make it a relatively autonomous system. In general, it includes two components: one - formal-logical apparatus (terms, symbols, equations, rules) that provide the basis for dissemination and understanding of the results achieved in the cognitive process; the other - a meaningful interpretation (categories, concepts, principles, laws) that is more dynamic

³ Величков А. Личната сигурност в големия град, София, 2004

⁴ Luhmann, N. *Soziologie des Riskes*, Essen, 1991

⁵ Величков А. Личната сигурност в големия град, София, 2004

⁶ Христов, П. *Метатеория на риска*, София, 2010

and undergoes permanent development to the extent that it reflects the specific historical conditions and is related to the philosophical and methodological preferences of the authors.

In this sense, the terms "security" "hazard" and "risk" and some of the relevant derivatives, such as "safety", "challenge", "vulnerability". have begun to play the role of a formal-logical apparatus of risk research that has gradually become a core around which the much more dynamic carriers of meaningful interpretation are built. The "decision" as an "essential characteristic", which allows the risk to be distinguished, finds itself at the center of this core. The focus of the search for innovative solutions in terms of the effects of risk is placed on the attempts to optimize the way of preparation and decision-making.

It is important to note that all this is happening in Europe, against the background of the revolution in Christianity provoked by the Swiss theologian Jean Calvin (1509-1564) who laid the foundations of Protestant ethics. Its leading idea is that success in worldly affairs is a sign that God's providence has chosen salvation for the individual. This stimulates constant striving to increase wealth, since it is how a man can constantly be assured of being one among the "chosen people". According to Max Weber, the practical consequence of this belief is the rapid accumulation of capital and the increase in production.⁷

It would be logical in a similar socio-economic environment, as noted by O. Rammstedt, that formal rationality of decisions made in insurance business and gambling, based on the ability to figure out money, to be placed at the front in the process of building the notion of risk.⁸ History has confirmed the truthfulness of Rammstedt's conclusion and has quite precisely registered this scientific trait of Blaise Pascal. In 1654, Pascal then at the age of sixteen, having exchanged five letters with his friend Pierre de Fermat, offered a solution to "Pacholi's conundrum," that had occupied the minds of the fans of gambling and renowned mathematicians for more than 150 years. The question is – how to distribute the money invested by the participants in the game supposing that the agreement made is that the money shall go to the one who demonstrated best result after five castings, if the game has been suspended for reasons not attributable to them, with a result two to one. The answer is that the fair player, who leads two to one, in case of game being continued, would win in three of four cases. This solution is based on the so-called "Pascal's triangle" where based on the assumption that an event of equal chance (N) recurs on a strictly defined number of occasions, and enables quantitative calculation of possible combinations using a relatively simple formula:

$$\text{Probability} = N: (N + 1)$$

⁷ Вебер, М. Протестанската етика и духът на капитализма, София, 2005

⁸ Rammstedt, O. Wieviel Unsicherheit vertragen der Mensch?, Vorwärts 52, 1980

The history of science has made the assumption that the texts of the five letters has established the base for the then future development of the theory of probability that makes it possible, by way of calculation, to explain the current times and foresee the future. This exclusive contribution belongs to the Swiss mathematician Jacob Bernoulli, who formulated the law of large numbers where the random selection of any set has the same qualities as the whole set.

In 1738, another Swiss mathematician and insurer, Daniel Bernoulli, Jacob Bernoulli's nephew) made his important contribution to the probability theory, extending the term "value". "Value of things", as he said, shall be based not on their price, but by their usefulness. The price of a thing depends on the thing itself, and is equivalent for all, while usefulness depends on specific circumstances with the man estimating such thing⁹.

Daniel Bernoulli invented the possibility to ensure trade ships at reduced rates, by attracting a greater number of customers. The greater number of customers enables calculation of scope of damages with higher precision and can guarantee high enough profit. Thus, the young Swiss man made insurance business a business with guaranteed profits.

All it became possible due to the innovative idea of D Bernoulli who was able to define risk as the derivative of damage severity and probability of occurrence of an insured event, as well as to formalize this definition as a popular and quite conceivable mathematical formula:

$$\text{Risk} = \text{Severity of a damage} \times \text{Probability of occurrence}$$

The value of this innovative idea, gaining popularity as the "Bernoulli's approach", is that the insurer gets a tool to measure and compare risks. After their rankings - upward or downward alignment, D. Bernoulli introduces the practice of not insuring two types of risks: those who have a very high severity of the damage but are of low probability, others - risks that are high probability, but with a negligible severity of injury.

The risk model proposed by D. Bernoulli gives such a practical effect that, with some modifications, for example, the product divided into number of years or events occurring or a square root deducted against it, therefore this enables risk to be represented graphically as squares inserted each after the other, and this is still widely used today, even dominating as an approach of the legislative practitioner.¹⁰

The euphoria around the Bernoulli model overshadows the important methodological note of such remarkable authority in science as the creator of the heliocentric model of the solar system Pierre Laplace. He is the first

⁹ Bernoulli D. Exposition of a New Theory on the Measurement of Risk, 1738. Quote by Дамодаран А. Стратегический риск-менеджмент. Принципы и методики, Москва-Санкт-Петербург – Киев, 2010

¹⁰ See more Христов, П. Метатеория на риска, София, 2010

distinguished scholar who in his "gambling theory" (1816) turns risk into a subject of theoretical research beyond the field of mathematical calculations and probability theory.

Laplace reflects on the relationship of risk with the hope and fear of man for Tomorrow . In his view, mathematical expectation should be supplemented by the "individual circumstance" factor, especially the financial situation, in order to speak of "moral hope". Maintaining a balance between estimated profits and potential losses is considered reasonable. This means that the estimated profit or loss shall be measured via their relative value versus the total assets of the one who assumes a risk. It would make quite a difference to loose 100 ducat for a person with pockets full of money, and a one for whom such money is all a family owns. By using the expression *С израра* 'moral hope', Laplace in essence poses the issue of awareness of the resulting personal responsibility for a subject coming in existence while implementing a decision made by such person.

It has been assumed that, the greatest innovation in the theory of utility belongs to John von Neumann, an American scholar of Hungarian descend, physicist and mathematician, professor at Princeton University. In the 30's of the 20th c., he established the theory of strategic science as opposed to gambling games. John von Neumann has reasoned convincingly the idea that since people do not live isolated like Robinson Crusoe on a desert island, the main source of uncertainty is society, and not nature or natural impacts. Where a decision is made not by a single payer, but a multitude of real life players, then everyone of these shall sacrifice some of his/her interests ('individual circumstances' as per the definition of Laplace). Thus, our life becomes a string of compromises with those alike. This rule is not valid when playing the game of dice or roulette, but it applies where a player, beside the good chance, relies on his/her choice.

The theory of strategic games of John von Neumann has been further developed via the Theory of games and economic behavior published in 1944, a joint work with Oscar Morgenstern. With this theory, individual situations of making a decision are associated with probability calculation. The solution-making situation under risk conditions is characterized by the fact that the person making the decision is aware of the distribution of probability. A rational strategy would consist in finding and choosing an action that would have the highest estimated benefit. In this context, risk is confined to assuming some potential loss, and this represents a reconsideration and interpretation of the idea of Daniel Bernoulli. While with Bernoulli some extreme options at the end of the string of ranged risks are eliminated, here choice is on a combination of variants that have been ranked in various positions of the range.

Based on this, in 1952, G. Markowitz has formulated the problem of choosing an optimized portfolio and securities, and as a result, from its solution, the theory of investment risk management was developed. The

meaningful interpretation of theoretical knowledge on risk has been enriched through consideration of risk as a mean square deviation and measure of uncertainty of profitability, and introduction of new notions such as diversification, curves of indifference, achievable and effective multiple portfolios. The ideas of Markowitz were further developed via the VaR theory (Value-at-Risk).¹¹ In addition, this in its turn is one the wide open doors of introduction of new information technologies in the preparation and making of management decisions. Computerized systems, via well-structured databases, software products and expert decision-making systems enable utilization of information on the run in the form of checkups, determination of allowable options, selection of the most efficient one.

In 1997 in Russia, a nationwide program was implemented “Russia’s security”, where the main concept was establishing a mathematical theory of security and risk, based on non-linear dynamics.¹² That attempt was not quite a success, because the conclusions did not find confirmation in case of earthquake, flood, avalanche, etc., where there is instant release of huge energy or mass accumulated. In the opinion of Solozhentsev and Ryabinin, modern computer hardware that enables the use of algorithmic form to solve extremal tasks is suitable for making prompt decisions (on the go), though it cannot replace analytical approach that requires the use of analyses that often go beyond the real problems to be solved.¹³

The definitions in the risk model used in the Bernoulli’s approach have been subject to clear diagnostics by Joseph Stiglitz in his explanation of the reasons for the banking crisis in the USA in 2008. Instead of having the existing regulatory system adapted to the new risks, arising due to trade banking being invaded by the instruments and techniques typical for the investment banks, such as derivatives and securitization, a thesis disputable from scientific aspect has been adopted, namely that risk can be managed with sufficient reliability using better computer models “¹⁴

The adaptation of the regulatory system to the new risks implies the adoption of a new risk model suitable for application in the lawmaking process. Interesting in this respect is the risk model developed in existential philosophy, where risk conception concentrates on its consideration as a system, and the system approach allows a deeper penetration of its nature. The emphasis on the properties allows revelation of the structural links between objects that are components of one or another system. This is the essential difference from the description of their characteristics when viewed as stand-alone objects. Investigating the potentials of a hazard, the solution that generates it, measuring the likelihood and severity of damage and

¹¹ Шарп, У., Александер, Г., Бойли, Дж., Инвестиции, Москва: ИНФРА, 2001.

¹² Управление риском: Риск. Устойчивое развитие, Синергетика, Москва, 2000.

¹³ Соложенцев, Е. Д., Сценарное логико-вероятностное управление риском в бизнесе и технике, с. 15.

¹⁴ Стиглиц, Дж., Свободно падане. Америка, свободните пазари, кризата и виновните за нея, С., 2010.

awareness of personal responsibility for the decision made, form a system, allows the discovery of individual features unknown or unrevealed until then and a new systemic way to reveal the content and nature of the risk. As L. von Bertalanffy writes, systemic research is the basis for a fundamental reorientation of scientific thinking.¹⁵

For the most prominent representatives of existential philosophy - S. Kirkegore, M. Heidegger, K. Jaspers, the true essence of man is revealed when placed in an extreme situation, especially when man is on the border between life and death, which is why risk is an important theme. In a way different from that of science, they also reach a clear differentiation of the marginal significance of risk.

Firstly, existential philosophy enriches the notion of the relationship of risk and hazard to which a person is doomed as a result of the need to be active in order to secure one's existence. For S. Kirkegore, anxiety is particularly important, as it reflects human freedom. "Throughout one's life," he notes, "man is faced with the need to design. This projection evokes challenges by hazards, thus brave behavior projecting is risky, and so is 'being'. Contemporary science of security is attributable to Kirkegore and the formulation of the significant methodological postulate that 'risk is a hazard that gets more realistic'.

Fear and existentialist situation explain the relation between a hazard and a decision. Kirkegore has defined fear as 'chained freedom' that which refers to the existential situation of decision-making by man. With it, man makes a choice as if it were his 'absolute' choice, though it comes to life not earlier than an option is available, an option involving a risk.

The existentialist philosophy provides a clear identification of yet another main feature of risk - a risk can only exist where a decision that gives rise to a hazard is based on the possibility to be measured, figured and calculated. 'Daring' according to Heidegger, refers not only to the processing of risking, but at the same time indicates the 'weigh scales'. Should one 'lose the vision of real things, consequently continuous unrest', where a man starts weighing daring according to one's own rules', in that case the man becomes a trader'. In this sphere where 'settlement becomes a commodity' and 'the act of calculation' is 'the being of a defenseless person', there namely 'daring' becomes a 'risk'.

For Jaspers risk loses significance, since the 'must' to make a decision as being an existential set of problems, is inherent to man, and is not the result of a certain decision. His idea on irrational daring directly corresponds to 'moral hope' (of Laplace), because 'daring' results through coercion, as the result of 'irrationality'. Hope for a chance, good luck ultimately is the thing

¹⁵ Бергаланфи, Л. фон, *Общая теория систем – обзор проблем и результатов. Системные исследования*, Москва, 1969, с. 32.

that motivates a man to expose himself/herself to a hazard when seeking a specific goal, related to satisfaction of any need a man can have.¹⁶

In summary, the original contribution of the existentialist philosophy to knowledge of risk consists in the disclosure of its structure – the main components and their relevant properties that enable these to merge. If we should try to unveil the contents of the contribution made by the representatives of existentialist philosophy by way of description of what we signify via the terms: component, structure and system, we will see it is all about a very simple thing:

Decision-making implies action, man's action – an activity to be performed. Therefore, risk can emerge only in the presence of an action. And since human activity is carried out in space and time, where it causes various natural and social phenomena, such activity and its relevant risks have an objective nature.

A decision that gives rise to a real possibility to an undesirable or adverse event to occur is directed towards satisfying a specific need. Such need in itself is a state predetermined by any unsatisfied needs of the body and requirements of the environment, as may be necessary for normal being, and being aimed at elimination of dissatisfaction. Any dissatisfaction that had not been handled, will definitely lead to disturbance of the normal vital functions, deprives humans of happiness, and causes harm, it can also have detrimental effects. Until being satisfied, a need will exist as an emerging and growing sensation of the lack of something. Such sensation motivates seeking of ways and means to satisfy the need. Availability of alternative ways and means implies choice, and choice constitutes a solution.

Assuming a risk in case of any potential of an adverse event, can also lead to harmful or disastrous consequences. However, risk unlike dissatisfaction contains an option for successful handling of the need; thereby any unpleasant, harmful feeling would disappear. In this context, the well-known Bulgarian lawyer, D. Michailov has provided one of the most precise legal definitions: 'Risk is a specific human action or behavior, focused on satisfaction of specific needs at the background of an existing hazard of damages, of negative effects on known public relations'.¹⁷

The basic instrument for defense of public relations is law. By virtue of the social contract, every citizen has specific rights and in turn assumes the relevant obligations. Failure to perform any obligation results in legal responsibility. Legal responsibility is in effect through implementation of sanctions by the state. Hence, personal responsibility – this issue has been initially discussed within the frame of knowledge about risk, as posed by Laplace, and it has a rich resource for protecting both society and man against irrational, irresponsible and malicious actions and activities. Such is the practice in the field of nuclear security. The basic principles and content of

¹⁶ Cambridge Философски речник, София, 2009

¹⁷ Михайлов, Д., Проблеми на наказателното право. Обща част, София, 2007, с. 277.

the Vienna and Paris Conventions on Civil Liability are internationally accepted as legal means to address nuclear risks.¹⁸

Law entails further potentials for risk treatment, not yet utilized, in my opinion. Legal defense according to the definition is a functional system, which contains the main components, and beside sanctions, it includes prevention and remedy of injuries cause through illegal behaviors.

¹⁸ Legal aspects of the regime of civil liability for nuclear damage in Bulgaria, Administrative and Criminal Justice, Nr3/2016, Baltic International Academy, Latvia, Riga

Issues of Higher Education in Internationalization in Georgia

Through active cooperation and exchange of cultural values, Georgia permanently promotes its culture and develops its own cultural phenomenon. Georgia is the country on the crossroads of big trade routes spread along the border of two continents, Europe and Asia, the two great cultural worlds of East and West. Owing to its location, Georgia has had close contracts with many countries and peoples since the ancient times and due to its geopolitical reality, different cultures and religions got interwoven.

Georgia is characterized by the feature natural to every cultural state it can't live in isolation from other countries. The history of the Georgian culture clearly evidences that the Western values were not alien to the Georgian world and that the two worlds never conflicted in this respect. Some of those values appeared in Georgia in the ancient times and took lead of the same West European values, while others fell relatively back. However, the main thing is that both of us have much in common and are much similar.

An efficient way to consolidate the cultures, languages and religions is not their isolation what leads to the degradation of nations, but contacts and mutual enrichment. The civilizations cooperate and compete with one another, but conflict between them has never been the major spring in the history. The universal civilization is not a mere sum of individual civilizations, but a substrate of the experience and knowledge accumulated in the course of history showing a human essence and recognized as a common property of the mankind.

Globalization on the one hand has created better conditions for the information exchange, technological and economic activity of people and abolished limitations, but this process has always needed proper adaptation and specific preparations. Therefore, unless the expenditure for education increases, particularly in the underdeveloped countries, the chasm between the two worlds will enhance further.

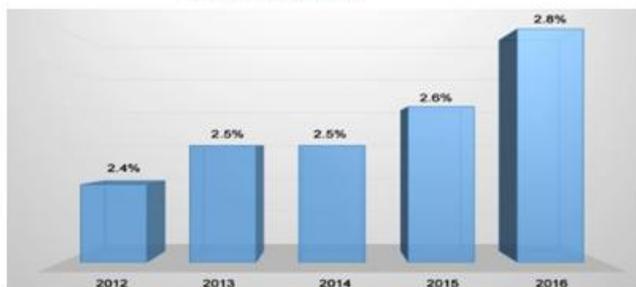
Forces of globalization, such as the outcomes (e.g., General Agreement on Trade in Services; North American Free Trade Agreement; and, Mercosur) of interactions between international organizations (e.g., the World Bank; the International Monetary Fund; the Organization for Economic Cooperation and Development; and, the United Nations Educational, Scientific, and Cultural Organization), intergovernmental organizations (e.g., the European Union, African Union, Asia Pacific Economic Council, and Caribbean Community and Common Market), and nongovernmental organizations (e.g., human rights education groups) are influencing nation-state decision making as these forces develop global laws, agree on transnational trade, and sponsor educational causes [1].

A major impact on higher education

Under the influence of globalization, the higher educational institutions adopting the principles of globalization are not “local enterprises” any more, but are engaged in the process of international changes [2, p.321]

A major impact on higher education resulting from this level of influence is that public officials in the Georgia are increasingly urging colleges and universities to become more efficient and to quantify educational productivity in areas such as quality of education, social equity, efficiency in cost management, and enrollment outcomes; something postsecondary institutions had never had to do in almost four centuries of American higher

Education Expenditures in the Gross Domestic Product
(Nominal GDP)



education history. Vaira described this impact as “the trend toward a more entrepreneurial and managerialist pattern of organizational change” [7, p. 488].

This new paradigm of managing higher education is being used to demand excellence, and, as such, establish a framework for competition among institutions. This is especially significant to public campuses as appropriations are increasingly becoming tied to outcomes. Education and science are closely related to other fields of societal life, including economics.

A man needs two following things best of all: first, obtaining the skills for physical or material activity, what is closely related to economics, and second, sufficient competence to fully meet his spiritual needs what depends on the development of the education system.

Consequently, the internationalization ensures virtual and physical mobility of the students and personnel and sharing the education and practice. [3]

In terms of marketization and neoliberalism, the Georgian government is unable to invest sufficient funds in education and as a result, people without money are unable to make use of the goods of the process of globalization. The movement toward decentralization and ultimately privatization is a direct consequence of globalization. Decentralization and privatization are continuously accelerating as institutions providing public good, such as universities, find themselves increasingly constrained by limited budgets and begin looking for opportunities to supplement shortfalls. In the age of globalization, with budget cuts prevailing on the one hand and with privatization of education looming as a solution on the other, scholars of public higher education finance are offering strategies to institutions on how to deal with dwindling budgets.

Such strategies include decreasing their operational costs by offering more distance education and online courses, eliminating non-productive programs and services, reducing consumables, engaging in cost-sharing with other institutions and companies, and tightening fiscal management. Institutions are also exploring 23 alternative sources of funding, such as social foundations, private corporate sponsorship, commercialization of research,

and trans-border educational enterprising, which includes increased recruitment of international students.

Globalization dynamics linked to economic and technological factors, and ranging from transnational agreements to institutional enterprising, are stimulating responses from colleges and universities, known collectively as “internationalization” [8]. Given the divergent ways in which globalization is impacting higher education, colleges and universities are increasingly embracing internationalization as a centralized focus to coordinate institutional responses to global challenges.

Globalization, therefore, has a tremendous impact on the operations of colleges and universities. As it reshapes cultures and the diversity debate, it is forcing the immediate need for curricular and support services changes at institutions of higher education, which are being faced with the need to accommodate the various cultures on their campuses. As a result, campus internationalization efforts are increasingly required to become more strategized, which require a great deal of intentional planning. The planning urgency is moreover exacerbated by the immediacy of new and unprecedented types of accountability requirements placed upon the institutions, particularly by legislatures, accrediting agencies, the business community, and citizens.

Under the draft budget of 2017, the financing of the Ministry of Education of Georgia is to increase by 40 million Gels. In the 2017 state budget, the Ministry of Education is the third in terms of funding by 1.116 billion to spend. [4]

During the recent academic year 2015-16, Georgia hosted a total of 138,900 BA and MA students and 3,765 PhD students at Georgian higher education institutions, including 21 public and 52 private HEIs (GeoStat, 2016). Among the student base, 6,643 were foreign students: 3,822 in BA programs and 285 in MA programs.

According to the official statistics (GeoStat, 2016), 54.1% of foreign students were studying at private and 45.8% at public higher education institutions.

The number of overseas students in Georgia has plateaued in 2014 with 3,020 BA and 136 MA students, followed by a substantial decline in 2015 with 2,014 BA and 92 MA students, mostly due to the changes in visa policy.

Georgia is one of the most popular destinations for degree-mobile students from Azerbaijan (36%), India (22%) and Turkey (12%), followed by the students from Iraq, Russia, Sri Lanka, Nigeria and Iran as the major senders. [5, p. 7-8]

Internationalization of higher education has gained more importance in recent years with the purpose of improving the quality of education and promoting competitiveness of higher educational institutions. Internationalization covers the mobility of students and educational staff,

joint educational programs, international cooperation within the limits of different research projects.

The university education model must help a student to create something new and valuable and permanently set new goals. The given model must enable a person to create his future by considering his capabilities, mind, conscience and character.

An imperative question is the unification of the educational programs with the basic international educational criteria allowing equaling our graduates to other countries' professionals in their rights.

As the forces of globalization increasingly stimulate entrepreneurialism in higher education, this new administrative archetype is increasingly steering the discourse regarding the knowledge needed in society. In this environment, scholars agree that the new paradigm for higher education is the production of innovative knowledge, not in response to its value as a societal good, but rather as a response to the societal good of economic competitiveness and development. Higher education institutions increasingly affirm the need to prepare students to be internationally competent so that they can function professionally in more and more culturally diverse settings, and be more competitive in international markets. [9]

In addition to stimulating economic competitiveness, international collaboration among nations and institutions are essential to solving a gamut of global problems, such as environmental, health, and crime-related issues. For this reason, steering research and knowledge production toward an international dimension has become a key rationale for internationalization higher education, and a major propeller of the knowledge society.

As institutions of higher learning internationalize their campuses, in part, in response to knowledge society needs, increasing and pervasive use of information and communication technologies is resulting in the development of virtual universities. A student from anywhere in the world can attend classes at these universities, obtain academic support services, conduct research, and earn a degree without leaving the confines of his or her own home.

The concept of knowledge society has emerged, therefore, from the impact of the economic and technological forces of globalization on higher education teaching and research. The outcome of this modern-day dynamic is the pace at which knowledge is accelerating.

Consequently, the educational delivery paradigm of colleges and universities is increasingly shifting from the exclusive production and dissemination of knowledge to a pattern of technological transfer of knowledge. This phenomenon has become known as the "knowledge society", a dynamic, uncontested, contemporary mechanism increasing worldwide capacity to address the intricacies and nuances of global citizenship and multiculturalism. [9]

Georgia's efforts to return to the European family largely comprise increasing the overall attractiveness of the country. In past decade, the country observed a milestone of major investments in infrastructure projects, the business environment, recreation, entertainment, services and tourism. However, little was done to develop and implement national policy for the internationalization of higher education. Georgian universities have been actively establishing international ties and engaging in European projects, academic exchanges and mobility programs. At this point, the intervention of the state and defining a broader goal is vitally important.

Signals to transform Georgia into a regional hub for receiving comprehensive higher education eventually resulted in creation of the study in Georgia initiative under the Ministry of Education and Science. The team is obliged to support and represent those Georgian universities that are interested in international marketing and recruitment of students from target countries. [6]

Like many centuries ago, the Georgian society carefully looks at the western civilization and we hope that various contacts between the students and lecturers of the university and their participation in different exchange programs will help all the participants to develop curricula and studying methodology and obtain and further develop new teaching materials.

It is true that the special scientific literature long ago recognized that each national civilization is a unique and inimitable phenomenon and has its own way of development, specificity and regularities, but we must not forget that the mankind is based on the idea of unity and diversity of such a union. So, the world civilization is a unity, a system, with the regional and local civilizations having the structural and functional relation with it.

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Adaptive-Pedagogical Management of Innovations in Post-Qualifying Education

The issue of innovations in all the branches of social life including that of education is of high social ranking in Ukraine. It is «Strategy of Ukraine Innovation Development for 2010–2020 under Conditions of Global Challenges» that emphasizes the importance to introduce innovations in the field of education [10].

In this respect updating of post-qualifying education becomes of an important value in the process of reforming education in Ukraine. The working strategy of the current system changes: post-qualifying pedagogical educational establishments should set the necessity to work not only for the functioning of the educational system, but its development, intending to change retranslation tasks into research ones, to find educational requirements, to study specificity of educational processes in the system of post-qualifying education.

Due to integration processes the range of tasks in front of post-qualifying pedagogical educational establishments of Ukraine is extremely wide and involves many aspects of educational activity. They cannot be solved without cardinal changes in the system of management. A retrospective analysis of post-qualifying education of pedagogical staff in Ukraine proves that in the organizational-structural plan it has developed as an integral social system with its distinctive integral features and components (activity objectives, content, organizational forms and methods of work, conditions, results of functioning etc.). Post-qualifying education should constantly adapt to social-economic situation in the country, pass ahead of these processes, determining them to the conditions of establishment of a new educational system with promising functional opportunities, structures, content, quality, management and relations with social environment.

The Ukrainian scientists: O. Halus, G. Yelnykova, L. Kalinina, Yu. Mashbyts, V. Kucherenko, K. Mulyk, I. Osadchyi, V. Prykhodko, V. Strelnikov, V. Shvydun et al. draw special attention to the study of projective subjects, adaptive character of management in education, which is rather essential for modernization of educational systems. The general result of these studies is the need in adaptive-pedagogical projecting of regional educational systems concerning professional advanced training of pedagogical staff and its management [3].

Theoretical foundations of innovation processes management were studied by N. Vasylenko, L. Vashchenko, V. Hurov, L. Danylenko, V. Lazariev, P. Tratyakov, T. Shamova, Ye. Shatokhin; regulations concerning the structure and peculiarities of innovation activity in the field of education were investigated by V. Bohdanova, I. Havrysh, I. Dychkivska, M. Klarin, N. Klokar, A. Kolomiyets, O. Kutsevol, K. Makahon, O. Saranov, V. Shukshunov, O. Khomeriky, N. Yusufbekova; expertise conceptions of innovation projects were introduced by O. Akimova, B. Brylin, L. Danylenko,

O. Novykov, T. Novykova, V. Palamarchuk, L. Podymova, V. Slastionin, O. Shushpanov). Substantial contribution in the development of theory of innovation educational technologies and in the system of post-qualifying pedagogical education in particular was made by Yu. Babanskyi, V. Bezpalko, N. Bilyk, P. Galperin, L. Danylenko, L. Zorina, I. Ziaziun, M. Klarin, N. Kolomyynskyi, Ye. Korotov, V. Luhovyi, N. Protasova, V. Putsov, I. Rachenko, N. Talyzina, O. Tonkonoha, M. Shkil et al.

H. Kravchenko (2015), examining the issue of adaptive management in the development of post-qualifying pedagogical educational institutions in Ukraine, elucidates the following issues of practical organization and development of the department institutional system under present-day conditions: theoretical aspects of adaptive management and its effect on the development of the department system of post-qualifying pedagogical educational institutions; the pattern and technology of formation of learners' professional competence under conditions of advanced professional training; the major approaches to the management of professional development of scientific-pedagogical department staff and learners of refresher courses; innovation technologies in the management of educational activity of learners; the tools to assess the quality of development of a professional competence of learners [8].

The author emphasizes that the major tasks of the department system is providing the common innovation policy in all the spheres of their activity; determination of the content of functional services and units to fulfill short-term and long-term tasks based on a clear matching of interests of several managers in structural units pretending to gain access to the same resources. The main attention is concentrated on the improvement of activity of separate units and integration of all the kinds of work, creation of conditions promoting effective fulfillment of the determined purposes and tasks.

An important constituent of post-qualifying education is advanced training which provides improvement of professional activity essential for the development and improvement of the personality. The term «advanced training» is not only acquirement of additional knowledge on a basic specialty. Any amount of additional knowledge can remain a dead weight or simply become out of date if an educationist is not able to apply this knowledge and obtain it himself. Therefore, advanced training is acquirement of additional knowledge on a basic specialty and improvement of professional skills on the basis of comprehension of individual activity and correlation of its results with the requirements of modern society.

The indicator of the highest achievements in professional activity is desire and ability to innovations, the need of continuous education. Advanced training under contemporary conditions of educational modernization is transformed into a flexible subsystem of continuous education that responds quickly to the requirements and enquiries of the society, and constantly provides advancing of professional competence of educationalists. As any

educational process advanced training of pedagogical staff in the system of post-qualifying education should be built on the basis of both principles of education and positions of andragogy.

The pattern of education of the leaders and pedagogical workers of comprehensive educational establishments in the process of advanced training built on the bases of andragogy is considered as an integral system of structural constituents in their interrelations and continuous development with possible correction of the objectives and tasks considering peculiarities, professional requirements and expectations of learners. Realization of the above pattern of teaching pedagogical workers in the system of post-qualifying education is directed to the solution of the following tasks: development and introduction into practice individual programs of professional development into the practical work of advanced training through the system of thematic special courses considering requirements of this category of learners; organization of distance learning providing broader opportunities for unsupervised work and self-governing, direct the educational process not to the knowledge in general, but to the solution of an important issue for a learner, is built on partnership between the subjects of learning; selection of methods and techniques of interrelations between a learner and a teacher promoting an effective work of a teacher to achieve the objectives of learning; arrangement of subject-subject interrelations through the establishment of equal interpersonal relations between the subjects of the learning process, conscious self-management of the educational process, reflexive activity of learners, maintenance of their educational initiative; following the results of education of learners in a certain category in the course of advanced training.

Therefore, implementation of the andragogy approach ideas into the practical work of departments enables to develop and introduce innovations techniques and methods of teaching/learning of specialist considering the traditions of advanced training of pedagogical staff in Ukraine, specificity of educational requirements of learners, conditions and purposes of certain establishments, where they work and study.

To our mind, an important condition of effective functioning of the regional educational systems dealing with advanced training of pedagogical staff is: skillful management of their adaptive-pedagogical projecting consisting of the provision of technological basis in the management of regional educational system; purposefulness of their results to improve the work of educational managers on different levels; definition of opportunities and directions to predict the development of regional educational systems; application of the scientific-research results in the formation of regional educational policy concerning the organization of advanced training of pedagogical workers [2, c. 145].

Substantiation of the conception on the management of adaptive-pedagogical projecting of the regional educational systems of advanced

pedagogical training consists of its understanding and improvement. The task to realize this conception is to promote modernization, topicality and systematization of theoretical conceptions concerning the essence of these systems and improvement of their forms.

At the same time, the problem to create a centralized system of the scientific-methodical support of advanced pedagogical training in regions requires an adaptive character to manage the projecting of pedagogical action.

Therefore, adaptive-pedagogical projecting of the regional educational systems of advanced pedagogical training is not regarded as an objective only, but certain intermediate result as well.

Elaboration and theoretical substantiation of the Conception on management of adaptive-pedagogical projecting of the regional educational systems of advanced pedagogical training enables to consider their following structure: the pattern of interrelations, the major parameters of functioning and development, vectors of development: «Normative-legal base»; «Optimization of the structure and management of adaptive-pedagogical projecting of the regional educational systems of advanced pedagogical training»; «Prior tasks and the ways of development of the regional educational systems of advanced pedagogical training»; «Strategic approaches in the regional educational systems of advanced pedagogical training»; «Strengthening of the infrastructure of a post-qualifying pedagogical educational establishment»; «Forms to realize advanced pedagogical training», involving the objectives and expected results.

Strategic approaches of the author's Conception are systemic, regional, project, andragogy, competence-oriented, innovative and disseminated, which realization provides stable interrelations of the internal and external media of the educational systems in the regional educational systems of advanced pedagogical training, and enables to realize the range of these approaches on the basis of innovation processes influencing on their development [3].

Practical value of the research performed by S. Zagorodniy (2017) consists of elaboration of the methods of stage-by-stage development of innovation competence of the leaders of comprehensive educational establishments in the system of post-qualifying education; creation and adaptation of diagnostic methods that can be used in the process of monitoring the development of innovation competence of the leaders in comprehensive educational establishments; selection and systematization of a complex of pedagogical methods and techniques that can be applied in the process of development of innovation competence of the school leaders in the system of post-qualifying education [7, c. 11].

Considering the peculiarities of management of the educational establishment leaders the researcher was able to isolate four components in the structure of their innovation competence: axiological-motivational (orientation to mastering and fulfillment of pedagogical innovations, interest

to the issues and research in the sphere of educational innovations, desire to professional self-development in the field of pedagogical innovation), theoretical-meaningful (theoretical, practical and methodical knowledge in the field of pedagogical innovation, awareness with the major notions, categories and regularities of innovation activity), procedural-activity (diagnostic, projecting, constructive, communicative and organizational abilities, essential for realization of innovation activity in the educational establishment) and research-reflexive (ability to analyze and assess pedagogical innovations, determination of the causes of success and failure, changes of ineffective approaches and kinds of activity) [7, c. 164].

S. Odaynyk [9] speaking about strengthening of innovations in the sphere of advanced training and professional development of pedagogical workers, emphasizes the importance of learning at the establishment of post-qualifying education which should provide the formation of a number of professionally important and socially necessary nowadays personal competence including communication culture, ability to work in a team, culture of innovation thinking, tolerance, professional responsibility, organizational features and leadership.

Therefore, this problem can be solved on the basis of innovation education with the major objective to develop cognitive activity and self-reliance of professional practical works in the process of their advanced training in particular.

An essential condition of innovation education is active learning with prevailing methods and techniques directed to independent mastering knowledge and acquiring skills by learners themselves in the process of their active mental and practical activity. The most common innovation approaches in modern advanced training system are: projecting, modeling, active and interactive forms of work with learners, problem-stated lectures and seminars, topical discussions, round table discussions, business game, training etc.

Implementation of innovation development monitoring in the establishments of post-qualifying pedagogical education is rather important as well. Summarizing different approaches to interpretation of this notion in the field of education it should be noted that monitoring of innovation development is specially organized continuous learning of the parameters in the innovation development of the educational establishment, finding deviations from the given purposes; elaboration of the system of measures to minimize deviations, and selection of developmental tendencies.

The sense of monitoring is to obtain a clear notion of changes occurring in the process of innovation development at the establishment at a certain period of time and stage, to find tendencies of the development of this process, to predict possible ways directed to support positive changes.

Monitoring of innovation development of post-qualifying education can include the following directions: monitoring of innovations with the purpose

to diagnose and predict the state of education; monitoring of innovation educational curricula; monitoring of the quality of continuous education innovation development; monitoring of innovation processes in education enabling to define the strategy and tactics of innovation implementation in the system of higher education considering peculiarities and opportunities of the establishment.

In Poltava region special attention is drawn to the formation of innovation educational space, elaboration and implementation of new educational patterns and technologies, coordination of innovation activity in particular. Thus, in 2017–2018 in the establishments of preschool and general secondary education 7 experiments on the all-Ukrainian level were conducted (57 establishments-participants) and 8 experiments – on the regional level (38). 2 programs of the experiments were realized, and 7 more were initiated. For the first time 19 scientific-methodological centers and methodological departments of the regional educational authorities participated in the research-experimental work on the subject «Psychological support of an individual educational trajectory of an educationalist in post-qualifying education», realization of the program «Elaboration and implementation of educational-methodological supply of the primary education under condition of realization of new State Standards of the primary general secondary education» started on both levels on the basis of comprehensive educational establishments in 2017–2022th.

In 2018 four educational establishments displayed their initiative as to their participation in the All-Ukrainian experiment «Electronic textbook for secondary education», 11 schools joined the experiment on the subject «Standardization of end-to-end social-psychological pattern of a massive media education implementation in domestic pedagogical practical work in educational establishments of Poltava region», 2 educational establishments participated in the experiment «Formation of the key civil and social competence in educational process on the level of basic secondary education». The most topical for experimental elaboration and implementation of new educational patterns and technologies became the subjects of social-psychological and psychological-pedagogical directions, development of competence in natural sciences and technologies, ecological and media competence, initiative, information-digital competence, and ability to learn for life.

The Institute staff collected and systematized information concerning implementation, probation and elaboration of innovation educational technologies in the work of comprehensive educational establishments in Poltava region with the purpose to determine the direction of pedagogical search and find the tendencies of development of a modern comprehensive educational establishment.

Interactive technologies appeared to be the most common (62 establishments of comprehensive education). Their essence is creation of

comfortable conditions for learning when every pupil feels his/her success and intellectual ability; it is mutual learning where both a pupil and a teacher enjoy equal rights and values in education. They are most actively implemented in the towns of Poltava, Kremenchuk, Horishni Plavni, Lubny, and 11 districts (Pyriatyn, Myrhorod, Lokhvytsia, Khorol, Hadiach, Karlivka, Kremenchuk, Novi Sanzhary, Zinkiv, Semenivka, Shyshaky). Projecting technology occupies the second position (60). Role-playing games are the third in rating (49). They assume involvement of pupils into an educational game, gaming simulation of events, “experiencing” situations etc. The most active are establishments from Poltava, Hadiach, Horishni Plavni, Myrhorod, and 11 districts (Kozelshchyna, Hadiach, Dykanka, Karlivka, Kremenchuk, Lokhvytsia, Novi Sanzhary, Zinkiv, Reshetylivka, Semenivka, Shyshaky).

In general educationalists from Poltava region determined 88 innovation pedagogical technologies topical for their activity, which were analyzed by the three criteria: to make success in life contemporary children should be able to think effectively, to act effectively and communicate effectively.

Analysis of educational technologies applied in comprehensive educational establishments of Poltava region is evidence of the following: educationalists prefer innovations of a repeated cycle; absolute innovations do not exist; threshold innovations are practically lacking (for example, the experiment with implementation of robotics technology in educational process); the biggest number of users was attracted by comprehensive innovations, that try to correspond to the above criteria and promote successful achievement of educational results.

Innovation technologies as themselves included educational experiments, projects and programs having appropriate financial, scientific-methodological support, media support; they were topical by their subjects chosen and had clear tasks.

Participation of the regional educationalists in innovation activity has become a school of success, school of a positive action.

The key to solve many educational issues is STEM-education based on the principles of fundamental nature and scientific value, and combines interdisciplinary and project approaches. Integration of natural sciences, technology, engineering and mathematics makes the basis for it. Implementation of STEM-education in Poltava region is realized according to the Plan of measures on implementation of STEM-education in Ukraine for 2016–2018 and develops by the following directions: educational robotics technology, IT-technology, projecting-research activity.

An example of the statement that success depends on persistent work has become an absolute victory of the team «PRIME ROBOTICS» of the comprehensive educational school of I-III degrees №1, Horishni Plavni Municipal Council, Poltava region, (instructor: the teacher of computer science Roman O. A.) in the Championship FIRST LEGO League 2018, held within the framework of the All-Ukrainian Festival «ROBOFirst – more than

robots». Positive examples in the region are organization of projecting-research activity of pupils, traditional regional scientific-methodological seminars «Design technologies in learning natural sciences» and organization of the festival of robotics technology «FERREXPO ROBOT FEST» in the town of Horishni Plavni. The elective course «Learn nature. 5th form» was probated and introduced into the educational process in the basic establishment «V.I.Vernadskyi Shyshaky Specialized School of I-III degrees». Its peculiarity is the use of STEM-laboratory equipment as the first digital educational innovation.

We introduce innovation constituents of the research performed by the Public Organization «School of adaptive management of social-pedagogical systems» (head: G. V. Yelnikova, Doctor of Pedagogical Sciences, Professor, Ukrainian Engineering-Pedagogical Academy, Kharkiv), presented by its participants in collective monographs dealing with further development of the adaptive management theory of the social-pedagogical systems and its application in the management of establishments of different levels in Ukrainian educational system:

1) «Adaptive management: essence, characteristics, monitoring systems» (2009). The origin and notions of adaptive management, its essence and characteristics are described. The concept of directed self-organization is presented, which is considered as a philosophic basis in the development of management in education on adaptive principles under conditions of information society. The presented concept of educational monitoring is considered as theoretical basis for realization of adaptive management providing directed self-organization and reflexive self-development of those involved into educational process [6].

2) «Adaptive management: applied aspect, expansion in Ukrainian educational system», (2015). An applied aspect of adaptive management is presented associated with its expansion in Ukrainian educational system. The system of algorithm management of a comprehensive educational establishment with application of ICT is given, which is considered a kind of educational management on adaptive principles under conditions of information society. Monitoring investigations from the positions of a qualimetry approach to assess the activity of educationalists, quality of advanced management qualification and attestation of leaders of comprehensive educational establishments are considered. The system of automatized calculations of monitoring procedures is analyzed as a necessary condition of realization of adaptive management of the regional educational system [5].

3) «Adaptive management of the professional education development» (2016). The theory and practice of adaptive management of professional education development are considered. Theoretical bases of adaptive management in the social-pedagogical systems are given. The major directions in the development of professional-technical education under

conditions of market economy are considered. Distribution of subjects concerning elaboration of professional and educational standards is analyzed including wide qualification professions due to changing the content of professional education in Ukraine [1].

4) «Adaptive management: inter-branch relations, scientific-applied aspect» (2017). Inter-branch relations of adaptive management are described, which are demonstrated in its expansion in the systems of general secondary, higher and post-graduation education in Ukraine. Theoretical-methodological bases of interrelations between the subjects of educational system management are presented, which is implemented by means of mutual adaptation under conditions of market transformations of the society. The origin and evolution of adaptive management and its application for professional development of scientific-pedagogical workers are considered. Monitoring systems of the quality of educational activity in comprehensive educational establishments and development of higher educational establishments of I-II accreditation levels are given. The system of marketing management of educational activity in the institutes of post-qualifying pedagogical education is analyzed as an integral part of adaptive management of social-pedagogical systems. Special attention is drawn to the theoretical and practical aspects of pedagogical expertise of the development of secondary education as an important component of adaptive management of the regional educational system [4].

Therefore, the authors of the monograph continue to develop the theory of adaptive management of social-pedagogical systems and describe its practical implementation in educational establishments including professional schools, polytechnic colleges, enterprises, and the systems of higher and post-graduation education.

On July 5–9, 2018 in Berdiansk the Summer School with international participation was successfully organized: «Adaptive management of new Ukrainian school: value guidelines». It included four scientific directions: «Stem-education in the context of adaptive approach»; «Pedagogy of partnership in the system of adaptive management of New Ukrainian school»; «Adaptive principles of scientific-methodological provision of the educational process of New Ukrainian school under conditions of reforming the system of Ukrainian education»; «Value guidelines in the formation of new generation of educational leaders in the context of adaptive management».

On the basis of home achievements and considering the world experience the following conclusion is drawn: while selecting the concept of development of post-qualifying pedagogical education establishment the patterns and technologies of innovation processes and their adaptive-pedagogical management should be created with the purpose of effective practical realization. It will open the way for Ukrainian post-qualifying education to enter European cultural-educational space.

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Remote Training of Future Teachers of Technologies on the Subject of "Processing of Structural Materials"

In recent years, the development of information technologies has made the modernization of the education system an urgent one. The essence of such modernization was more reflected in the concept of distance education, which, thanks to such a global phenomenon as the Internet, covers the broad strata of society and becomes an important factor in its development.

The use of distance forms and methods of teaching contributes to the individualization of the process of professional formation of future specialists, encourages them to work independently, forms an information culture, and sets up the mastery of innovative means of obtaining and applying information. The possibilities of distance learning fully correspond to the social order for the training of future specialists. The normative and legal substantiation of this issue was reflected in the state documents - the National Doctrine of Education Development of Ukraine in the 21st century (National Doctrine of Education Development, (2002)), the Law of Ukraine (Law of Ukraine "On Education" (with amendments and additions) (2017)), "About Higher Education" (Law of Ukraine" On Higher Education", (2014)), the State Program" Education "(Ukraine of the XXI century), "Concepts for the development of distance education in Ukraine" (Concept of the development of distance learning technologies in Ukraine, (2006)).

Distance education is a new form of organization of the educational space, where the limitations associated with the place and time of education, the preferences in the single national educational traditions and state educational standards, through the use of modern information and communication technologies of education are overcome. However, despite the fact that different systems are being created and used in the world for organizing distance learning (Blackboard Learning System, WebCt, Moodle, Lotus Learning Space, etc.), which take advantage of information technology, the problem remains to improve the quality and effectiveness of distance education.

Analysis of scientific psychological and educational literature and studies that have appeared recently, indicates a significant attention of scientists to the problem of introducing distance technologies in the educational process of educational institutions of different types. The theoretical basis for solving the problem is the scientific and pedagogical foundations of distance learning of domestic scientists V. Kukharenko, V. Oleinik, V. Rybalko, N. Sirotenko, P. Stefanenko, and also in the works of foreign researchers R. Delling, J. Blumstuk, D Keegan, J. Coom and Russian A. Andreev, M. Moiseeva, E. Polat, V. Soldatkin, A. Khutorskoy, and others.

Forms of distance learning, when the teacher and student are separated by distance and time, for example, correspondent training, existed in the

West since the 1840s. Attempts were made for their theoretical justification by leading scientists in this field, but only in the late 1960s, theoretical basis of distance learning.

One of the innovations of that time was the use of broadcasting in educational technologies. So, until 1922, broadcasting technology has become a new means of communication. The first university in the US, which introduced radio broadcasting in the educational process was the Pennsylvania State College. Teachers of the college used this method, broadcasting courses on the radio. And by 1925 already 200 colleges had received a license to conduct radio courses. For example, the State University of Iowa began offering students to take tests and examinations on the subjects of the course through radio broadcasting (Jovanovic, Kolobrodova, & Korotkova, 2018).

The theory is very important for the introduction of distance education, since it has a direct impact on the practice in this field. D. Keegan (Keegan, 1996), Sewart, Keegan, Holmbergedds (Sewart, Keegan, & Holmbergedds, 1988) considered that the absence of a long-time acceptable theory weakened distance learning. Such scientists as Moore (Moore, 1973), Peters (Peters, 1971), Wedemeyer (Wedemeyer, 1981) dealt with this issue.

In his work (Keegan, 1996) D. Keegan classified early theories of distance education as follows: 1. Theories of independence and autonomy. 2. Theories of industrialization of teaching. 3. Theory of interaction and communication.

Delling R., Wedemeyer C., Moore M. made a significant contribution to the development of the theory of distance learning of the groups mentioned above, namely, to the theory of autonomy and independent learning, to the theory of industrialization of teaching - A. Peters, and to the theory of interactivity and communication - B. Holmbergeds et al.

Delling R., who made the greatest contribution to the development of the theory of independence and autonomy, regards distance education as a multidimensional system of learning and communication processes using an artificial signal carrier. In his works (Delling, 1978) eight dimensions of this system are indicated: a pupil; society (including legislation, government, family, etc.) organization (distance learning institution), which helps the student to learn; The purpose of training; the meaning of what needs to be studied; result of training; distance; signal carrier.

It is interesting in this approach that R. Delling refers to distance learning institutions as organizations that help the learner to learn knowledge, and also emphasizes the absence of a teacher among the eight parameters of the above-mentioned system.

The article (Vinogradova, & Klobukova, 2018) deals with technologies used in distance education in the United States in the twentieth century. Particularly detailed analysis of the activities of the largest school at the University of Nebraska-Lincoln. Distance learning programs in this school

and university are unique and innovative. The authors considered the positive aspects of the introduction of distance learning in the educational process.

The distance learning course is an artificial, dialogic opportunity for learning, in which an artificial carrier is a bridge between a student and an educational institution.

The concepts of feedback and two-way communication are central to Delling's approach to distance learning. He sees a significant difference between monologic learning opportunities (books, newspapers, magazines, films, lectures, discussions, self-training courses) and dialogical (classroom, conversation, letters with answers, distance courses), asserts that in distance learning there is no teaching, so that the teacher does not exist in the system, and the functions related to the student's learning of the material within the educational institution are carried out by various machines, people and materials. R. Delling minimizes the role of the teacher and educational institution and emphasizes the autonomy and independence of the student. He explains this attitude to the teacher and educational institution by the fact that the students of distance learning programs are mainly adults. The goal of the school is to help the student when he wants it, if he himself can not cope with the solution of the tasks. If the student can work autonomously, then the only information that the institution can help him is information, documentation and a library.

Distance learning is considered as a qualitatively new, promising form of education. In a vocational and technical school, distance education is a part-time, part-time training of qualified workers and junior specialists, retraining and advanced training. Informatization of education in Ukraine is one of the most important mechanisms that affects the main directions of modernization of the educational system. Modern information technologies open new prospects for increasing the effectiveness of the educational process. The paradigm of education itself is changing. A big role is given to methods of active cognition, self-education, distance educational programs.

Distance learning - based on modern information and communication technologies of education and professional development.

Distance learning technologies can be considered as a natural stage of the evolution of the traditional education system from the chalkboard to the electronic board and computer training systems, from the library to the electronic library, from the ordinary audience to the virtual audience.

The effectiveness of distance learning is based on the fact that the learners themselves feel the need for further training, rather than being subjected to external pressure. They have the opportunity to work with educational materials in this mode and the amount that suits them directly. The effect largely depends on how regularly the student is engaged. Consecutive performance of control and diagnostic assignments and graduation work, as well as support from all aspects of the instructor-coordinator, ensures the systematic mastering of knowledge.

Analysis of the introduction of distance learning shows that the real contingent of potential students can be attributed to those who are often on mission, military personnel, geographically remote listeners, women on maternity leave, people with physical disabilities, those who combine study and work, employees, raising their qualifications and similar to them. And in spite of the fact that distance learning involves the acquisition of basic secondary education, this direction has not received active introduction into the educational process of schools, colleges and other secondary special education institutions.

Not everyone succeeds in studying for five years within the walls of the university, but modern technologies can give a second chance. Distance education - distance learning - has become a true innovation of the 21st century. Virtual course of lectures allows you to reduce or stretch the learning time at your discretion. Among the advantages of such training is the opportunity to study in any place where there is a computer, the material is strictly dosed for weeks and coincides with all the requirements that are imposed on students of any university, in addition, the student has the opportunity to perform tasks at a convenient time for him. The process of accomplishing tasks remains behind the scenes. Theoretically, they can be done by someone else. To surrender the session, we will have to repeat Lomonosov's feat - to come from our native provinces. Distance education is cheaper than stationary, but due to the purchase of a computer and a fee for the Internet a little expensive.

On the first course of distance learning, many students suffer from a lack of control by the dean's office. The main difficulty is getting yourself to learn. Another problem is the lack of personal communication with the teacher. The question by e-mail reminds inquiries in help service, and seminars remind Internet forums.

For some, the new education system is the only available way to get a higher education, the rest - would never exchange traditional training for distance education, since they perceive the university not only as a place of study, but also the possibility of personal communication with students and with teachers.

The effectiveness of distance learning for graduates and students is also in the fact that the opportunity to study remotely does not limit the ability to learn and improve in professional work while working at the enterprise. This level of education is considered by the students to be quite sufficient and possible for the implementation of their life plans. Many of them believe that the knowledge acquired corresponds to successful work.

The most important components of distance learning are: the creation of practical situations during the educational process, the opportunity to prove oneself, to realize oneself, the clarity of the organization of the educational process, the individual approach. Least important: participation in research and development, the opportunity to "show oneself".

In the process of distance learning, students often use educational material on paper and in electronic form.

Ability to work on a training server will help students solve problems with educational material and counseling at a distance in their spare time. Assessing the success in future professional activity, students who do not have work experience, assess their chances a little higher than those who are working at the moment. The training server most students use infrequently, but there are those who use it every day. The most active in attending the training server are senior students.

Most students prefer such forms of control: control and certification work, abstracts, solving practical problems, assessing the level of knowledge in the process of personal interview with the teacher, self-esteem. Most students of distance learning technology, regardless of the course, study is easy and positively influences them. So, more than half of the students noted that during the training they had mastered the ability to work independently, increased their level of knowledge and gained confidence in their abilities and plans for the future. It can be concluded that students are friendly towards distance learning.

Talking about the features of distance learning technologies, it can be noted that this type of training is not suitable for everyone. The training system in Ukrainian schools is not focused on the formation of independence for students, and sometimes this technology is simply not suitable for a person.

The main goal of distance learning is to allow everyone to learn, who has the desire to get a profession. Interest in this technology training respondents see not only in the desire to receive education, but also in the fact that information technology is being introduced into our daily lives.

Teaching a technical block of disciplines for future technology teachers should be closely related to the surrounding world, namely with the technologies and mechanisms around us that every student, every student, if not at least, can at least see next to each other. One of the methods of training future technology teachers is the leading link for children in schools in the world of technical awareness and with some perseverance and the world of technical creativity.

The use of distance learning should put before the student the task of knowing the surrounding world, namely its technical component. One of such ways is to compile remote practical works in such a way that they combine work with theoretical material and practical component.

Consider one of the options in which you can combine these two components in the study of the subject "processing of structural materials." Let's divide the practical work into three parts: theoretical, practical and creative. In the first part, they will suggest not to write down brief theoretical information, but to follow the path of cognition. We put the question in such a

way that the student wrote down for example: not only signs of "manufacturing technology" and its types, but also found:

- differences in the types of technologies, and how they differ, the direction of their use;

- the equipment that is used, its variety, than it differs from the like;

- examples of products obtained by these technologies.

The last part of the paragraph can be used the method of "crossword puzzles" cognitive and educational value of which noted A.S.Makarenko, K.D.Ushinsky, A.V.Lunacharsky, and in the educational activity the use of crossword puzzles is reflected in the works, A.A.Eskendarov (Eskendarov, 2007), R.S.Gurevich (Gurevich, Konoshevsky, & Melnik, 2005), A.V.Kovalenko (Kovalenko, 2010), J.D.Malakhova (Malakhova, 2002), B.V.Korneichuk (Korneichuk, 2003). Using a crossword puzzle will allow the student's creative development, selecting words and learning to formulate questions on a given topic, compiling it in the correct sequence.

The second part of the work can be presented as "practical", in which the student armed with theoretical skills in the world around him finds a system (mechanism) in which there is a detail produced by technology according to the topic of practical work. Having found such a system, the student takes pictures of her with her student ID card, thereby noting what exactly this mechanism has found. The next part is "knowledge". A student using search methods (literature, the Internet, etc.) reflects the diversity of such mechanisms in the surrounding world. Logically composing from origin to development and diversity, briefly highlighting the main points of such development and dissemination. This approach will allow the future technology teacher to increase his horizons and prepare for the education of children, expanding his technical horizon. The variety of designs, mechanisms, systems allows each student to find his own way of solving this problem. The teacher in turn approves after discussion and presentation by the student of his version of the "system".

The third part of the work is aimed at a creative approach to cognition of the world. The student uses his knowledge and literature to describe the role played by the part (which is made according to the specified technology) in the mechanism or system (what it drives, what role it performs, in what environment it works, what connections it has, etc.). The last stage is the drawing (sketch) of the detail, which will allow the student to consolidate intersubject communications and creative activity, since the dimensions and the type are taken from a particular detail.

Using this approach to teaching the subject of processing of structural materials, allows us to use the process of cognition and creative approach that qualitatively finds itself in distance learning. The student can do other things, while recycling the theoretical material in his head. This way of understanding the technical world can be qualitatively used in the distance

form of training, and will give a qualitative result in the preparation of future technology teachers.

The potential of remote technologies is assessed highly. However, to a possible replacement of traditional technologies, remote ones still need to be cautious. Often an opinion is expressed that it is necessary for any person to provide an alternative and free choice of educational technologies. But there is a certainty that the future is for remote technologies. Students who study remotely are more adapted to external conditions, they are more independent, sociable and sociable, are not afraid to make important decisions, which means that it will be easier for them in the modern world of market relations.

In modern conditions, graduates who study remotely tend to appreciate the prestige of their profession. They, like many, experience difficulties, but are the most successful and better adapted in the professional sphere. Evaluation of satisfaction with their place in the team and relations with the leadership of graduates of distance technology is somewhat higher than that of graduates of traditional education.

Currently, distance learning technologies have already taken one of the leading places in secondary vocational education. Interest in obtaining a specialty increases remotely, and qualitative characteristics of specialists differ only in positive moments: self-confidence, easy adaptation in the team, the ability to self-educate. A comprehensive analysis of distance learning has confirmed the hypothesis of quality training of mid-level professionals. The financial side of the question of why many students prefer distance learning is still the least researched. In this sense, the fact that a student of a distance learning institution can work and receive wages in the course of training (although the full-time student is also, in principle, is not deprived of such an opportunity), testifies in favor of distance education, to learn without a career, to improve professional knowledge and skills, thereby increasing their qualifications and status at their main place of work.

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Management of Innovative Training of the Executives of the Health Care System

Life-long learning is essential for individuals at all levels to remain relevant in today's fast-paced environment. Faced with constant challenges, changing technologies, and a fluid environment, executives especially must continue to broaden their perspectives and strive for continual professional executive development.

Executives must specifically strengthen and reinforce their executive core knowledge, skills and qualifications to make informed decisions and devise new innovative solutions to the complex challenges they continuously encounter.

The managers' preparation for future challenges, the development of the ability to maintain both personal and organizational professional development, assurance of the ability to move towards the strategic priorities of the executive development in the context of limited resources is an important task of the modern management of innovative training of healthcare managers in Ukraine. This ensures maximization of the managers' potential effectiveness as well as significant organizational results under the conditions of modern society development.

On the other hand, the rapidly changing field of medicine demands that future physician-leaders excel not only in clinical medicine but also in the management of complex health care enterprises. However, many physicians have become leaders "by accident," and the active cultivation of future leaders is required. Addressing this need will require multiple approaches, targeting trainees at various stages of their careers, such as degree-granting programs, residency and fellowship training, and career and leadership development programs [1].

Ukraine implements the transformation of socio-economic systems, changes in the administrative-territorial structure, performs institutional transformations in order to develop public management on the principles of civil society, democratic values and the basic principles of a law-governed state - a new paradigm of the innovation system of state governance was formed, when the units of governance under are constantly in a state of transformation and reformation due to the organizing influence of the state. All these processes are launched on the grounds of severe socioeconomic, political, external conditions and a deteriorating state of public health and demography. Accordingly, healthcare managers should have up-to-date managerial skills and understand the issues of the healthcare sphere for a high-quality, competent management of the health sector, which is a vivid indication of the implications of the effectiveness and sufficiency of the management processes.

The discussions on the carrying out the health care reforms and well-thought-out formation of the staff have been ongoing for the past 20 years, but there is still no consensus on what specifically needs to be done to improve the quality and accessibility of health services in order to make the

work of the doctors prestigious and to ensure the proper system's management.

A clear understanding of our goals and functions, the way we might develop and operate the organization is definitely critical for managers, as well as the opportunities for wider prospects for career development and continued management of business outcomes of health care organizations. Therefore, the quality of the preparation and increase in the employment opportunities is a crucial part of the wise and successful development of public management.

For young managers, training usually starts with the deepening of the understanding of common business sectors and their functions, such as finance, innovation, marketing, strategy, etc. Top managers need to achieve a profound awareness of how the world is changing, which mega-trends shape the future, etc. Many programs are aimed at improving self-awareness through the advancement of leadership practices, challenging and engaging, consolidating the learning to address real-life situations. They should learn to look for the new perspectives on social problems, be able to find and produce change, continue to evolve under all conditions and to be motivated and focused not only on obtaining personal results, but also on the achievement of the goals of the organisation.

In the modern world of rapid transformations, globalisation and complexity of modern challenges and unexpected consequences, the structurally complex elements of the health system work under the constant tension of complicated and demanding management of the maintenance of the health process.

On the other hand, in recent years the course for euro integration that is being fulfilled according to the EU-Ukraine Association Agreement and "Ukraine-2020 Sustainable Development Strategy" provides for the transformation of socio-economic systems, changes in the administrative-territorial system, and institutional transformations. The country moves from state administration to the public management on the grounds of civil society, democratic values and the basis of a law-based state.

It is equally important to point out that Ukraine is transforming while experiencing a period of difficult socio-economic, political, and foreign economic conditions - we may list the following complexities:

- the imperfection of the infrastructures in the country, economic imbalances, lack of confidence in the stability of development;
- the discordance of the politics in recent years that has led to the ineffectiveness and disparity of the decisions and management practices in various spheres of the country's life;
- the inconsistency in the adoption and implementation of the administrative decisions has negatively affected the country's position and led to the overloading of the economic and socio-humanitarian spheres;

- the prolongedness, sporadicity and incompleteness of the reform processes in various sectors of the country's life led to the inability to use them effectively for the benefit of the development of the Ukrainian society;
- the population aggravation and the growth of social disparities;
- worsened economic situation characterized with chronic budget deficit, devaluation of the hryvnia, reduce of real value of the allocated funds, respectively, the country's inability to ensure implementation of the adopted social programs and activities during growth and modernization of social needs, corruption; loss of income by the most people etc [2].
- the rapid growth of uncontrolled migration, in particular the intellectual and labor emigration as well as the emigration of the reproductive potentials of the country and the nation;
- difficult demographic situation, aging of the population, etc.

Such transformations have led to negative consequences in Ukraine's healthcare sector.

For the last 15 years, unfortunately, in Ukraine the demographic situation is characterized by a decrease in the total population, reduction in life expectancy for both men and women; decrease in birth rate, increase of death rate, lack of natural growth; aging of population with increased "load" for working persons, deformation of gender and age structure by predominant death rate of men; increase sanitary-epidemiological problems at risk of outbreaks and dissemination of infectious diseases, worsening the situation of tuberculosis and HIV; significant deterioration in the health of the nation with increased premature mortality and so on (Лібанова, Курило, 2012; Рингач, 2014) [3,4]. The problems and risks of health care also include reducing the availability, quality and effectiveness of medical care (prevention, treatment, supervision) at all levels and medications support, medicines, which come amid a surge of quantity, change of need for medical and social care and growth in the number of contingent in need for state care; difficulty of healthy lifestyle [2].

The situation is aggravated by the conduct of hostilities in the East of the country, which leads to:

- the constant growth of the forced migratory movement of the population;
- the emergence of two new social groups: internally displaced persons and participants of the anti-terrorist operation and members of their families;
- the damage to infrastructure and territories;
- the emergence of new problems and complications of Ukrainians' health, including mental activities in the area of combat operations and wounding of military and civilian population;

- the growing abuse and dependence on alcohol, drugs and social behavior;
- the warming of the social climate, aggression of society, stigmatization, etc.

Such complex turbulent circumstances and transformations require new approaches and management tools for the formation and implementation of the adequate, timely and right managerial decisions and measures.

Consequently, for a competent withdrawal of the country to the path of development and prosperity, it is necessary to reform the system and train managers of different levels for all branches of the country's life.

Public management reform is among the 20 directions for changes of primary importance in 2018 on the agenda of the Ukrainian reforms. In addition, it is included in the Strategy and Development Plan until 2020. "Ukraine's Sustainable Development Strategy 2020" [5] is a document that defines the priorities for our development to meet European standards of living.

"Strategy 2020" [5] includes 62 reforms, the most important of which are 8: national security and defense systems, renewal of authorities and modernization of anti-corruption system, judicial and law enforcement systems, decentralization and public management, development and deregulation of the entrepreneurship and health care systems, etc. and 2 vital programs: the energy independence and popularization of Ukraine in the world, the advancement of the interests of the state in the world information space. The main prerequisite for program implementation is the public agreement between the authorities, business and civil society, in which each party has its own area of responsibility.

The natural process of replacing the traditional mechanisms of social governance, so-called "command and control" form, with the market "motivate and obtain the result" with the application of new, more flexible, approaches to the management of society focused on providing high-quality public services has begun - a new paradigm of the innovation system of public management.

Various state governance systems are being improved, first and foremost, in line with the historical nature of economic and socio-political transformations of societies. Modern state administrative paradigms shift towards the so-called doctrine of a "new innovation system of public administration," that is based on the replacement of different parts of the bureaucratic mechanism with flexible, autonomous organizational structures that are responsible to society in order to enter into partnerships with the private sector, citizens and communities [6].

According to the encyclopedia of public management, public administration is the activity of the state (governance bodies), aimed at creating conditions for the fullest possible realisation of the state functions, fundamental rights and freedoms of citizens, harmonisation of various groups

of interests in society and between the state and society, ensuring social development of the respective resources [7]. From the beginning of the formation of modern Ukraine, the state administration had quite a dominant character, and the key elements of it were the state and state power. In comparison, today, public management is developing as a key element of society and public authority.

M. Minenko states that there has been a transformation of "state administration" into "public management", and in due course into "public management": the "bureaucratic model" in the public sector has turned into a "market" one with the shift of emphasis on performance in accordance with the instructions and well-regulated rules for providing high-quality public services and achieving efficiency and quick results. [8].

Unlike state administration, "public management" is a purposeful interaction of public administrations with legal entities and individuals regarding the implementation of laws and regulations and the fulfillment of a number of core functions: guiding planning that defines the desired directions of development, the creation of juridical, economic and other conditions for realizing the interests of the participants in interaction, such as division of labor, cooperation and coordination of activities, monitoring of results, etc. [9].

The term public management came from the law and practice of foreign countries - it involves the functioning of a universal organizational and legal mechanism for identifying, coordinating and implementing social needs and interests, forming the rights and responsibilities of participants in social processes and their relationship in the right field. [10].

According to the UN Glossary, public management has many meanings: - it is focused on the implementation of state policies and programs, as well as the coordination of personnel activities; - it is connected with the implementation of laws and other norms adopted by the legislative bodies of the state; - it is used in administrative, political and legal theory and is a procedure for the enforcement of the legislative, executive and judicial branches of power in order to implement state regulation and provision of services to the population, etc. [11,12].

According to the UN, public management has two related meanings: 1) a holistic state apparatus (policies, rules, procedures, systems, organizational structures, personnel, etc.), which is financed from the state budget and is responsible for managing and coordinating the work of the executive branch of government and its interaction with other stakeholders in the state, society and the external environment; 2) management and implementation of the entire complex of state measures related to the implementation of laws, regulations and decisions of the government and management related to the provider of public services. [12, 13].

T. Kondratyuk believes that public management is a subsystem of the social system, a component of society, which functioning and development are strongly influenced by all other spheres of social life. [14].

Public management is still sometimes identified with state administration, but administration itself is a managerial activity, since the Latin word "administratio" means "service", "help", "management". Administration is the prerogative of the executive authority or official (civil servant). [15].

In the narrow sense, public management is also considered as a professional activity of civil servants - all activities are aimed at implementing government decisions. It is also considered to be an interdisciplinary academic field based on the theory and concepts of economics, political science, sociology, administrative law, and management. In the broadest sense, it is looked at as a system of administrative institutions with a definite hierarchy of power, through which the responsibility for the implementation of government decisions goes from top to bottom. [16].

Public management combines state and public administration and consists of a set of institutions and executive bodies. [17].

The main factors behind the rise of "public management " are: the requirements of society to reduce the number and increase the productivity of government agencies; the urge to introduce a market management style; the need for the decentralisation of the power vertical; the focusing on results rather than on procedures. [8].

Public management is a kind of management activity of public authorities institutions, through which the state and civil society ensure self-control of the whole social system and its development in a certain direction [18].

V. Martynenko considers public management to be a form of implementation and realization of public management, provided by the representative bodies of democratic governance through its executive structures [19].

K. Kolesnikova considers public management as a part of public administration (government) aimed at the development of the country. The aim and methods appear to be based on the principles of democracy using the latest approaches and effective management technologies to fulfil a certain level of citizens' needs by world standards. [12].

Public management is a managerial influence - the effective interaction of the state apparatus and society with the adoption of decisions and actions important for the country (society, population); - an open public sphere of public interest, where all public institutions, along with the citizens, act as objects and subjects of management as well as autonomous units in cooperation with the authorities and management. It can be suggested that public management is both a management of society and managing together with a society where the logic of the market prevails [20].

In general, the concept of "public management " reflects an integrated mechanism, the subsystems and elements of which are political program guides and priorities, normative regulation and other procedures, financed by the state or local self-government centralized and decentralized organizational structures as well as their respective staff who are responsible for administering activities in a particular field of social relations at the national, subnational and local levels. [21].

Even J. M. Prinfrir and R. Prysytus considered public management as the organization and direction of human and material resources to achieve the desired goals [22]. Abramicheva N. T. states that public management is the influence of the entity holding the public power on the object of any public interest [23].

It should be noted that issues of public and internal politics and public life both at the country level and at the community level are constantly influenced by the public administration. Public management is always carried out in the context of social events and socio-economic, political and cultural conditions of the realities and, undoubtedly, cannot be isolated from society. It is about being a part of this society (the staff of public administration - political officials, state and municipal officials) and implementing different decisions in close conjunction with society. [21].

So, Ukraine develops public management - an instrument for quality management of cooperation between the political system, the public and private sectors and citizens, with the obligatory constant maintenance of the balance of the provision of municipal, state interests and interests of the people, with the involvement of society into mechanisms of controlling the authorities.

In addition to widespread public involvement, understanding of service delivery and transparency became an integral feature of public management in Ukraine. This complicated process of finding common solutions, achieving consensus on an active and productive participation of a wide range of representatives of various social spheres - politicians, authorities, scientific and expert fields, civil unions and citizens, has begun. But today, the level of organization of public authority still does not provide a functionally sufficient and structurally consistent system of governance in the country.

An important issue is the provision of qualified management representatives to health care systems as a key indicator of the effectiveness of the taken decisions and the implemented actions of public management. Unfortunately, the question of the formulation of personnel policy is still under discussion and the well-thought out way of forming a human resources in health care is still unclear. The reasons for this are lack of funding, imperfect legislation, ineffective management and an outdated model of medical education. At the national level, sectoral reforms are already launched today, but there is still no consensus on what exactly needs to be done to improve the quality and availability of health services, to make the

work of the doctor prestigious and highly skilled, and, most importantly, to update the base for the preparation and improvement of health care managers.

In order to ensure high-quality public healthcare management in Ukraine under current conditions of constant turbulence, educational processes and training programs for managers have already been reformatted with an orientation towards the training of public management executives.

We are convinced that it is also important to focus on the ability to make the right decisions under constantly changing conditions, to perceive, stimulate and innovate - new or improved products / services, technology, techniques, production and / or management, which will lead to different types of utility and will contribute to improving upgrades.

The training of modern managers requires the gaining of practical skills and abilities to work with people, especially considering that she/he is the manager of innovations, implementation of changes. It should also be taken into account that the managerial actions and procedures for making managerial decisions directly depend on personal qualities - education, qualifications, and professional skills; the correctness and effectiveness of the chosen strategy, as well as tactical decisions and actions, depends on them in a proportional way. Also, we should indicate the fact that any innovative activity in the field of health, like any other, requires the full development of the manager-executor - relevant knowledge from other, related spheres of public life.

Another important reason for the importance of conducting research and attention to this topic is that Ukraine needs humanization of governance with the creation of appropriate conditions for the disclosure of the creative potential of managers and executors of different levels.

The term "innovation" corresponds to English "innovation", and literally means the process of using something new in any field of activity that extends to the entire spectrum of social phenomena and processes - a new order, new customs, new methods of work, a new form of management, etc.

We agree that innovation is not just "use of something new", the emergence of this "new", but first and foremost, the implementation and spreading of new in the social practice of the life of society and / or the person, accordingly - the use in a certain area of society's life of innovations of intellectual, technological developments that help and improve the effectiveness of socio-economic and other activities.

Recently, both the in the academia and among consultants in management, the aspect of innovation in management is more and more present (Ciumara, 2013) [24]. Innovation in management is defined as the invention and implementation of practice, structure, techniques or management process that is new to the highest level of development in the field and that is accomplished in order to contribute to reaching organisation objectives (Birkinshaw, Hamel, Mol, 2008) [25].

Compared to other types of innovation, management innovation has a unique ability to apply radical and long-term changes in competitive advantage (Hamel, Breen, 2010). Innovation in management involves conducting and practicing managerial skills, determination and courage in taking responsibility for implementing changes that initiates progress and productivity.

Innovations - updating and / or transforming existing models, tools, methods and techniques, such as educational ones, that over time transform the familiar processes and become general. Therefore, for public management innovations are the development of new methods and tools, methods and forms of work of government institutions and their cooperation with representatives and organizations of civil society, private sector, etc.

According to A.Gevyuk, understanding of the essence of innovation processes in public management has a number of problems:

- first, it is the practical implementation of scientific and theoretical progress in practice - the development of innovative theories contributes to a more effective social development of social institutions, regardless of their political system;
- secondly, it is the subordination of all innovation processes to the task of improving the quality of the management process - a special role of the conceptual components of organizational management foundations;
- thirdly, the introduction of new information and communication technologies is also an important element in the innovation process [6].
- The human resource of health care is a major factor in the perspectives and sustainability of development, competent realization of the state policy and the implementation of all necessary reforms. It depends on providing quality management services and shaping the human (reproductive and labor) potential of the country.

So, the development of innovation management education for healthcare managers is an important task that needs monitoring of opportunities and constant updating.

Public management is the basis of the functioning of modern Ukrainian society and represents a certain process of social relations with numerous associations of subjects and objects, which transformation and modernization of the latter times are aimed to increase efficiency, effectiveness, responsibility for providing quality, timely services to the population.

It should be noted that the current practice of using public management in Ukraine is aimed at ensuring both efficiency and transparency, as well as the ethics and fairness of actions. Today, the responsibility of leaders of public authorities for the formation and quality use of any resources have increased;

the requirements for the efficiency and effectiveness of their activities are also increased.

The innovative course of Ukraine anticipates the development of new progressive and perspective approaches that are developed on a scientific basis in order to ensure the effectiveness of political, social and economic development, growth of competitiveness and Ukrainian society. The development of society is always knowledge-based, therefore, quality education is the most important resource for the effectiveness of human potential, especially considering the turbulence and the unprecedentedly rapid increase of information and knowledge every day.

Solving problems of research, identification, analysis of the availability and assessment of training needs and improving the qualifications of healthcare management personnel is important for modern Ukraine and helps to determine the nature, profile and level of priority needs in the education of this contingent. For example, yesterday's focus was on measuring results, transparency, accountability, but today we need the ability to intensify interconnections with communities and citizens, to generate trust and satisfaction.

The research has been implemented, but the national scientific base is not yet sufficiently developed. The need for continuous improvement of knowledge, skills and development of new competencies of management in the field of health care, on the other hand, encourages further research on this topic. Today's new competencies require workers of all levels - clinicians, directors, administrators and, in particular, managers, to effectively carry out their activities and to succeed in the work of the organizations of this system.

The health care system is multifaceted, complex, constructed from numerous components, which, in the dynamics of modern risks, threats and the speed of processes and changes, produce sometimes the most unexpected results. For this reason, attention should be focused on research into how to improve its management processes at all levels, with a particular focus on, at our point of view, the adequacy of the training of modern managers - senior level executors in the health care system in Ukraine.

There are four groups of modern universal skills that form the profile of the current manager of healthcare, that are relevant in Ukraine:

Interpersonal skills - affective, emotional, allowing to work with other people. They include: leadership - the ability to inspire and motivate others, "sell" them ideas, negotiate and promote joint projects; cooperation - self-awareness, adequate self-esteem, communicative ability, ability to cooperate and work with teams; delegation - the ability to establish and develop relationships, provide others with opportunities to growth, the ability to manage groups and teach others.

The ability to manage information - collecting, organizing, interpreting and sharing. These include: change management, innovation, creativity - ability to adapt to change, implement changes, provide innovation, creativity,

ideas generation, ability to cope with and provide organizational development in the new environment, identify strategies and solutions; collection of information - the ability to understand and to be aware of organizational events, the ability to hear and understand the source of information; analysis of information - the ability to assimilate information from different sources, to identify its significance in order to establish communications.

Analytical skills - knowledge / thinking skills that allow assimilate new information and use it for future planning. These include: planning - the ability to "see things", conceptualize, predict the future and develop strategic plans; quantitative data analysis - activity of using tools / methods of analysis from functional disciplines (finance, marketing, operations management), statistics and computers for data processing; technological control - an important and compulsory option in the modern conditions of the development of an information and communication society - the possibility of using information, supporting or creating new technologies or processes, understanding of current technological trends, etc.

Action skills - behavioral skills - planning, management, and action. These include: the formulation of goals: the ability to define goals and standards, allocate relevant personnel and resources, evaluate the effectiveness of the organization; adherence to the achievement of the goals of the organization, the ability to carry out the tasks of the organization in the conditions of limited resources, to observe timelines, to ensure efficiency; entrepreneurial skills - ability to take initiative, seek and use opportunities and risks, make decisions in conditions of uncertainty.

The well-known and widespread today's knowledge and skills of healthcare managers, actively promoted to development, relate:

- strategic planning of the organizations' development of with understanding of the processes of the necessity to collect the right valid data, the required investment, an allocating resources and the need to develop and / or improve certain products / services; to use an analysis tools, measuring progress, reporting, etc; in order to ultimately ensure the usefulness of the strategic plan, in accordance with with the mission and vision of the healthcare organization development;
- leadership and coaching – as the ability to lead, convince, establish communications, to use the power in favor of the organization's progress and achievement of goals, to establish relationships, to listen, to create trust, mutual understanding and empathy, etc;
- changes' management – is about how to prepare your organization for changes at all levels, focusing on communication and developing a plan to improve standards, quality and results. It's an ability to change, adapt and develop that was marked as the only stable competitive advantage in the modern healthcare environment [26];

- leadership in changes - the ability to predict where the change originates, to support that impuls, to facilitate the implementation of changes. It also about to understand, when and how to be active / reactive, what are the leadership styles, the ways to overcome inertia and strategies to overcome individual resilience to changes, etc;
- innovativeness – an application of the creative ideas of subordinates for achievement the useful results. Ensuring compliance with time and situation; and competitiveness. Managers should be able to determine how to use the creative energy of employees to get new, better results, or efficiently attract additional resources, or to improve the process of performing the functions of the organization itself. It's important, in our opinion, to have the ability to define strategies for encouraging differences in thinking and to use the methods of stimulating the culture of innovation in the organization. It is useful to use technologies to collaborate and share knowledge that drives creativity and innovation; to promote innovation as a organizational value; to include innovation as a leader in development competency n organization; to develop an "idea-finding" program; to create a review process for innovative ideas that signals that innovative ideas are valued; to recruit for creative talent;
- decision-making - is a necessary skill for successful executives to manage day-to-day operations in long-term strategic planning. The ability to make decisions on a defined methodology, based on proven activities and organizational approaches, is crucial for managers at all levels of government to create an optimal conditions for success and achievement of goals;
- teambuilding – the ability to group people, diagnose team needs, set expectations for the development, the ability to influence the formation of a microclimate and culture, build autonomy, support leaders, etc;
- conflict management - how to prevent and transform the conflict on the energy of a positive movement towards achieving the goal of the organization, etc;
- negotiating - is a practical, everyday skill that is critical to any manager in any organization, because, in fact, each conversation is a negotiation. This is the very skill that is need to practice and master in order to successfully and effectively use in everyday life;
- stressmanagement, selfmanagement and trains for creativity development.

The key to managers is the ability to plan, design and manage the healthcare institutions and systems, intelligent and prudent consumption of scientific researches and related information, etc.

It is precisely for the development of these qualities advanced healthcare managers' training programs are being developed, to gain enormous benefits from the important role that managers make during the period of changes.

Today, the regular structured improvements in cooperation mechanisms between education and healthcare sectors, other national authorities and the private sector have been developed and implemented in Ukraine, with the aim to improve the correspondence between the education of health care managers/executives and the realities of the health care sphere functioning, facilities and capacities and the provision of healthcare services. As in the world, the dynamics of public-private dialogue aimed at addressing health care and promoting the development of a new era of the education for healthcare sector leaders has increased.

Health care executives and managers need to have complex managerial responsibilities both in new health care delivery models and in traditional hospital facilities, bearing in mind that the old boundaries between administrative and medical management are slowly disappearing. In most institutions, a small number of healthcare managers consider that they are properly trained through formal education for a competent healthcare manager [27].

Competent managers should have developed managerial skills and be aware of health care problems. A number of research, identification, analysis and assessment of training needs have been conducted in Ukraine to develop and implement appropriate programs to meet the current needs for staffing of health care authorities, on the basis of which the nature, profile and level of priority needs in the education of this contingent are determined.

Among others, for example, public management needs the following competencies:

a) intellectual:

- the ability to analyze and forecast activity;
- the ability to develop and justify choosing the most effective solutions.

b) functional:

- the ability to use instruments of democratic governance in the spheres of state and regional governance, European cooperation;
- knowledge of social development, regulation of the economy, public finances, communications, constitutional and legal principles of governance, e-governance, territorial administration, European institutions and procedures, human resources management technologies.

c) social:

- the presence of communicative abilities;
- the ability to work "in a team";
- readiness for cooperation and resolution of conflicts [28].

Although, there is a low level of consensus on the set of basic competencies and skills, required for healthcare managers, nobody calls into question the need for additional academic improvement and professional development for competent management of functions in an extremely complex and dynamic environment such as health care I [29, 30].

Increasing the level of education and training is an essential component of strategies for strengthening the human resources capacity of health care, but its greater effectiveness will be lost if it is not supplemented by policies to preserve graduates and provide them with working conditions that will enable them to use their knowledge and skills productively (GHWA, 2008). WHO has identified four recommendations for the best practices: on the Government's political commitment to reform and leadership in their implementation; on the establishment at the national and / or subnational level of cooperation and joint responsibility in the field of education and vocational training of health care personnel; on taking into account the needs and absorption opportunities of the labor market and aligning them with the national plan for the development of health care personnel; on the creation or strengthening of national and subnational institutions, capabilities or mechanisms to support the implementation of the implementation plan for this reform (eg legislation, policies, procedures) [31].

In recent years, at the National Academy of Public Administration under the President of Ukraine, innovations have been actively implemented in training programs for the training of managers/executives for various fields. The very basis of the all programs at all departments were changed from the state governance to the public management. Thus, the new educational approaches and new methodic were already created for new public managers to become modern, adequate and proficient. That process of innovations is still active.

Over the last 2 years, the staff of the Department of Public Health (today - the Department of Social and Humanitarian Policy) together with «Deloitte Consulting LLP» conducted an innovative educational project on the formation and acquisition of listeners' competencies, in particular, the modern theoretical and practical knowledge, skills and abilities for the comprehensive professional knowledge of the policy and management in the health care economic and financing, by adapting the training course to the Master's program at the National Academy.

Within the framework of this work, the analysis of the academic disciplines of the Master's program was made and the relevant changes were made to the curriculum with the subsequent transformation of the curriculum and process, the creation of new content of the disciplines and the program of the distance course on economics and financing in the health care field. For the first time, on the training space page for the distance learning listeners, a discussion platform was placed - a forum where listeners has an opportunity to ask their questions.

It has also conducted training and communication activities, a number of questionnaires (to assess listeners' knowledge and the quality of teaching course), constantly questioning the future masters – managers and executives of the health care to determine the most relevant knowledge and skills they need.

As part of this training students were offered to do practical (situational) tasks aimed at:

- the systematization of representations about the policy and principles of health care management in the conditions of social transformations;
- the systematization of theoretical knowledge and practical skills in the field of legal regulation of health care activities;
- the formation of the abilities to make decisions, that'll take into account the obtaining of long-term benefits for the management of health care system and public health;
- the formation of skills to apply different methods, technologies and tools of politics and management in the field of health care, f.e. management of quality and management of changes;
- the formation of skills to apply different methods, technologies, tools for analyzing the economic situation, the financing of the health care system and applying contractual relations in the field of health care;
- the definition of the main economic and financing problems of the health care sector in Ukraine, finding the solutions to resolve that problems and the creation of the special measures to reform and improve the health care system;
- carrying out a comparative analysis of the conceptual approaches to the legislative framework for financing health care system in foreign countries and in Ukraine;
- the application of the strategic planning process to finance health care facilities in the context of reform;
- the development of the communicative competences of the listeners, in particular in the context of discussing the main social problems and challenges to preserve the health of the nation.

Here is a separate data from the conducted surveys.

An analysis of questionnaires before the passing distance course shows, that to the question "What are your expectations from this course?" the vast majority of listeners responded: - learn to manage changes and involvement to the health care reforms implementation, also, concrete progress and results in reforms implementation.

To the question "Call a single topic / question which you would most like to know during the course?", listeners generally answered that it was the acquisition of new competencies on topical issues in the reform of the health

care system and the consideration of topical issues of decentralization of management in the field of protection health.

To the question "Identify which changes (reforms), in your opinion, are the most important for the health care system at the present stage?" The vast majority of listeners said that this:

- introduction of a new financing model;
- autonomy of health care institutions of state and communal ownership;
- state financial guarantees for the provision of medical services and medicines.

From the analysis of the questionnaires, conducted after the distance learning, was found that, according to the overwhelming majority of students, changes (reforms) are the most important for the health care system at the present stage, in particular:

- creation of hospital districts;
- introduction of a new financing models;
- autonomy of health care institutions of state and communal ownership;
- state financial guarantees for the provision of medical services and medicines;
- application of international clinical guidelines in Ukraine;
- legal and regulatory framework for health care reform;
- the legal basis for the protection of the rights of patients and doctors;
- changes in personnel policy;
- fight against the corruption.

Preliminary data indicate, that the implementation of preliminary and final surveys and questionnaires, the introduction of training forms of education, the preparation and implementation of exercises and case studies for the formation of certain skills are the most innovative in teaching, because they have made the necessary component of novelty, curiosity, motivation and encouragement to expand the horizons of knowledge , deepen them and get new ones.

The results of the questionnaires and conducted surveys are being processed and published in the following publications.

In our opinion, the guest lectures, hat are actively implemented in training program, are also an important element of teaching the managers and executives of health care system. They provide the opportunity to directly hear the experience of well-known executives, to make own opinion and to get answers for the questions and discuss.

Also, surveys showed that managers are willing and point to the need for more detailed development and consolidation of acquired skills in conflict resolution, staff motivation, team building and support, timemenegement,

selfmanagement. To support motivation and interest in the continuing of training and active self-development, the staff of the department are offered an additional meetings - discussions on which the main skills are working out from the real situations. It is also an element of the innovative training of the managers and executives.

Therefore, according to the laws of the innovations development, this will for the next years become a standard qualitative training of effective modern healthcare managers.

For the survival and progress of human, nation and humanity, innovative development is essential. Innovation in education is of particular importance, as education plays a crucial role in creating a sustainable future. "Innovation resembles a mutation, the biological process that keeps the species developing so that they can compete better for survival" [32].

Education and training of healthcare managers in Ukraine are urgently and constantly in need of effective improvements, new teaching technologies. In order to ensure the quality of innovation in training and education, it is necessary to have a robust theoretical basis developed on targeted, systematic studies on efficiency in terms of economic, time-cost and practical implications. The experience of other countries can be used, but then it is necessary to take into account the conditions of adaptation to national peculiarities. Therefore, it is important to have an own experience and create the right conditions for managing innovation training.

It's important today to establish the real level of the priority of proposed skills in certain specific conditions of the organization's functioning, the differences between the level of these skills and the level of qualifications of managers, etc. The priority of solving such issues is due to the need to provide managers an additional tools to carry out their mission more competently and qualitatively.

A training program for the executives in health care, should prepare to take on greater responsibility, practical tools and meet today's complex challenges. And also importantly, it should help meneger to move forward in career.

Further discussion and research also require the factors influencing the life-long education and professional development of healthcare managers in Ukraine in order to improve the effectiveness of their work.

Consequently, management of innovative training of the executives and managers of the health care system - is an important factor of the development and effectiveness of the public health management system, which needs to be constantly maintained and developed.

"There is a clear need for innovative management education practices that use experiential learning opportunities to ensure the next cohorts of managers can operate in a contemporary, dynamic and complex business environment" (Professor Michael Powell, ABDC President, 2012).

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Application of Innovative Technologies in Teaching Mathematical Disciplines for Students of Technical Specialties

Priority changes in the education system have led to a transition to a new level: a graduate of a technical university must be adapted to the application of technological innovations in production, highly skilled, and competitive in the world labor market. In order to form a competent graduate in all potentially significant areas of professional education and life itself, it is necessary to apply active methods of teaching, technologies that develop, first of all, cognitive, communicative and personal activity of modern students [1-6].

Higher mathematics, recognized as the universal language of science, is an element of the general human culture, is at the same time a powerful means of personal development. It promotes the development of the skills of logical thinking, spatial representation, such features of character as the ability to set problem, purposefulness in achieving the goal, belief in their capabilities, and confidence in the correctness of the task.

Modern education requires the finding of such technologies in the teaching of the subject, the use of which can help students to be free in choosing the optimal solution to the stated mathematical problem. We apply a comprehensive approach to solve the task. In this paper we consider the technology of developing learning in a mixed form of traditional teaching and using open information educational resources. Developmental learning is learning, which is directly oriented toward the patterns of personality development [7].

The teacher leads the learner to self-development, studies his cognitive needs, creates conditions for active creative activity and thereby shapes the cognitive interests of students. Psychological and pedagogical research shows that the solution of this problem is possible if the teaching material is given to the students not in the finished form, but as an object of search, so the main goal of my activity is the formation of the creative personality of the student. To achieve this, it is necessary to include students in cognitive search, to develop their observation, thinking, to be able to notice important and essential, to compare and analyze, generalize and draw conclusions. At the same time, the main load in the labor-intensive learning process should not fall on the memory of the students, but on their thinking, that is, the learning base should be not creative but creative, when most of the students should learn not from the words of the teacher, but in the process of independent search information and ways of solving problems.

There are a lot of methods that highlight the problem of the formation and development of cognitive interests of students.

A goal of chapter is the use of pedagogical innovative technologies of mixed teaching. These technologies are aimed at individualized and cooperative learning development using critical thinking. That increases the motivation of students to study the subject, increase the performance indicators of their independent work, and as a result - an excellent knowledge of mathematics, which simplifies the solution of professional and life problems.

Pedagogical innovation is the process of creating, disseminating and using new means (innovations) to solve pedagogical problems that have been resolved differently. Individualized learning is a teaching method that takes into account the contribution of each student to the learning process. This method is based on the notion that there can't be two children who could participate in the training sessions alike. At classes, students display their own knowledge, attitudes, skills, peculiarities of temperament, and others like that. In order to achieve effective learning, the teacher should react sensitively to these differences.

Individualized learning occurs in pure form, when the teacher works with a pupil alone. However, teachers can learn a number of methods to increase the level of individualization in practice when working with a large number of students [8].

Cooperative learning is a pedagogical technology used in the teaching of students in groups and makes them responsible for teaching each other; each student is personally accountable for his or her own learning. Cooperative learning is synonymous with the term "joint learning". Critical thinking is an approach to such a development of thinking, in which particular attention is paid to the ability to formulate independent statements or thoughts and their substantive arguments. Students demonstrate their ability to think critically when they interpret or interpret in verbally or in writing (they interpret something) and reinforce it by their own arguments. Critical thinking is used reciprocally by students when they analyze or correctly criticize the arguments of other people.

To make the educational process interesting and long-lasting, it is necessary to flexibly regulate part of traditional and e-learning. As an e-learning course, students can be offered to independently develop e-literature, podcasts, video lectures, e-courses, collaborative work in virtual rooms, participate in online surveys, web tours, webinars, video conferences.

In order to organize such a learning process, you need a virtual working space in which a mixed learning process will take place. We apply the server of the Sumy State University (Fig. 1) [9].

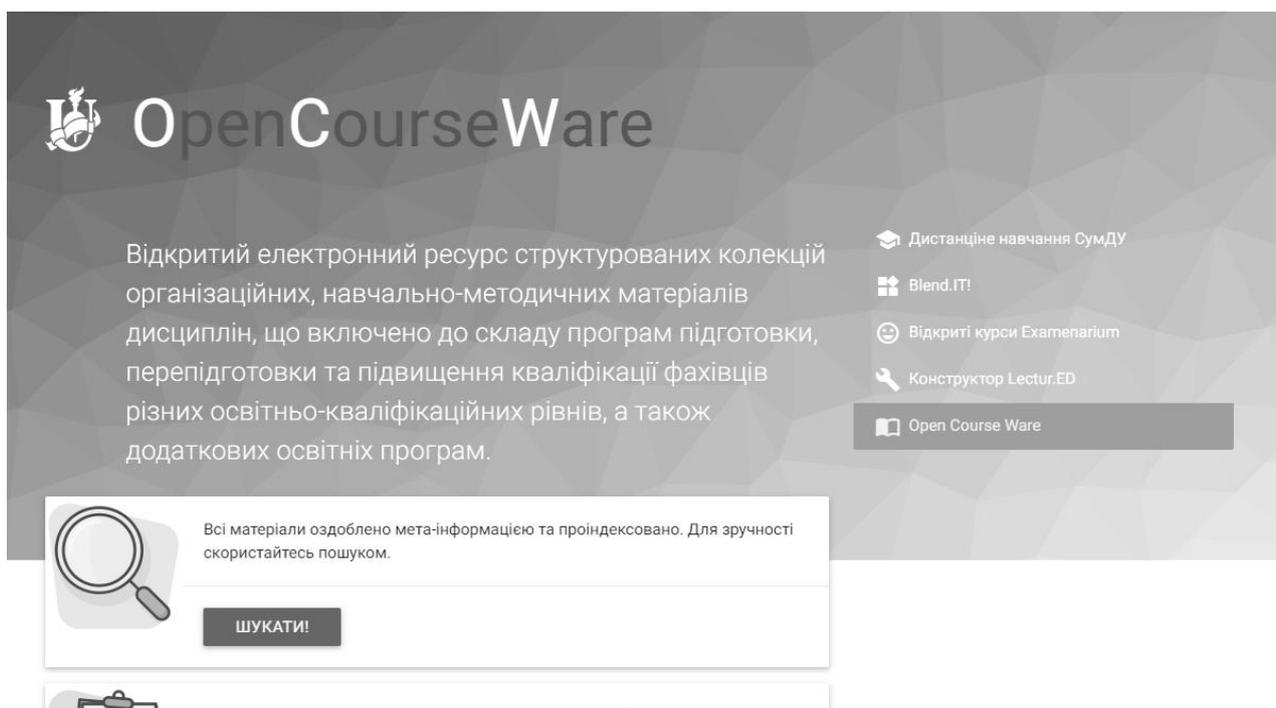


Fig. 1 – The Server of the Sumy State University

Providing students with a wide range of theoretical material, literature on preparation for the Olympiads, writing of scientific works, typical examples, podcasts, video lectures, instructions for the implementation of practical tasks, software products, calculators, and consulting, preparation for Olympiads conducted by us with the help of mixed learning Mix.sumdu (Fig. 2).

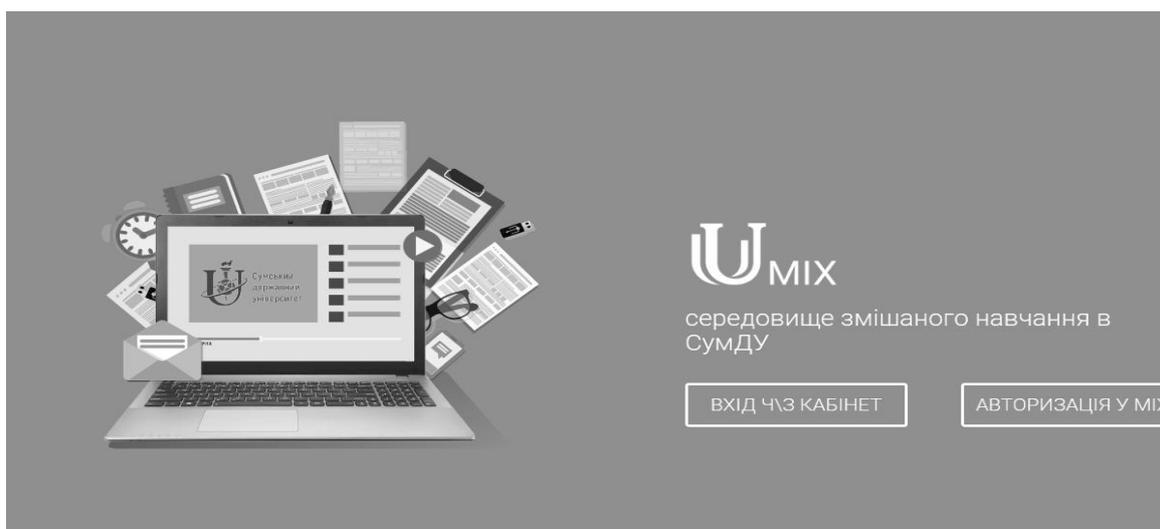


Fig. 2 – Mixed learning of the Sumy State University

On this server, the teacher has his office (Fig. 3), where he can:

1) creates chats, teams, sections, construct a phased joint work on research, topic, module, semester. That is, communication can take place in one space; the necessary documents, links to the Internet source, video presentations, and student leaderboards can be displayed;

- 2) to create on-line teams for quick solving tasks, conducting quizzes, passing tests;
- 3) Adjust all necessary applications of different formats without problems;
- 4) to conduct all kinds of communication with the audience;
- 5) set a time indicator with a reminder of the deadline for the task;
- 6) have a cloud storage;
- 7) create a complete case of the necessary methodological provision of the taught course;
- 8) establish a cumulative score system.

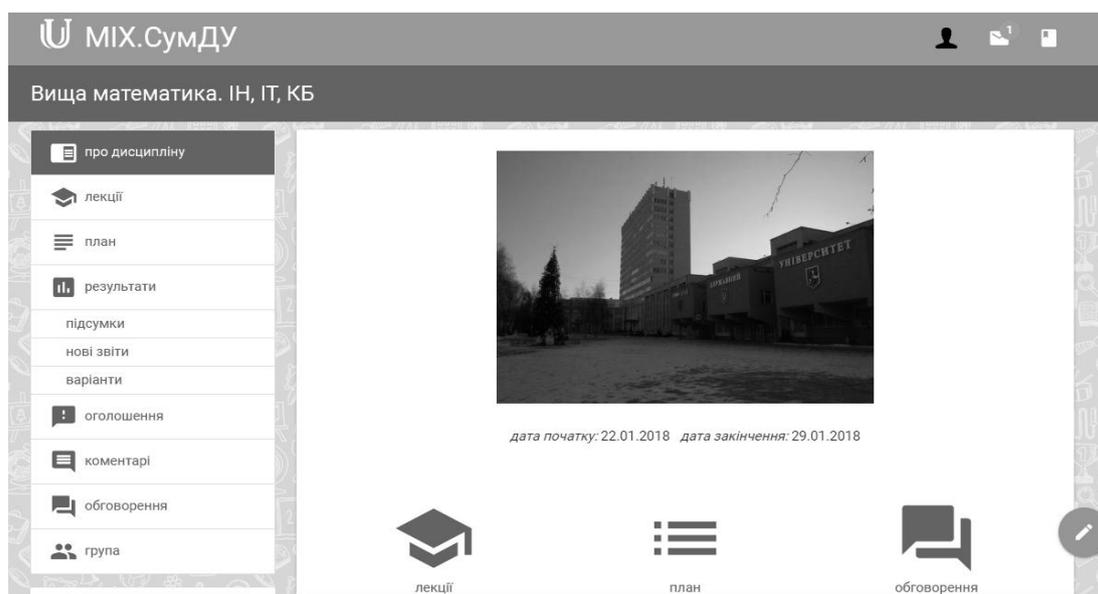


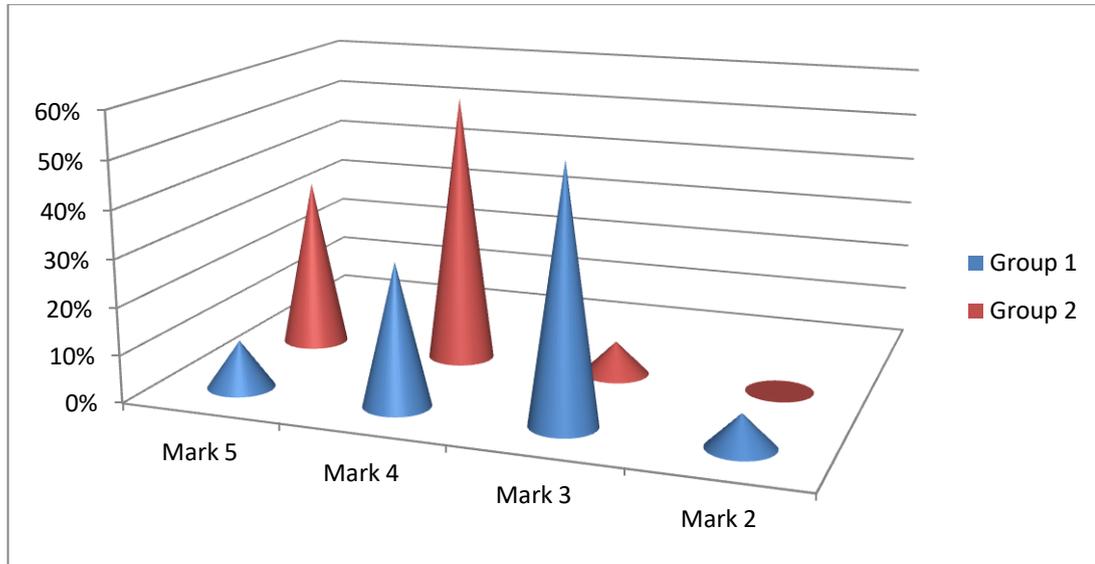
Fig.3 – Teacher's office

Before applying the mixed form of training, students were asked in practice whether they have the desire to prepare for the exam and to independently process the material in a new way. A new form of educational process has attracted everyone. First, students of the same group were involved in this work. After the work was completed, the results were summed up. According to the results of the exam, a comparative analysis was carried out on the acquisition of the material of the two groups, which at the beginning of the training had the same level of knowledge.

Group №1 was preparing for programs with an auditoria load of 30% of the educational process, and 70% is the independent study of students by subject literature, the execution of settlement tasks, and the refinement of theoretical material. Group number 2 worked on a mixed form of training. The results of the exam showed that group № 2 had better results. Students felt more confident, fluent in the material, they felt in their learning as a student and a teacher, which also gave them more confidence, they showed students in group № 1 not only their ability to calculate the derivative, the

boundary of functions, integrals, and at the speed and skillfully work in the virtual working space. We have open access to various information.

Table 1. Examination results



Collaborative work is a method of learning where a group of students works in an educational environment and collectively solves the problem. In such conditions, knowledge is not provided by a teacher, but arises as a result of communication between students when they try to understand, and then apply the theory in practice. [6] Students check each other for assimilation of the material for a modular cycle from higher mathematics and evaluate their grades. For the purpose of successful work, the teacher gives an example of possible questions, describes how to answer them and what to consider when making an assessment (Fig. 4).

<p>3. Виберіть правильні твердження:¶</p> <p>1)Послідовність частинних сум збіжного ряду необмежена.¶</p> <p>2)Сім'єю кривих називається множина кривих, залежних від параметра.¶</p> <p>3)Диференціальне рівняння називається неоднорідним, якщо його множина подана у вигляді: $y' = f\left(\frac{y}{x}\right)$ ¶</p> <p>4)Якщо збігається ряд, то збігається його залишок.¶</p> <p>5)Звичайним диференціальним рівнянням називається рівняння, яке зв'язує незалежну змінну та її похідні.¶</p> <p>Відповідь: 2, 4.¶</p> <p>Оцінка за виконання і складання тесту—5.¶ Виконала: Іванова Анна¶</p> <p>¶</p> <p>Завдання¶</p> <p>¶</p> <p>1. Встановити правильну послідовність для знаходження загального розв'язку ДР другого порядку. $y'' + y = 0$ ¶</p> <p>$z = \frac{dx}{x} + y = 0$</p>	<p>$\frac{dy}{\sqrt{C_1^2 - y^2}} = \pm dx$</p> <p>4) * $\sqrt{C_1^2 - y^2} = \pm dx$ ¶</p> <p>5) * $z dx + y dy = 0$ ¶</p> <p>6) * $z = \pm \sqrt{C_1^2 - y^2}$ ¶</p> <p>7) * $y = C_1 \sin(\pm x + C_2)$ ¶</p> <p>8) * $\arcsin \frac{y}{C_1} = \pm x + C_2$ ¶</p> <p>9) * $z^2 + y^2 = C_1^2$ ¶</p> <p>¶</p> <p>Відповідь: 3 - 1 - 5 - 2 - 9 - 6 - 4 - 8 - 7 ¶</p> <p>2. Встановити відповідність для фізичних застосувань подвійного інтеграла.¶</p> <p>1) Об'єм тіла → → → → → а) $\iint_D dx dy$ ¶</p> <p>2) Площа плоскої фігури → → → б) $\iint_D y \rho(x, y) dx dy, \iint_D x \rho(x, y) dx dy$ ¶</p> <p>3) Статистичні моменти плоскої → → → в) $\iint_D f(x, y) dx dy$ ¶</p> <p>... фігури відносно осей Ох та Оу → → → г) $\iint_D y^2 \rho(x, y) dx dy, \iint_D x^2 \rho(x, y) dx dy$ ¶</p> <p>4) Моменти інерції плоскої фігури¶</p> <p>¶</p> <p>Відповідь: 1 - В; 2 - А; 3 - Б; 4 - Г; ¶</p> <p>3. Об'єм області V виражається формулою: $V = \iiint_V dV$, або ¶</p>
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Fig.4 – Joint creation and solution of tests

Also, students perform alternate work together (Fig. 5), where the work itself specifies what needs to be done, which sources to refer to, which maximum score can be obtained.

Криволінійні інтеграли. Їх застосування

30 балів

Криволінійні інтеграли мають численне застосування в математиці, фізиці і прикладних розрахунках.

Кожен студент обирає одну величину з наведеного нижче списку, записує формулу її знаходження і наводить приклад з її застосуванням.

- Довжина кривої
- Площа області, обмеженої замкнутою кривою
- Об'єм тіла, утвореного обертанням замкнутої кривої відносно деякої осі
- Маса кривої
- Центр мас
- Моменти інерції кривої
- Статистичні моменти
- Сила тяжіння точкової маси матеріальної кривої
- Плоске стале протікання нестисливої рідини
- Робота при переміщенні тіла у силовому полі
- Магнітне поле навколо провідника зі струмом (Закон Ампера)
- Електромагнітна індукція в замкнутому контурі при зміні магнітного потоку (Закон Фарадея).

Можливі джерела інформації:

1. http://mathem-kstuca.ucoz.ua/Liter/modul_krat_integr_ua.pdf
 2. http://sites.znu.edu.ua/bank/public_files/2009/10/matanaliz/Titova/2/text2_3.pdf
 3. <http://uoooidata.org/course/nns/nns10005/MA5Hmw09.pdf>
 4. <http://schoolsite.org.ua/4/media/editors/tinymce/upload-files/L8.pdf>
 5. http://didkow.ds8.ru/Olexiyenko/Lect_3s_KKI_2.pdf
 6. [http://portal.tpu.ru/SHARED/t/ТОКTV/Page_4/Tab/Решение\(КРинт\)_0.pdf](http://portal.tpu.ru/SHARED/t/ТОКTV/Page_4/Tab/Решение(КРинт)_0.pdf)
- ↑ www.volpi.ru/files/vpf/vpf_library/krivolineinve_integraty.pdf

Fig.5 – An example of teamwork

The next type of work is the execution of tests (Fig. 6). By performing tests students better master the theoretical material, work out the finer points of the methods of calculation, better memorize properties and definitions, which lack the time in classroom classes.

Знайти матрицю C , яка є сумою матриць A і B .

$$A = \begin{pmatrix} 5 & 5 & 5 \\ 0 & 1 & -2 \end{pmatrix}, B = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}$$

$C = \begin{pmatrix} 6 & 5 & 5 \\ 0 & 2 & -2 \end{pmatrix}$
 $C = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}$
 $C = \begin{pmatrix} 1 & 1 & 2 \\ 2 & 1 & 0 \end{pmatrix}$
 $C = \begin{pmatrix} 1 & -3 & 4 \\ 1 & 2 & -1 \end{pmatrix}$

Дати відповідь

Статистика	
30	0

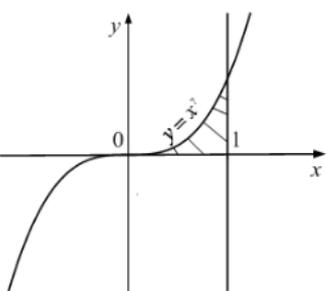
Завершити тест

Прохідний бал(%): 60
Дозволено відповідей (спроб): 3

Питання	
Блок 1	
»	Додавання 0
Блок 2	
»	Віднімання 0

3. граф	Бал за тест: 3.0	Прох. бал: 4.0	Складність: недостатчно даних
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По заданій графічно області

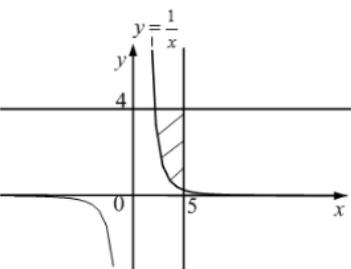


розставити межі інтегрування у повторному інтегралі $\int_a^b dx \int_{f_1(x)}^{f_2(x)} dy$.

вказавши $a =$ $b =$ $f_1(x) =$ $f_2(x) =$

4. граф	Бал за тест: 3.0	Прох. бал: 4.0	Складність: недостатчно даних
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По заданій графічно області



розставити межі інтегрування у повторному інтегралі $\int_a^b dx \int_{f_1(x)}^{f_2(x)} dy$.

Fig. 6 – The sample of test cases

An integral part of blended learning is trainers (Figure 7). Unlike fitness tests a progressive incremental is solving complex examples of small particles, where the teacher has laid its assistance in tips and answers.

Partial derivatives FSV

⋮

Introduction / Step 1 / Step 2 / Step 3 / Step 4 / Step 5 / Step 6 / Step 7 / Results

Task

Find the total differentials up to second order function

$$$z = x^8 + y^9 + x^6y^4.$$$

Find the partial derivative for x.

$$$\frac{\partial z}{\partial x} = ??? x^{???} + ??? x^{???} y^{???}$$$

Fig. 7 – An example of work with a simulator

Another example of the work of students in the history of mathematics: the creation of video with a story of an interesting episode of the life of outstanding mathematicians.



Fig. 8 – Examples of video presentations

They created a separate bookmark, which shows student conferences, seminars, mobility programs, summer schools, camps. Each student can add a link to the list and in all others it will appear in the news list. Interesting information that accumulates during the year can be used in the future for other students and expand their cognitive basis.

In order to successfully operate in a changing world, students must be able to sift information and make decisions about what is important to them and what is not. The teacher's task is to teach the students how to understand how different parts of the information can be related, to learn new ideas and knowledge in the appropriate context, to comprehend new meetings, to reject information that is irrelevant or incorrect. Analyzing information, determining the problem, weighing alternative opinions and taking thoughtful decisions, students learn to think.

With the help of mixed learning, implementation of new approaches in organizing the educational process in mathematical disciplines is possible. The use of virtual working environments for exciting learning can provide the motivation and potential of students to study, increase their level of knowledge in mathematics, as evidenced by the results of comparing the use of traditional and mixed learning.

Thus, such training can create a solid foundation for the acquisition of highly specialized subjects, make students of real professionals and give them important tools for achieving victories in real life.

In order for e-learning to become part of the educational process as part of culture and learning, it is necessary: to organize training and retraining of teaching staff in the field of ICT use, to develop the forms, means and methods of controlling the effectiveness of such training, to provide educational material for this methodology.

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The Application of Interactive Methods for the Development of Competencies in Management Psychology

The chapter substantiates the relevance of students-managers-to-be psychological competencies development during the study of Management Psychology discipline. Thus, it describes the interactive methods, which are expedient to be used in practical classes for the development of manager psychological competencies.

The quality of knowledge mastering, skills and competencies formation in course of a particular discipline study depends on many factors. These factors include the content of a discipline (interesting, accessible, understandable, developing), the personality of a teacher (professional competency, knowledge of the subject, authority among students, ability to interest etc.), motivation of students to study and other.

In Management Psychology classes it is necessary to develop students psychological competency, in particular, communicative and managerial competencies. We regard the communicative competency of an individual as psychological knowledge, capabilities and skills in the field of communication. Management competency is a combination of personal capabilities, qualification knowledge, experience of an official, which allow to participate in certain decisions development or to independently solve certain issues due to the availability of relevant knowledge and skills [6].

The analysis allows to distinguish several areas of scientific research, which contribute to the issue research regarding the development of psychological competency of students, and namely:

1) theoretical analysis of the competences formation and competency development, and namely the modernization of education based on competency approach (this issue has been investigated by O. Bermus, N. Bibik, B. Bolotov, O. Volkova, N. Galieieva, T. Herysh, E. Zeier, O. Oleinykova, L. Paraschenko, P. Samoilenko, V. Sierikov, L. Tarkhan, A. Khutorskyi, Ye. Tsarkova, L. Shtyka); methods of a competency approach implementation in the experience of foreign countries (I. Zymnia, O. Ovcharuk, O. Pometun); the essence of competencies (E. Zeier, O. Krysan, Yu. Tatur, A. Khutorskyi, O. Onoprienko, V. Yahupov, V. Svystun); monitoring of the levels of competencies achievement (V. Baidenko, I. Ivanova, H. Keurulainen, O. Lokshina, M. Savchyn, O. Paschenko); types, levels, integrated model of competencies (R. Boiatsis);

2) psychological comprehension of the issue of communication and communicative competency (V. Andruschenko, O. Briukhovetska, R. Werderber, I. Synhavska etc.).

3) psychological analysis of management activity and the use of interactive methods for training and development of manager personality (investigated by T. Antonenko, O. Bondarchuk, L. Karamushka etc.), including socio-psychological and communicative training (R. Boyce).

L. Karpova considers that three spheres and namely motivational, subject-practical (operational-technological) and self-regulation represent the structural components of professional competency. The developed motivational sphere ensures the maturity of cultural, personal-motivational and social competencies. Subject-practical sphere is characterized by cumulative knowledge (professional, subject, psychological-pedagogical, methodical, methodological); skills (gnostical, communicative, organizational, diagnostic, projective, constructive, managerial); qualities (obligatory, important and desirable), what stipulates the effectiveness of teacher professional and pedagogical functions implementation. This sphere maturity contributes to the development of certain professional sub-competencies: methodological, practical and assignment, didactic-methodical, special and scientific, economic and legal, valeological, informational, managerial and communicative. Self-regulation sphere maturity contributes to the development of such sub-competency as a psychological competency and autocompetency i.e. volitional and emotional spheres management skills and abilities, professional destruction overcoming technologies, reflection maturity [8].

Modern specialist professional competency (considered as a readiness to perform official and professional obligations in accordance with current theoretical and practical achievements and experience, which correspond to the global demands and standards on a high professional level) is regarded by S. Tsymbal in a form of a unity of its three components: value and motivational component, subject and practical component and autoregulatory and volitional component, which are considered as personality aspects concurrently [9, 10].

During the courses in Management Psychology, it is important to shift the emphasis from the simple transfer of knowledge, skills and capabilities to the settlement of conditions for the development of communicative and managerial competencies of students. The students should consider and be aware of their own possibilities, their own communicative peculiarities (personal communicative qualities, abilities, skills), should be aware of their interactions with others, able to develop and improve them.

An in-depth analysis of scientific research of the issue of competences and competencies [1, 5, 6, 12] has revealed differences in understanding some basic concepts of a competency approach, as well as different views on the correlation between the concepts of "competency" and "professionalism". The history of the issue shows the complexity, multidimensionality and ambiguity of the interpretation of the very concepts of "competence", "competency" and competency approach.

Competency approach is one of the most important directions of psychological and pedagogical theory and practice among Ukrainian and foreign researchers. It is not a simple coincidence, that much of the research of foreign and domestic scholars is today related to the clarification of "competency" and "competence" concepts.

In order to differentiate the "competency" and "competence" concepts, we have analyzed A. Khutorskyi's research, which emphasizes that the first means the general ability (capability) of a specialist to demonstrate knowledge and skills in professional activity, apply them to solving a problem in a particular situation, and the second one is a set of knowledge, abilities, personal qualities necessary for effective activity [12]. The concept of competence is interpreted as the potential ability of a person to work, is based on knowledge, experience, values, inclinations acquired through learning.

I. Zimnia allocates 3 main groups of competencies: 1) competencies belonging to an individual as a subject of life (health preservation, value-semantic orientation in the world, knowledge expansion); 2) competencies belonging to the interaction of a person with others (conflict resolution, cooperation, tolerance, communication); 3) competencies belonging to human activity and manifesting themselves in all its types and forms (formulation and solution of cognitive tasks, non-standard decisions, means of action) [5]. In our opinion, I. Zymnia has offered quite interesting characteristics of competencies. The researcher distinguishes the following aspects: motivational (ability to show competency), cognitive (knowledge of a competency content), behavioral (the experience of competency manifestation in various standard and non-standard situations), value-sensible (relation to the content of a competency and an object of its use), emotional (emotional and volitional regulation of the process and the result of the display of competency). The proposed structure of competency indicates to the complexity of its measurement and evaluation.

According to T. Duran, competences include theoretical knowledge, abilities and abstract characteristics of a person (attitude) [10]. The analysis of these and other sources shows that the concepts of "competency" and "competence" are widely used in various types of human activities and characterize the high quality of the professional activities, therefore, in psychology, the use of such terms is justified.

Competency approach leads to a reorientation from the process to the result in the activity measurement. The result is considered from the standpoint of the state of being relevant in society, ensuring the ability of an individual to act independently, to solve life and professional situations. At the same time, not the amount of information collected is regarded as a result, as required by the cognitive-knowledge approach, but the ability of a future manager to act in various problem situations within professional activity and communication. According to the competency approach, competences are considered as a desired result of vocational education. The

competency approach brings to a focus not the knowledge of a manager, but the ability to solve problems arising in management activity. The priority of independence and subjectivity of a manager organically fits into a competency educational model, which anticipates that a manager should be aware of the extent of the abilities development, develop an outlook, understand the purpose of life. Consequently, the introduction of a competency approach in education is occasioned by the fact that a person should not only have certain knowledge, skills, but also use them as a tool for life problems solution and social roles implementation. And this should be taken into account when teaching students Management Psychology.

The awareness of the benefits of a competency approach for the professionalism of a manager and the search for new formats of professional standards and relevant assessment procedures are relatively slow. The powerful capabilities of this approach remain unaffected due to the absence of a coherent system for developing the professionalism of a manager-to-be during the studying at a university. More attention is paid to the development of managerial, in particular, psychological and communicative competencies, in the field of managerial staff postgraduate education [2, 7].

In course of Management Psychology studying students need not only to equip themselves with knowledge of the managerial process and management activities laws, but also to develop the ability to manage people, make decisions etc., develop competences in the field of communication and interaction with people. In general, the achievement of these tasks will allow students to develop communicative and managerial competencies.

We have highlighted some of the components of the communicative competency of an individual:

- 1) positive perception of the surrounding reality, management of a personal mental state, mood;
- 2) negative self-perception stereotypes overcoming;
- 3) increase of self-esteem, self-confidence, own strengths and opportunities;
- 4) ability to cause sympathy among others, establish positive interpersonal relationships;
- 5) analysis of personal desires, needs, aspirations; orientation on real life goals that can be achieved.

The manager psychological competency structure includes interconnected and interdependent components:

a) cognitive component – a set of psychological knowledge necessary for constructive managerial interaction; knowledge about personality characteristics, needs of colleagues; knowledge of their personal desires, aspirations, needs, understanding of their personal abilities;

b) operational component – a set of skills and capabilities, which ensure management activities success; ability to overcome negative self-perception stereotypes and negative perception of other people; ability to cause

sympathy in a team, to establish positive interpersonal relationships; influence people, motivate them to succeed;

c) motivational component – an active desire of a manager for self-improvement, personal managerial competency increase, personal growth. According to the studies in the field of managerial psychology, the meaning of this component is understood through self-actualization.

By developing these components of psychological competency, it is possible to stimulate personal growth of a future manager, improve the personality of a manager, harmonize the interaction of a manager with the surrounding world, people, organizations or units, with other social institutions. Within the studying of Communication Psychology discipline, it is also necessary to develop students professionally important managerial qualities, which are regarded as an important component of managerial competency:

1) effective social interaction (ability to communicate, ability to establish and social contacts, sociability, ability to work in a team, diplomacy);

2) ability to manage (ability to appreciate staff, credibility, leadership qualities, trust);

3) intellectuality (the ability to quickly make the right decisions, creativity);

4) good organization (responsibility for subordinates, self-discipline, discipline, time orientation: flexibility, understanding of the situation, sense of time, needs);

5) social maturity (the ability to adjust personal behavior, ability to defend personal point of view, correctly refuse from or insist on it, ability to respond optimally to remarks, fair and unfair criticism);

6) ability to engage in complex professional activities (stress, ability to plan activities and set priorities under time shortage conditions).

Psychological training with the application of interactive methods helps to improve psychological competency and promote the growth of the personality of a future manager [3, 4, 7, 11]. These methods include: training; business and role play; work in micro-groups (small groups); brainstorming; discussion; interactive lecture; case method (analysis of real situations); aquarium; open space technology etc.

We have achieved a good result from the point of view of students-managers-to-be psychological competency improvement in course of Management Psychology discipline teaching by modules introduction. Each thematic module contains a theoretical part (lectures and seminars) and active training. In this case, the theoretical part is also realized in the form of interactive methods (interactive lectures, thematic discussions, case studies, etc.).

Interactive methods are based on the following principles: interactions; activity of participants; relying on group experience; feedback.

An environment of educational communication is created, which is characterized by openness, interaction of participants, equality of their arguments, accumulation of joint knowledge, possibility of mutual evaluation and control.

A teacher, along with the new knowledge, leads students to an independent search. The activity of a teacher gives way to the activity of students, the task of a teacher is to create conditions for their initiative. A teacher serves as an assistant in the work, one of the sources of information. Therefore, interactive learning is most effectively used in intensive learning.

An effective method in this regard is the **socio-psychological training**. Training is a learning process, in which the main attention is paid to the practical mastering of the material, when participants have the opportunity to develop and consolidate the necessary knowledge and skills, change their attitude to their personal experience and applied approaches in the process of modeling specially defined situations. The training allows to diagnose the condition of a psychological competency of a person, to identify psychological problems, personality traits and peculiarities of the interaction with people. Participating in the training, the student-manager-to-be will learn the peculiarities of the perception of other people personal qualities, behavior and communicative skills. The participants are able to solve their psychological problems, correct disadvantages, outline the ways of their personal growth.

Such training has two phases – diagnostic and corrective. This enables a psychologist, who conducts a training, to diagnose the state of communicative competency of each participant, outline ways to improve the skills and abilities of everyone in business and personal communication.

During the diagnostic phase of the socio-psychological training, a number of tasks must be performed:

- 1) self-cognition of training participants – knowledge of their personal qualities, communicative features, reflection of their personal communication and behavior;

- 2) feedback from other training participants, i.e. information on how other people perceive each training participant as a person, the ability to communicate with people;

- 3) external diagnostics – learning of personality traits and communicative qualities of each participant by a psychologist-trainer, who conducts group work.

The correctional phase of the socio-psychological training enables to correct each participant disadvantages and outline the ways of psychological competency improvement.

Psychological knowledge and skills of future managers are also improved as a result of participation in business communication training aimed at not only interpersonal interaction effective methods development, but also at the increase of manager general level of competency in this field of knowledge.

In the process of training, students not only analyze the process of management activity (planning, decision-making, assessment, control etc.), but also master the knowledge and algorithms of solving management tasks and work to develop their leadership potential.

Small group work is also effective – for example, group work on designing the implementation of something in the educational process from the point of view of different subjects – students, parents, teachers, administration, employers. Each group describes the project and analyzes the situation.

Brainstorming is an operational method of solving a problem, based on the stimulation of creative activity, in which the participants of the discussion are offered to express as many options as possible, even the most fantastic. Then, among all the ideas, it is necessary to choose the most successful, which can be used in practice. The inventor of the method of brainstorming is Apex Osborne.

The brainstorming stages are as follows:

1. Problem statement (preliminary step).
2. Generation of ideas (the main stage).
3. Grouping, selection and evaluation of ideas.

The success of brainstorming depends largely on the second stage (generation of ideas). At this stage, the main thing is the number of ideas. It is not necessary to make any restrictions, criticize or evaluate (even positively) the ideas expressed, as the assessment diverts from the main task and "knocks down" the creative mood. The third stage allows to highlight the most valuable ideas. At this stage, evaluation is encouraged.

The **discussion** presupposes the identification of various points of view of the participants regarding an issue (problem) and, if necessary, a comprehensive analysis of each of them. The benefits of the discussion give impetus to problem-based learning. Students – participants in the educational process – not only passively acquire knowledge, but "extract" them, solving cognitive tasks. In the process of discussion, specific skills and abilities are formed: the ability to formulate opinions, to argue them (techniques of evidence-based controversy), and critical thinking skills.

An **interactive lecture** is a lecture conducted by a teacher in front of a large audience of students within 1-4 hours with the use of such active learning forms:

- facilitation;
- guided discussion or conversation;
- moderation;
- demonstration of slides or educational films;
- brainstorming;
- motivating speech.

Case study is a teaching technique, which uses a description of the real situations. Students according to this method should analyze the situation,

understand the essence of issue, suggest possible solutions and choose the best ones. For this purpose, the used situations are based both on real factual material and on invented cases. The advantages of this method are that participants easily relate the received theoretical knowledge to a real practical situation.

Aquarium is a role-playing game, in which 2-3 persons take part, while others act as observers, allowing one to "live" the situation, and others – to analyze it from the side and "empathize". This method is very effective when it is necessary to demonstrate skills, abilities, emotions and state with a time limit. Most of the participants are experts and analysts.

Students-managers-to-be psychological competency improvement and success of each of them in mastering Management Psychology depends on many factors. One of the main factors is a desire of students to self-improvement, their activity, openness, a desire to develop their personal psychological competency. The level of knowledge and skills of a teacher-psychologist who teaches students is an extremely important factor.

The most effective methods of developing the psychological competency of an individual are interactive methods – the methods, which stimulate students' initiative during the educational process, while a psychologist-teacher takes up the position of an assistant partner. The course and the result of learning acquires a personal significance for all participants in the process and allows them to develop their ability to independently address psychological and managerial problems.

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Significance and Application of Howard Gardner's Theory of *Multiple*

*“Creativity is always called “thinking outside the box.”
You can't think outside of the box unless you have a box”*

H. Gardner

Chapter 1

The Harvard psychologist Howard Gardner, more than 30 years ago, has created the concept of "The Theory of Multiple Intelligences," which he dealt with in detail in his book "Multiple Intelligences," and before that, he lay its basics in his book "Frames of Mind", 1983. The theory of multiple intelligences challenges the notion that human intelligence can be measured by a single indicator – the intelligence quotient, [IQ] [1.2001]. According to it, each individual develops at different speed, in different spheres of intelligence, and possesses different types of intelligence. Howard Gardner points out 9 kinds of intelligence: linguistic, logical-mathematical, musical, spatial, bodily-kinesthetic, interpersonal, and intrapersonal. Later, he adds natural and existential, but it is possible to add even more. The modern educational system focuses only on the development of the first two, so some students remain "weak" and cannot reach accomplishment in it.

Professor Gardner, in his article "The Three Faces of Intelligence", May, 2001, considers intelligence in three directions [4, 2001]:

1. **The first aspect** - we associate this concept with the generalizing characteristic of the brain capacity, i.e., this is the ability, for example, to solve complicated problems / tasks /, foresee the future, analyze complex models or the ability to synthesize, summarize parts of greater portions of information. In this regard, much of the mainstream disciplines begin with the training of the Charles Darwin Theory, continuing with the study of the child's mind by Jean Piaget in search of the answer to the question of what is unique, and at the same time common, in terms of intelligence.

2. **The Second aspect** - the understanding of the intelligence handled by psychologists, psychometrists, is the notion that intelligence is a hallmark, as well as "height" and "extroversion" /the person's direction towards the outside world/. And in this sense, the individual can be compared to another one by the degree to which he or she exhibits this trait or set of traits. In much of his work, Gardner has devoted himself to compiling and researching profiles of the intelligence of different individuals.

3. **The Third Aspect** of intelligence expression is the most intriguing, because it is related to the ability and the way one handles the already set tasks. More specifically, here, Gardner points out as intelligence expression, examples of things like whether the task is wisely executed, poorly advised, the result is clear or misleading, connections between a manager and subordinates are built intelligently or stupidly, whether the new concept of the task is clearly presented, etc.

Professor Gardner treats **the different types of intelligence** in his book "Multiple Intelligences," grouping them into the following categories [2,2008]:

1. Linguistic intelligence - it includes the ability to operate with words, both, verbally (narrators, speakers, politicians) and in writing (poets, writers, playwrights, journalists, editors). Modern pedagogical practice focuses, unfortunately, above all, on this type of intelligence. At school people listen, write, read and speak.

This kind of children, from their early age, loves the order, they are systematic, they feel well the regularities and they can think logically. They love to listen, they learn early to speak, read and write correctly. They have a good memory, so they remember easily and with pleasure, are not shy from the audience, readily recite poems. They can easily learn foreign languages, and the best way to teach them is in the form of fairy tales - for the smallest children, and stories, debates and discussions - for the bigger ones.

2. Logical-mathematical intelligence is associated with the ability to operate with numbers (mathematicians, accountants, statisticians) and thoughts rationally (scientists, computer programmers, logicians). It is also actively involved in school syllabi.

If your child has this kind of intelligence, you will quickly notice that he/she loves mainly precision, he/she is amazingly organized, has abstract thinking and likes to do arithmetic. Such children, from an early age, are interested in computers, logical experiments, solving tasks, which is easy for them to do. They are successful in mathematics, physics, and chemistry - those subjects that require accuracy, advanced logic, and particular mindset. To challenge them, you have to put different tasks to them, use schematic diagrams and tables, offer different experiments, and math games.

3. Musical intelligence is related to the ability to perceive and evaluate music (music critic), to create and transform (composer) and to perform (performer). A person who has advanced musical intelligence easily memorizes melodies and is capable of reproducing them. He is receptive to the rhythm.

In children this is manifested through their interest in sounds. As little kids they are sensitive to tones, rhythm and tempo, they perceive music very emotionally. From an early age, they are able to understand the complex musical forms. They are very emotional and have intuitive development, so with this type of children, it is good to use their favorite music in the process

of learning. Also pay attention to the rhythm of speech, because good perception and remembering depend not only on what you have said, but also on how exactly your words sounded.

4. Bodily-kinesthetic intelligence includes the ability to use the body for self-expression, to transmit feelings and emotions through movements (athlete, dancer, actor), use hands to transform various objects (craftsman, sculptor, mechanic, surgeon). They are very skillful and quick in their actions.

Children with this type of intelligence, from an early age, are distinguished by good coordination and extremely precise control of their body; they feel the rhythm very well. They have fast reactions, well-developed reflexes; very quickly assimilate the handling of different objects and tools. And after all, such children like to act, move, in a hurry to touch everything, and learn not visually, but by touching and even trying to taste. They remain indifferent to the pictures and visual images and perceive the world through tactile sensations, so they remember well what they did, not what they heard or read. They learn better when they act and play with the objects, while listening to the information. They quickly switch their attention, resulting in concentration problems that parents often take for laziness, distraction and unwillingness to focus. It would be good for such children to receive information by means of movements (as in the case of rap music), to use visual models that can be touched and manipulated. They need frequent breaks during which they will play, run, or perform several physical exercises.

5. The visual-spatial intelligence is the gift to perceive the world visually and to analyze this information (hunter, scout, guide) and also to transform the space (architect, artist, inventor, interior designer). People with this type of intelligence are receptive to the colors, shapes, lines and relationships between objects in space. They can graphically express their ideas.

If you notice that the child thinks in pictures, creates visual images and remembers better with pictures, then this type of intelligence is characteristic of him. Such children often use metaphors in their stories, read maps, tables and diagrams easily, and are sensitive to the colors and shapes of the surrounding objects. From an early age they express interest in the fine arts, so it is good to use illustrations to study the material they are learning and to stimulate their interest in knowledge. Thanks to visual images, these children will systematize their knowledge more easily, understand and remember all that, which they can hardly perceive with the help of logic.

6. Interpersonal intelligence helps people to sense the moods, motives, intentions and feelings of others. This is the ability to communicate, that is, the exchange of information with other people in a verbal and non-verbal way, through the language of gestures, music and speech (sellers, politicians, managers, teachers, social workers).

From early childhood the children of this, so-called, "social" type of intelligence can get along with people, negotiate with them, communicate, and after all - love to be among them. When they grow up, they acquire the ability to recognize other people's thoughts and plans, so they often begin to manipulate those people. Such children have many friends, show activity among people, prefer to be mediators in disputes and conflicts.

Receiving joy when communicating with people, the child of this type perceives in its best the knowledge in the team, so do not try to keep him at home with the hope that he/she will concentrate and learn his lessons better. Train him/her by introducing him/her into group work, discussion, debate, giving him/her an opportunity to express opinion, and encouraging him/her through additional activities in school and out-of-school forms.

7. Intrapersonal or in-personal intelligence develops people's sense of themselves, an understanding of their strengths and weaknesses, limiting beliefs, motivations, moods and desires as well as emotions; high level of self-control, self-understanding and self-esteem (psychologist, psychiatrist, philosopher). This type of intelligence is manifested through the other types determined by Gardner.

For children with such intuitive intelligence, self-knowledge, even self-examination, is inherent. These children, who are absorbed in their inner-self by nature, are deeply aware of their strengths and weaknesses, and they understand their mental excitement. From an early age, they have their own values and purpose in life. Their actions are guided by strong intuition, self-motivation and a desire to be distinctive among others, and their inner harmony is broken by a profound analysis of personal experiences.

In the study process, these children should have the opportunity to self-organize themselves in their own learning process. They do not need control, they themselves are well organized. Such children should not be abused because it will only strengthen their resistance and their desire to seal off themselves even further, and that will not bring about anything good.

8. Naturalist intelligence develops the ability to understand nature and to perceive regulations; to orientate among many living organisms (botanic, veterinary, forester); they are also sensitive and attentive, interested in certain characteristics of the surrounding world (meteorologist, geologist, archaeologist).

Such children like to be outdoors and their training is most effective during excursions, green school and other forms where they will have the opportunity to explore the things that excite them.

9. Existential intelligence - The ability and the propensity to formulate questions about life, death, and other existential issues.

Howard Gardner's concept of individual competencies changes the face of education today. Ten years after publishing his book "Frames of Mind" and "Multiple Intelligences", thousands of trainers, parents, researchers study the practical application of his theory.

For the further development of education, the **hypotheses**, shared by the professor with his audience, are important, namely that first of all - all people have all kinds of intelligences - from a cognitive point of view these intelligences form us as human beings, and secondly there is no two people, even identical twins, with exactly the same intelligence profile.

These hypotheses give reason for the professor to make two very important **conclusions on education**:

1. In order to develop the intelligences of children and pupils, it is necessary to **individualize the training** of each child and each student in a way that he/she can learn and it is necessary to organize the evaluation in such a way that he/she can show what he/she has learned.

2. **Pluralizing of teaching** is imperative in this case: any idea, concept, theory, topic, has to be taught in several ways: by speaking, writing, schematics, diagrams, formulas, metaphors, manual work in order to activate a multitude of intelligences.

In Professor Gardner's view, **intelligence** does not include **a moral assessment**. In one of his lectures in front of teachers in Sofia University in 2005, he focuses on three questions: what will be the world in the future, what types of mind should be developed in children, and what are the tasks that are set for the education if it wants to be adequate to the development of the world.

Professor Gardner and his working group put forward that **the future world** will develop in the following spheres: thinking beyond the established borders; flexible and timely responses; going outside of the specialties; team solving of problems; sophisticated Hollywood-style projects and productions; forms of nonlinear system thinking; going beyond the "power point" in the virtual world, from which it is clear that there is still a huge difference between the direction in which the world is developing and the education of our children. And in this sense, Gardner concludes that not only do we have to learn, but we also have to perform self-study all the time.

In relation to the future, Professor Gardner also examines **five necessary minds of the future**, namely, abilities, competences to develop the educational system of the children and society as a whole: **disciplined mind, synthesizing mind and the inventing, creative mind, respectful and ethical**. Gardner puts an emphasis on the **synthesizing mind**, as the world develops furiously, information databases swell and become enormous, and one must be able to synthesize the essence in the sea of information. According to the professor, the development of the **creative mind** is done by encouraging and creating conditions for mastering more than one specialty; cultivating systematically the skills to synthesize the already known; encouraging to go beyond the familiar or set some appropriate, new questions; encouraging the appearance of strong characters in the field of learning (not taking into account some criminal, non-ethical manifestations of the pupils with "strong" characters), but to highlight the hard work and

success of the student-creators. Professor Gardner believes that one cannot be creative unless he is a specialist at least in one area, but to become a master it would have taken you at least 10 years. Gardner says that in order to be creative you have to think outside the box, but to get out of the box, you must first have/see/ possess it, which leads to the thought that only if you are a professional in an area, you can go out of the box. He adds that **no artist can be created by following the rules. Disciplined** mind is associated with ideas, concepts, projects in depth, **synthesizing** mind - in breadth, and **creative** mind enables us to think outside the "box" that creates the disciplined mind. **How to generate creative students?** Gardner answers this question that it's easier to stop them from being creative than creating them. We stop children from being creative by telling them that there is only one correct answer, or we punish them when they give the wrong answer. **Respectful** mind is driven by "the need to understand others" and is associated with the development of intrapersonal and interpersonal intelligence because it is seen that "the up-down" model" of a number of schools and organizations is totally outdated. There is here the role of accepting people as they are, no matter, race, religion, gender, age. **Ethical** mind, according to the professor, has a higher level of abstraction than the respectful one. It means "to perceive yourself as a good worker and a good citizen and to act appropriately in both roles." Professor Gardner asserts that it's easy to be ethical when it's in your favor, but it's really ethical to be ethical when it's in your detriment.

In connection with the evolving digitalization and the development of the so-called "apps generation" [cyber generation] Gardner appoints two main tasks for the education process in one of his lectures in the US - to train children to synthesize information from the web; to stimulate young people for creativity in the web because they are not willing to try and await permission, and this is not a prerequisite for creativity. The question of how and in what way to deal with children's addiction to the internet and digital technologies is a matter for the parents. In his seminar, he says that the pattern of parental behavior must change, because if the child gets home and sees his two parents looking at a tablet, smart phone, computer, there's no way but he/she will do exactly the same. To change the role model, parents should be much more creative in the games and entertainment offered to children, such as choosing something more interesting for them than standing in front of the TV, i.e., changing the model is not just a change of the education system, but a change in the model, which the parent gives to his child. On the other hand, the environment and society also influence the behavior of children. Gardner makes a difference between children addicted to technology, which is harmful; for them the meaning of life is the smart phone and the other people who use technology as a means of obtaining information. The digital world is taking on more and more personal space, and in its video, Professor Gardner is exploring how the **three "I's"** -

identity, intimacy, imagination – will modify in children.” Yes, the Internet gives many opportunities, but it reduces the identity, intimacy and creativity of children,” he says. **Identity** - knowing who you are, what you want to be, developing your intrapersonal drive, concentrating and getting to know yourself; **intimacy** – the intimacy, the internet network creates transactional relations, pictures that are not alive, with no emotions; through communicating, people discover their inclinations, interests, love; **imagination** - creativity, through ready-made patterns, you cannot develop creativity; Gardner appeals to computer games specialists to create such games, that will require additional work or even invention by the children themselves. Of course, we cannot reject the Internet and digital technologies because the world is developing through them and we are part of it, but we can do so that it brings benefits to children when becoming a part of the training system by enabling them for research, creativity and inventing new things.

Analysis:

According to H. Gardner, modern education has to contend and acquire a deep understanding of three classical principles: truth, beauty and divinity. Such understanding requires, however, the mastery of many important subjects, which the human individual has created over the centuries. As a supportive example of this approach, Gardner describes education that rejects the Theory of Evolution, Mozart's music, and the lesson from the Holocaust. Far from the standardized IQ tests that are the most common, Gardner imagines an educational system that preserves the power of traditional education and, at the same time, is capable of preparing the younger generation for the challenges of the future.

In this context, the aim of the future education system will be through a wide range of teaching methods to work on two layers: 1. to touch the different intelligences in children, so that the material provided is understood by everyone; 2. to develop their intelligences to make them more useful to them and to society;

In connection with the above-mentioned five types of the mind of the future and the intelligences to be educated in children, it should be noted that, firstly, all these qualities should be cultivated and upgraded in the teachers themselves, in their preparation to practice this profession; secondly, the process of teacher selection should assess precisely that fact; thirdly, the development of the different intelligences should be a model in the educational system itself; fourthly, the parents also have to assist the processes of transformation in school through a personal example and by changing the pattern of behavior.

And as Martin Luther King once said, "Intelligence plus character – that is the goal of true education," and Ralph Waldo Emerson believed that, "Character is higher than the intellect", Professor Gardner concludes that he

does not oppose excellence, but at the end of the working day, we do not need the best and the brightest, but those who have a good character.

It is interesting to draw a parallel between Professor Gardner's *Multiple Intelligence Theory*, 1983 [1.1999]. and the much earlier discovery of Prof. Dr. Lozanov, a psychotherapist, a physiologist of the brain and a linguist, who, in 1965, sets the foundations of Suggestopedia in Bulgaria [5,2005]. This is an exclusive educational method that not only helps to acquire study material that is much higher than the amount of school content, but also achieves a psycho-relaxing effect on students. Suggestopedia as a science has been sufficiently researched, first in the established pilot schools in Bulgaria, through acknowledged working teams at the Bulgarian Academy of Sciences and then in the world and from UNESCO, being announced as one of the most successful ever created training methodologies. The resources that Suggestopedia uses in training are psycho-hygienic, didactic and artistic. The laws, according to which the suggestopedagogues teach are: love, freedom, teacher's conviction that something extraordinary is happening, a multiplicity of volume, a golden section, teaching from the whole to the parts, and vice versa; object interrelationships are used, there are no definite objects, also the classical arts and aesthetics are used, with which the above-mentioned types of intelligence, asserted by Professor Gardner, are being influenced and developed in large measure. The training of suggestopedagogues is of utmost importance, passing through the same values and through the same process, through which the children will later be educated, because without having experienced this magic, teachers cannot pass it to the children. The effects of Suggestopedia are that children are happy, with a sense of freedom to give answers different than predicted; they are confident that they are getting better; more relaxed in the learning process; interested in the classical music which they enjoy with great pleasure, as well as the interest to learn on basic instruments, different tempos related to the songs studied; stress is eliminated. Through the use of an extremely rich palette of instruments and the uniqueness of teaching, they develop in children all the intelligence that Professor Gardner mentions in his book, as the effect is not only on the student but also on the teacher.

Chapter 2

Suggestopedia as a method of teaching in pedagogy – characterization

1. Concept

One of the conditions for the continuous development of human society is the succession among generations. This cannot be done without pedagogy as a science. The latter is associated with several concepts: upbringing, self-study, education, training.

The training methods put together the procedural side of study technology and, together with content, are the core of it. The method (from Greek "methode"- way for research and knowledge) is a form of practical and theoretical assimilation of reality. From Greek "methodus" - way, way of study, training, exhibition is a system of rules and methods of the approach to studying the phenomena and the laws of nature, society and thinking. The method is the way of work for the teacher and students, by means of which knowledge, abilities and skills are developed [12, 1993, c.529].

Historically there are different theories of upbringing and training that implement different methods to achieve certain results.

In this work, special attention will be given to Suggestopedia as a successful method in pedagogy, integrated / for a short time as experimental / not only in Bulgarian schools, but also in many foreign ones.

Increasing the acquisition of useful information per unit of time, reducing the detrimental effects of learning and accelerating the creative development of a personality are among the most important issues of modern pedagogy.

The need for a significant load on accelerating and improving training and education, without additional stress on the nervous system and without harmful effects is more than clear. Unfortunately, attempts to improve the learning process (technical, organizational, psychological, and didactic) often lead to minor improvements in the acquired material. In doing so, they also increase fatigue, boredom, and alienation. It is well known, according to official data, that neurotic illnesses and apparent and hidden *didactogenia* / illness and suppression of children's development due to a non-tactful approach of the teacher / are taking on a global scale and particularly in Bulgaria.

Modern methodological improvements do not allow the educative-psychogenic complex to respond and "resist" the situation, created by the rapid technical development. It is often forgotten that learning is a result of the interaction of the individual with the surrounding environment. It is the result of communication and its necessity. We learn and educate from the environment and because of the environment we live in. Therefore, a better knowledge of individual and communicative psychology is a basic prerequisite for the proper organization of the educative process. The trainee is not a cyber robot; a number of unconscious, intuitive factors can influence the acquisition of knowledge, the teachings and the practical experience.

Such a global approach to the personality, in which the memory reserves are revealed and which creates a stimulating attitude of the personality and increases the motivation is **Suggestopedia**.

This method was created by Prof. Dr. Georgi Lozanov /born 22 July 1926 / - a psychotherapist and physiologist of the brain, born in Sofia [5, 2005]. Officially this method was used in Bulgaria in 1965 when the first two experimental courses in English and French were organized at the Pedagogy

Research Institute in Sofia. Due to the exceptional results shown in the experimental groups, the interest in this method has grown not only in Bulgaria but also in other countries, and in 1966 a State Research Center for Suggestopedya was established. With the help of Prof. Dr. Evelina Gateva, a musician and a linguist, the classical art in Suggestopedia was introduced, which, in the next years would improve and enhance the favorable impact of this method on the person / trainee /. During the period of 11-16 Dec. 1978 UNESCO organized 20 experts from around the world to explore Suggestopedia on-site in Sofia and to offer what to do, and they put an incredibly high mark by immediately offering to train suggestopedagogues around the world and to create an international organization for Suggestopedia, which had to develop and implement Suggestopedia. This is a new method in pedagogy, which is based on the desuggestive-suggestive approach to the learner, which liberates and stimulates the personality. This method was quickly implemented in pilot schools in the country and mainly in Sofia. Consecutively, Suggestopedia drew the attention of specialists from Russia, the USA, Germany, Hungary, Canada, and later in Japan, Finland, and initially, Suggestopedic Language Learning Centers were created in these countries, under Dr. Lozanov's Suggestopedic Method; later on, these countries also implemented this method in some of their schools. In Germany, the first to sign a contract for training by the Suggestopedia system was Karl Marx University in Leipzig. Numerous universities in the United States have conducted a number of experiments on the suggestopedic system and reported very good results. A number of researchers around the world have been trained and experiments with this method have begun. This system was initially developed for students and adults in a foreign language because of:

1. The special importance of memory and automation in foreign language learning.
2. Exploring the possibility of using words as a measure of memory development.
3. The growing interest in foreign languages, which allows more people to be hired for experiments.
4. Experimenting in foreign language learning makes it possible to use the features of the methodology in other subjects as well.

Parallel to the development of this method, experimental studies have been carried out in Suggestopedia and Suggestology [6,1975].

Why this method is called desuggestive-suggestive. It is **desuggestive** because it does not rely on "inducing pressure" on the learners. It releases from numerous, obvious and inconspicuous, negative, restrictive and suppressing suggestive factors of the learning process. Hence, this method is first of all "desuggestive". Secondly, the method is "**suggestive**," because in every communicative process the interactions are at an unconscious, instinctive, automated, intuitive and emotional level.

Based on these prerequisites, it can easily be concluded that childhood suggestopedia should be distinguished from the suggestopedia in adults. In the latter, recent life negative, suggestive factors still do not reduce the mental capabilities. The desuggestive part in the learning process includes the harmful impact of unqualified teachers, textbooks, syllabi, parents throughout the surrounding environment. On these paths, children are unconsciously convinced that "study is a torture" and that their mental capabilities are limited, for example within the learning material taught. This is confirmed by the syllabi and didactic units in the textbooks, the frequent requirements for monotonous homework, and through tedious repetitions of separate, in themselves, meaningless elements of the curriculum. All that, sometimes, leads to certain pathology of the educational process. Instead of creating the conditions for gladly satisfying the basic need of the personality - thirst for information - as they take into account the laws of the brain, educators often seem to want to "learn the brain how to work."

Why Suggestopedia is also called **Reservopedia**?

This is a global-artistic approach, in which the organization of the learning process itself creates and maintains to a certain extent contraceptive psycho relaxation in the trainee. Activation of the receptive and intellectual-mnemonic functions of the brain are stimulated, but also of the whole personality [7, 1987]. A reserve potential is revealed, characterized by the following features:

1. Memory reserves, reserves for intellectual activities, reserves for creativity, reserves of the overall personality.
2. Training is so conducted by the teacher that it does not cause fatigue, but relaxation in the student.
3. Suggestopedic learning gives the impression of a "pleasant experience".
4. It has a favorable educational effect; it mitigates the aggressive tendencies in the students and helps them in adapting to society.
5. In the case of functional diseases, a psycho-therapeutic effect is observed.

Reserves are the non-manifested, genetically determined, operating in the paraconsciousness, abilities of the personality that are many times larger than in daily life. An example of hidden reserves that appear after a suggestopedic lesson can be:

- Hyper-memory, surmounting the capabilities of ordinary memory;
- Inducing hyper-creativity / creative hyper-productiveness /. In a number of experiments, it has been shown that artistic, musical, mathematical expressions can be greatly improved in quantitative and qualitative terms; an opportunity for accelerated creative self-development;
- Control and self-control of pain, bleeding, vegetative functions;

2. Specifics of the Suggestopedic Method

Paraconsciousness involves more or less unconscious physical activity. Paraconsciousness refers to peripheral perceptions that stimulate it, emotional stimuli, and innate and genetically determined instinctive tendencies. Paraconsciousness involves non-verbal automatic activities in their psychic reflection. Paraconsciousness encompasses also the unconscious sides of creativity, intuition and inspiration. The Suggestopedic method influences paraconsciousness so that the student becomes hyper-memorable, creative, relaxed.

Relaxation, when it is not controlled and guided, is favorable to the physical and mental condition itself. In the suggestopedic classes, relaxation is expressed in the form of reassurance. This reassurance is created by the overall organization of the process and is supported by the actual results that each learner can count on.

Peripheral perceptions - these are normal over-irritants. They are relevant to the consciously perceived program and greatly enhance its absorption. Prof. Lozanov's experiments show that peripheral perceptions reach the long-term memory. In moments when they are conscious, they contribute to the understanding of a given task. In moments of falling on the periphery of conscience and attention, they are easily automated. In the suggestopedic method, peripheral perceptions are perceived as a complete and very important system. The practical implementation of this activity is also the subject of the qualification of future teachers. Peripheral perceptions cannot refer to passive, involuntary memorization or incidental learning, because these forms of memorization refer to conscious activity. To stimulate peripheral perceptions, the suggestopedic class uses visual panels, schematics, diagrams, and at the same time the room should not be overlapped with such study materials.

Non-specific communication environment - Here, the suggestopedic method includes the "double plan" in presenting the information; the specificity of the intonation [the voice setting]; authenticity of information; infantilization in the sense of increased trust; pseudo passivity in the sense of relaxed, stress-free, controlled activity. Infantilization is a natural spontaneous reaction in obtaining high-confidence information. The teacher's prestige is also related to this group of resources, as in most cases the person receiving the information is unaware that the perception of information from this source has increased due to the increased trust in the source.

Multiple personality - Changes in physical activities lead to varied changes in the whole personality, including the functions of the body and the brain. For example, an emotion or thought automatically alters heart rhythm, blood pressure, breathing rhythm, etc; as well as changing the dynamics of the cerebral cortex. In this connection, the selection of other identities and names by the students and by the teacher, in the foreign language classes, acquires a new psychological and physiological meaning. They not only hide

behind them, but enter into a new functional system that could be further used in learning.

A public suggestive norm - it prevents students from learning the new teaching material. Being in a suggestive "custody" to these norms, we usually do nothing to contradict it. For example - we do not believe that we can remember more and more permanently, the student does not believe he will be able to acquire a given piece of material. The public suggestive norm teaches and threatens us that this is impossible, and if it happens, it is a miracle. The public suggestive norm determines the limits of our action, but it is thrown out of us by the so-called anti-suggestive barriers in the process of the suggestopedic lesson.

Anti-suggestive barriers - they are a system of emotional, logical /rational/ and ethical barriers. The *emotional* anti-suggestive barrier most often occurs in children when they shake head to a stranger saying "no". Most of all, this reaction in humans is unconscious on the whole. The *logical* anti-suggestive barrier appears to be conscious, but it is not. This anti-suggestive barrier rejects any psychological impact that is contrary to sound logic. The *ethical* anti-suggestive barrier rejects any impact, proposal that is not in harmony with the person's ethical structure. And this process is unconscious. In the ordinary learning process, the teacher often conflicts with the students' anti-suggestive barriers. They can be triggered in part by the teacher, but they should not be provoked or excited. In Suggestopedia such a question cannot stand because of the spontaneity and co-participation of the students. This spontaneity is ensured due to the characteristic game. The whole suggestopedic process is a pleasant, two-plan game.

In order to be sustainable, this method should be based on the principles of desuggestology, the principles of desuggestive pedagogy [8, 1976].

At the core of the desuggestive process there is the understanding that linear teaching or teaching of small isolated portions, especially when addressed only to consciousness and attention, as the tendency in mass practice, is in contradiction with certain psycho-physiological laws. Therefore, it cannot be effective; and in most cases, it will lead to despair amongst teachers. Such teaching relies only on the volume of attention and consciousness. It does not make a connection with the para consciousness, where everything is memorized for a long time.

Another underlying assertion in suggestopedy is that the brain does not perceive single symbols. They must be linked with additional associated perceptions, having an appropriate emotional filling. Concentrated attention, thus, discharges conscious control, and then the paraconsciousness takes control and records the information in the brain for a long time.

3. Principles of Desuggestive Pedagogy:

1. Joyful, spontaneous, contraceptive tranquility;

2. Dynamic, structured and hierarchical globality - the portion is a part of the whole; when elaborating a lesson we start with a global theme that includes a multitude of interrelated topics;

3. Desuggestive attitude aimed at spontaneous discharge of the mind potential;

The three principles are always considered together and cannot be ignored or worked with only two of them.

First principle: To achieve joyful and contraceptive tranquility, we use game systems, humor, visuals, illustrative materials that carry a *stimulating character*. The serene setting itself creates contraceptive psycho relaxation.

The second principle is related to the systematization of the teaching material in textbooks and visual materials and on the teacher's behavior and system of work; because, ultimately, by whatever method they learn, such a method creates their personalities. Hence, Prof. Dr. Lozanov believes that the traditionally built mass methodology of learning, the so-called partial methodology, based on detached elements that are subsequently connected, has its place in the study of science, scientific analysis, but in mass education for children and adults it is already outdated.

A typical example is the education of children in reading, starting from the letters. It takes a long time for them to learn to merge the letters until the word is finished, which already has some meaning.

On the other hand, the holistic method involves learning of whole words and sentences. But this method proves to be inappropriate because the children learn the first 10-20 words, and then because they do not know the letters, they cannot read the new words or read them with many mistakes. Which is the reason for the difficulties in the holistic approach? – That is lack of structure. The training is in great parts, but the structure is left to spontaneity or further study after it has advanced much in the way of holism.

According to the second principle of suggestopedia, the study content in textbooks, visual materials and way of teaching should be structured by keeping the hierarchical structure, the individual elements to be visible in the whole, and at the same time the elements should contain the global one as a part of it.

The third principle of Suggestopedia implies that once we have the necessary mental state according to the first principle, having the necessary dynamic structuring of the teaching material according to the second principle, an attitude must be created to release the potential brain and mind capabilities. This attitude must occur in the learner spontaneously. The teacher mastership lies in his skill to conduct the learning communication process at the level of potential personality abilities. The teacher does not resort to the slightest pressure or insistence. Thus the trainer has the feeling that he / she achieves everything, the teacher's aid is just a helping hand. Of course, this communication is a matter of training and practice.

Based on the already mentioned foundations of Suggestopedia and the principles of Desuggestive / Suggestopedic Pedagogy, **three groups of tools** are developed to help the methodology: psychological, didactic and artistic (the means of arts).

1. *The Psychological tools* include the overall organization of the learning process. It is important to organize in a certain way the peripheral perceptions. They should be not that much with illustrative material but with a stimulating organization. Not only are the wall panels a peripheral perception, but the whole atmosphere in the classroom, too. The latter must meet certain hygienic requirements and an aesthetic layout. It does not have to be complicated. School boards must be artistically and tastefully crafted. The teacher has to be fresh, to bring about peace of mind and work satisfaction. It is very important that trainees are unconscious imitators of everything they see, hear and feel. The teacher should pay attention to the freshness of his voice and, if necessary before the class has begun, to train his voice, too.

2. *Didactic tools* - some of them were considered in the presentation of the principles of suggestopedia. The material must be structured according to these principles. The dynamic hierarchical-structural globality must be observed not only in the textbook, but also in the teaching of the lecturer. The material for the suggestopedic lesson should be 2 to 10 times greater than what is expected in the ordinary lesson. The enlarged methodological unit gives an opportunity to cast a thorough view of the basic laws in the studied material. The codes aggregation also allows the projected limitation of the short-term memory to be overcome. This principle requires sensible learning and avoiding multiple exercises of details and gradual introduction of new subjects. An important feature is that, while the attention is attracted to the sensible integrity, the paraconscious thought processes treat the default elements included in the overall code. For example, in foreign language learning, the student's attention is directed to the sentence and its meaningful communicative side. At the same time, pronunciation, vocabulary, grammatical basis, the model, remain of secondary importance. The Suggestopedagogue briefly focuses on them and returns to the meaningful beginning again. Yet, a significant part of these elements are absorbed in the composition of the whole, without stopping at them.

3. *The artistic tools*, the means of art, are the best way of presenting, "entwining" the memory material; but they are also a highly motivating force. The artistic tools introduce a liberating and stimulating didactical art /music, literature, acting/ into the learning process. They support the suggestopedic process secondarily through an abundance of harmonized peripheral perceptions. The artistic tools not only create a pleasant atmosphere in perception, memorization and understanding of the basic knowledge, but they significantly increase the suggestive attitude of the reserves, the attitude, the motivation, and the expectations. By the means of art, students once again

acquire a part of the study material. Then the teacher's work becomes easy and pleasant.

Table 1 shows the results of first grade students in experimental suggestopedic classes in Bulgaria before and after playing a musical mathematical operetta.

Table 1

**Acquisition of study material in mathematics
through art means in 1st grade children**

Grade	Number of students	Type of control assignment	Correctly solved tasks in %
First	1312	Entrance level before the show	57
First	1312	Exit level after the show	74

The difference is statistically reliable / $p < 0.01$ /.

Along with all the principles and means mentioned above, it should be noted that there are seven laws in Suggestopedia, created by Professor Dr. Lozanov, which every teacher must observe:

I. First Law: Love

Nothing good in this world has been achieved without love. Love is also an important condition for reaching the psyche reserves. Love creates tranquility, trust, and contributes to the prestige of the teacher in the eyes of learners, thus opening up the paths to revealing the psychic reserves of the person. Love cannot be acted out, because learners will feel it; but it should not be understood as a sentimental mood, as this attitude provokes negative reactions. It must be felt as a sincere love towards the human being. We do not advise any teacher to commence work at the level of reserves without human love. It would be better to wait until he / she reconsidered the learning process from this position. In Suggestopedia, the teacher's love towards learners can be best illustrated by the image of a parent, who teaches his child to ride a bicycle without being able to tell at what point his parent holds him or lets him free.

Love, along with other laws, creates the necessary joyful, sincere and highly motivating concentrative relaxation. This condition is characterized by mental relaxation and unstressed concentration (various relaxation exercises, branded as techniques, are already known) [11, 1996, 1998, 2003, p.117]. It requires calmness, inner confidence and trust. Under these conditions of positive emotions, the creative intellectual activity and the globalized learning process are characterized by lack of fatigue. The principle of joy and concentrative relaxation is implemented through a system of games and laughter, through visuals that are less illustrative, but stimulating in nature, as well as the overall organization of the learning process.

II. The Second Law: **Freedom**

When there is Love, there is also Freedom. Freedom allows the teacher to exercise his personal judgment and make decisions in order to be able to adapt the suggestopedic system to the personal peculiarities of each group. It also allows learners to choose whether to take part in some activities such as songs, games, etc. that they may not like them according to their mood. At any moment they are absolutely free to leave the room, as long as they do not interfere with the group's work. The principle of freedom is one of the main elements that distinguish Suggestopedia from hypnosis. In hypnosis, the hypnotized cannot choose, act freely, spontaneously, and interrupt the process, in order to do something, unless the hypnotist has ordered it.

Freedom allows learners to listen to their inner voice and choose their own way to psyche reserves at different points in the learning process. Freedom is not dictated by the teacher, it is a spontaneous feeling in the learner. It is a feeling that they do not obey to a methodology, but are free to join with joy, by expressing their personal traits, i.e. the Reservopedia is not pressure but, on the contrary, it opens the door to personal expression.

III. Third Law: **The teacher's conviction that something extraordinary is happening**

The state of assurance that something extraordinary, different from the public suggestive norm, is necessarily happening, leads to a state of inspiration in the teacher. This internal festivity is reflected in the peripheral perceptions of the teacher that are perceived and created in the learners. What is particularly important is that this attitude is spontaneously created by the state of the lecturer and the learners happily resonate, most often unconsciously. This creates the so-called desuggestive link at the level of the reserve complex. The mastery of the teacher lies in facilitating this communicative resonance process. Naturally, certain suggestive influences are inevitable in any communicative process. In Reservopedia, however, even the least pressure or insistence on the part of the teacher is an obstacle in the process. He/she simply communicates at the limit of the unused brain or mind reserves, in accordance with the seven laws of Reservopedia. In this way, students have the feeling that they achieve it all by themselves; the help of the teacher is just a hand extended to a friend. Of course, this communication is a matter of training and practice.

Now, learners are able to acquire the study material at least two to three times and up to five to ten times faster and better than traditional methodology, with favorable effects on health and education. In the future, this rhythm of acquisition can be increased many times.

IV. Fourth Law: **Study material, increased many times**

In Suggestopedya, the study material presented to learners per unit of time should be at least 2 to 3 times (times, not per cent) larger than the volume of material presented according to the existing norm by other methods. For example, the study material in a one-month foreign language

course should be at least twice as much as a typical similar course. In fact, such a beginner's course will consist of 2000 to 2500 lexical units, acquired per 100 lessons without homework, which certainly exceeds the established norm. This proportion also applies to the rest of the subjects. If the traditional norm changes with time, after several years or generations, the Suggestopedic course will also have to change due to the constant incentive of evolution. Given that a large number of national and international expert committees have confirmed that the methodology has a psycho-prophylactic, psycho-hygienic and educational effect, it is more than clear that we should not allow the study material to diminish. If, in the context of Suggestopedia, the study material adheres to traditional boundaries, it would only fix and strengthen the public suggestive norm for the limited possibilities of the human being. Thus evolution would be delayed.

V. Fifth Law: **Whole - Part, Part - Whole; Part through the Whole**

When the new material is taught in all subjects, there should be no division between the element and the whole. Elements should not be taught and studied in isolation. For example, vocabulary, grammar, does not exist separately from language, but are a part of speech. Every whole is a part of a larger whole and so to infinity.

On the other hand, this concept is based on some studies on brain functioning, according to which parts of the brain contain information about the whole brain. According to the three foundations of Suggestology, the human being reacts as a whole and perceives the irritants in their complexity. This is another proof that the elements do not exist separately, but always as a part of the whole. From the point of view of philosophy, there is the great theory that the whole is in the part and the part is in the whole. They are indivisible. There are no isolated parts. Therefore, in learning, the elements must be taught together with the whole. The global gives extra nuances to the element. The atom reflects the laws of the universe, and the universe is in the atom.

VI. Sixth Law: **The Golden Ratio**

The golden ratio reveals the law of harmony in the universe, to which every suggestive process must obey. Harmony creates harmony and overcomes mental chaos, often provoked by traditional pedagogy. Harmony is a major factor in the teaching and acquisition of such large study material for a short period of time. The relations between the parts and the whole are in a golden ratio in the suggestopedic process of communication. The ability to learn improves when the education process smartly detects the right balance among rhythms, intonations, emotional stimuli, etc.

VII. Seventh Law: **Application of Classical Art and Aesthetics**

Classical art and aesthetics are used in Suggestopedia as particularly effective mediators. Suggestopedic art creates conditions for states of optimal psycho relaxation and harmony that help create a spontaneously increased

susceptibility state and stimulate the ability to reveal mental reserves in a pleasant atmosphere. It helps to reach a state of inspiration and to divert the attention from the "sick spot" where there is fear related to learning. Classical art is introduced through specially selected works of classical music, songs and arias, literary works, reproductions of masterpieces of fine arts.

Analysis:

In conclusion, I can say, as an individual, that this is probably the most humane method of teaching, which focuses not only on the outcome, but also reveals the brain's reserves, by freeing the mind through de-suggestion, from imposed public norms and revealing new horizons in the capacity of the human brain, creativity, and, most importantly, creates tranquility and joy in adolescents.

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The Optimistic Tragedy of Ukraine¹

Optimistic Tragedy is a well-known play written by Vsevolod Vishnevskiy in 1933. It is dedicated to the Revolution of 1917, which without exaggeration can be called one of the most large-scale social upheavals in the history of mankind.

In 1963, based on the play by Vsevolod Vishnevskiy, Samson Samsonov directed the eponymous movie, which in the same year won the Cannes Film Festival prize for “best film with a revolutionary theme”. The film (as well as the play) gained popularity and interest and became at the time the most successful film at the box office.

The plot of the play: a female Commissar is dispatched by the Soviet government to a ship, where power belongs to the anarchist marines, with the aim of establishing a new order and forming a Red Army regiment from these marines to take part in the Russian Civil War. The ship also has on board representatives of the old power – a captain and a boatswain – who have lost their abilities to run a crew. The arrival of the female Commissar immediately causes both ideological and sexual tension. The marines try to rape her; she takes out her revolver and shoots one, saying the famous phrase, “Well, who else wants the Commissar’s body?” After this episode, the Commissar undertakes delicate psychological work with the crew, convinces the sailors of the correctness of the new ideology and the need to accept new authorities. She skillfully uses the officers’ resources in the fight against the White Army, organizes an intrigue against the leader of the anarchists, as a result of which he is shot. In the finale, the Commissar dies, but the goal is achieved: the First Marine Regiment, which defeated the enemy and swore allegiance to the Soviet power and the Great October Revolution, has been formed from the anarchist crew.

According to a tragedy genre, this play is about death², first of all, about the death of the main character. However, it is optimistic, since this death for revolution presupposes a bright future and the good of everybody. Such ideas

¹ This paper was presented at the Conference “Ethnic and Religious Conflicts in the World. The Contribution of Psychoanalysis” which took place in October 17, 2014 in the Italian Chamber of Deputies, Rome. <http://www.journal-psychoanalysis.eu/ethnic-and-religious-conflicts-in-the-world-the-contribution-of-psychoanalysis-international-conference/>

² Vsevolod Vishnevskiy’s play *Optimistic Tragedy* was staged for the first time in 1933 at the National Academic Theater of Russian Drama in Kiev. The director of the show V. Nelly-Vlad changed the ending of the play: the Commissar and the regiment are alive; they turn their focus toward the bright future. This deprives the play of a dramatic revolutionary context and places it beyond the genre of tragedy. But, perhaps, it is this reading of the tragedy that shows the special characteristics of the Ukrainians in relation to their own history and mythology: the rejection of death and tragic pages of their own history in an effort to give an optimistic sense to the drama of what is happening.

are the basis of any revolution, and they deny death as the end of human life, placing it in the ideological context. At the end of the play, the author points to the inevitability of revolutions, comparing them to the “flow of the great rivers” and “grandiose forces of nature, terrible in their growth”, producing “the roars of cataclysms and streams of life”³.

The Psychoanalytic Theories of Conflict

Every revolution always reveals an irreconcilable confrontation and an inability of society to remain in the same condition, as well as bringing out and developing hostility (*neikos*), which for Empedocles already stood opposed to love (*filia*). The psychoanalytic view allows us to understand that all these phenomena originate from the intrapsychic conflicts responsible for the subject’s existence in the world. Even the main figurehead of Marxism describes a revolutionary situation with words that directly refer to desire and the dynamics of drives, “...the ‘lower classes’ do not want to live in the old way and the ‘upper classes’ cannot carry on in the old way”⁴. These words, as a metaphor, can be applied to the interaction of the super-ego and the Id in implementing, while trying to break through, sexual, aggressive or destructive drives.

From the psychoanalytic point of view, the conflict is considered to be a constitutive part of the human being and of the origins of subject formation. It was the conflict that became the pivotal concept of the psychoanalytic theory of neuroses. However, the concept of the conflict did not find its clear and complete expression in Freud’s works, although it was constantly supplemented and processed throughout his life, with the revised theory, which was obviously influenced by historical events. In short, we can say that the conflict is the contradictory internal requirements opposed to each other in the subject; for example desires and moral imperatives, or rather contradictory drives. The conflict may be manifest or latent. The conflict is without doubt a major datum of psychoanalytic experience, relatively simple to describe in its clinical modes, however it is more difficult to lay it in a framework of the complete theory.

The major milestones in the development of the theory of psychical conflict are linked to the discovery of the first and the second topographies (the first and the second models of the psychical apparatus). In the framework of the first model the conflict was considered as the opposition between the Unconscious and the Preconscious-Conscious systems, being separated by censorship. Sexual drives, kept away from Consciousness by repression, manifest themselves in various formations of the unconscious: dreams, parapraxis, symptoms. The censorship distorts the content of

³ Vishnevskiy V. (1978) *Optimistic Tragedy*. – Iskusstvo, 1978

⁴ Lenin V. I. (1920a) ‘Left-Wing’ Communism – An Infantile Disorder. In Lenin, *Collected Works* (1966 ed., Vol. 31, pp. 21-118) – Moscow: Lawrence and Wishart.

contradictions in these formations. Thus, the expression of the conflict always has manifest and latent aspects. The confrontation of these systems corresponds to the antagonism of the pleasure and reality principles, with the latter seeking to establish its superiority over the former. During this period Freud considered two main contradictory forces to be a basis for the conflict – sexuality and an agency of repression comprising in particular of the ethical and aesthetic aspirations of personality. The repression arises because of the specific traits of sexual ideas, namely, their incompatibility with the ego. The next stage in the development of ideas about the conflict belongs to 1920 – the creation of the second model of the psychical apparatus. Now Freud considers the conflict not only in topographical terms (as a confrontation between systems and agencies), but also from an economical-dynamic point of view (as a contradiction between different drives).

The new dualism between the life and the death drives revised the notion of conflict. It became obvious that certain kinds of drives compiled different psychical agencies. In clinical practice, Freud observed that the life drives appeared to cover most conflictual oppositions, and the death drive was not a pole of the conflict, but rather the very principle of strife. For Freud, a tendency towards conflict is related to the bisexuality inherent in each human being, which has a variable effect: its manifestation demonstrates a conflict between strictly irreconcilable requirements, and should this tendency not come into play, then nothing ought to stand in the way of a balanced resolution of homosexual and heterosexual trends. Thus, Eros or sexuality is always at the heart of the conflict.

Further development of the theory of conflict by Freud's followers has not resulted in a deeper conceptualization. Since psychoanalysis is focused on the subject, any psychoanalytic attempt to elucidate the question of conflict in depth must inevitably open onto the real nuclear conflict for the human subject – the Oedipus complex. The conflict here, before it becomes a defensive one, is already inscribed, pre-subjectively, as a dialectical and primal conjunction of desire and prohibition. In so far as it constitutes the major, ineluctable datum that orientates the child's psychical field, the Oedipus complex may be recognized behind the most varied modes of the defensive conflict. More fundamentally, if one takes the Oedipus complex as a structure in which the subject has to find a place, the conflict appears as already present in it prior to the interplay of drives and defenses which is to constitute the psychical conflict specific to each individual.

At first glance, the difficulty of creating a complete theory of conflict in psychoanalysis is associated with the fact that psychoanalysis as a theory and method is focused on the subject, on the unconscious and psychic mechanisms of a certain individual, and this makes it impossible to generalize. But we always take into account what was emphasized by Freud in *Group Psychology and the Analysis of the Ego*: “The contrast between individual psychology and social or group psychology, which at a first glance

may seem to be full of significance, loses a great deal of its sharpness when examined more closely”⁵. In the individual’s life someone else is invariably involved. And this other acts as a model, as an object, as a helper and as an opponent. Thus individual psychology is always social psychology as well. Everything that you conceive of yourself appears within the relationship with the other, in the image and likeness of the other. Freud’s thoughts on authority, violence and the drive to possess, including self-possession, are of special value for understanding not only the psychic processes of a certain subject, but also social and group processes and the conflicts they create.

Politics has at all times tried to create a symbolical field for realizing the psychical needs of every individual in social processes and events. Love, hostility, revenge, jealousy, envy, idealization, fear of death are implemented within this field, as well as other feelings that are inadmissible and illegal in a closed society, and which religion defines as a sin. However, this becomes quite legitimate and even fair, when various social entities come into confrontation under the auspices of the interests and ideals of certain political forces. That’s how ethnic groups, nations, religions, states, castes, classes and similar social communities come into being. Today it is quite obvious (and the case of Ukraine proves it) that any human society, nationality, religious affiliation is produced not by the common blood, but by the symbolical construction of reality. Any community, whether an ethnic or religious group or a class, is a result of symbolization, an artificial construction. Any of these constructions is always based on conflict. Conflict is a constituent beginning of any community and at the same time a principle that destroys it. And at this point I would like once again to bring into focus the instability and dynamism of such constructions.

So, the psychoanalytic point of view is that a conflict forms the basis for the existence of the subject, of humanity, of any society. The internal conflicts of the subject are projected outwards and unfold themselves within interpersonal and social relations. From this perspective we could ask ourselves: can psychoanalytic theoretical and practical contributions have an impact on the conflicts that break out in the world so often, and in what way?

In *Civilization and its discontents* Freud notes that conflict is triggered as soon as men are faced with the task of living together. As previously stated, the attempts to involve psychoanalysis as a means of coping with conflicts were made in different variations; but they did not produce the desired results.

The exchange of letters between “representative intellectuals” organized in 1931 by the International Institute of Intellectual Cooperation (instructed by the Permanent Committee for Literature and the Arts of the League of Nations) was one of the most notable attempts to prevent a Second World War in Europe. This correspondence was “on subjects calculated to serve the

⁵ Freud S. (1921) Group Psychology and the Analysis of the Ego. – SE 18, 67-143.

common interests of the League of Nations and of intellectual life”⁶. Owing to this correspondence, Freud’s *Why war?* was written, where he noted that a war was not something unnatural; and it was not such an inadequate means for establishing the desired “perpetual” peace⁷. In this context Freud wonders where the pacifists are coming from, why there are people who rebel so violently against war that “after all, seems to be quite a natural thing, to have a good biological basis and in practice to be scarcely avoidable”⁸.

However, the denial of such important psychoanalytic discoveries, such as human destructiveness and aggression, which underlay the psyche and the death drive, in various geographical locations has tried again and again to engage psychoanalysis in politics and in eliminating global social conflicts. In this respect, as a rule, high expectations were placed on psychoanalysis. For example, in the 1920s in the Soviet Union psychoanalysis was called to serve the interests of the state in order to explain the processes taking place in society and to create a ‘new man’ (stripped of the vestiges of the past and of old conflicts) for a new country. Unfortunately, this very fact did not allow psychoanalysis to exist in the Soviet state, and by the 30s psychoanalysis has been completely forbidden and withdrawn from circulation.

The current situation of our time also raises a question for us: to what degree, in such circumstances, are psychoanalysts able to keep their neutral position of researchers capable of carefully examining this remarkable example of conflict that unfolds in the field of social relations? In other words, can psychoanalysis become that very midground – safety zone – from where the researcher’s perspective, equidistant from all psychic instances, can examine far better the social conflicts (rooted in the psyche of each individual subject), the horror of which someone who is directly in their epicenter faces and experiences ?

Psychoanalysts in the Thick of Revolution

At critical moments of history psychoanalysts (appearing to be at the epicenter of tragic events) are forced to work in these very circumstances, and in some situations they should sacrifice their ethical position as analysts in favor of the citizen’s position. The revolution calls for carrying out the responsibility imposed by the times.

The working experience on Maidan⁹ during the early days of the 2013 revolution showed me and my psychoanalyst colleagues our helplessness in

⁶ Freud S. (1933) *Why War?* - SE 22, 197-215.

⁷ Allusion to E. Kant’s *Perpetual Peace*.

⁸ Freud S. (1933) *Why War?* - SE 22, 197-215.

⁹ Maidan, Euromaidan was a wave of demonstrations and civil unrest in Ukraine, which began on the night of November 21, 2013 with public protests in Maidan Nezalezhnosti (“Independence Square”) in Kiev, demanding closer European integration. The protests were sparked by the Ukrainian government’s decision to suspend the signing of an association agreement with the European Union, instead choosing closer ties to Russia and the Eurasian Economic Union. The scope of the protests soon widened, with calls for the

the face of huge numbers of injured or aggrieved people looking for assistance. During the first week of the events ‘the hotline’ was organized within the International Institute of Depth Psychology. The hotline phone rang round the clock. In this case, an important resource was that at our institute there was a group of professionals trained by our Israeli colleagues for working in crisis situations. They trained from 2008 to 2010, though at that time no one expected that such specialists would soon be in demand in Ukraine and in such large numbers. It is known that, by mischance, the Israelis possess an invaluable experience in working with victims, and the specialists of our organization were fortunate enough to be able to replicate this experience because of the training they underwent in peacetime¹⁰. Obviously, work in the epicenter of tragic events differs from psychoanalysis radically and requires rapid timely intervention, often complicated the conditions out in the streets. In such cases, it is necessary to work not only with the victims, but also with the specialists involved in releasing patients from traumatic experiences; and this very fact represents a huge problem, since even basic assistance to the victims takes a long time.

To cope with the tasks the situation demanded, we had to organize training for the psychologists who would provide the victims with assistance in a brief span of time. Between January and May 2015 26 psychologists (as many as the number of regions in Ukraine) were trained to help the affected children and their families. And in the following six months 537 persons were trained, with whom group supervisions, interviews and debriefing groups were carried out regularly. It is impossible to assess how much the trained specialists did for the affected people. It is too early to sum up the results and draw conclusions concerning the work of these crisis specialists, since at present there is no truce in our country yet. However, the core of the question is obvious to everyone: aid specialists in countries with persisting conflicts (such as Israel) have to comprehend the ongoing events in terms of an emergence of new approaches, taking into account current requirements, describing their practice and sharing the invaluable experience of working with affected and aggrieved people, because ‘hotspots’ are breaking out increasingly in different parts of the planet and are involving a growing number of people. The present-day war (perhaps, it might be called the Third World War) is kindling increasingly due to the fact that today there are no boundaries within the interface of the planet.

The calls for revolution on the social networks during the night of 21-22 November 2013 brought together in Maidan in Kiev such a large number of

resignation of President Viktor Yanukovich and his government. The protests were fueled by the perception of ‘widespread government corruption’, ‘abuse of power’ and ‘violation of human rights in Ukraine’. These protests led to the 2014 Ukrainian revolution (author’s note).

¹⁰ In 2008 the specialists of the International Institute of Depth Psychology took part in the training project “Organization and rendering assistance in stressful and crisis situations”, organized by the Community Stress Prevention Center (Israel).

people that a mass protest against the existing authorities resulted in an authentic tragedy for Ukraine. In its very first days the demonstrations caused a record number of victims. A new point to work on for our specialists in Euromaidan was that all the participants of the revolutionary events were 'closely tied' by Internet social networks. Our specialists had also worked in Maidan in 2004 during the Orange revolution¹¹. The difference between the revolutions of 2004 and of 2013-2014 was that in 2004 there was not such a powerful virtual coherence among the participants of the events, and there were no mass executions and death. Active involvement in the virtual world of social networks not only prevents individuals from keeping up personal boundaries and immediately infects them with a common emotion (a characteristic of mass psychology), and subsequently expands the field of the imaginary, intensifying to the maximum levels mass anxiety, panic, hatred and other affects within the resonant space of networks. Internet is the most powerful 'weapon of mass destruction' today, due to the fact that the network spread over the entire planet. This allows to infect with the affect a huge number of people and to bring them together very quickly in a particular place. This is what happened in Kiev during the night of 21-22 November 2013.

Peculiarities of Work with the Participants of Mass Conflicts in Modern Conditions

The difficulty of working with victims of the mass tragic events of history was noted by Freud. In particular, in his report at the Fifth International Psychoanalytical Congress, shortly before the end of the great European catastrophe – World War I – he said, "Often, perhaps, we may only be able to achieve anything by combining mental assistance with some material support, in the manner of the Emperor Joseph. It is very probable, too, that the large-scale application of our therapy will compel us to alloy the pure gold of analysis freely with the copper of direct suggestion; and hypnotic influence, too, might find a place in it again, as it has in the treatment of war neuroses. But, whatever form this psychotherapy for the people may take, whatever the elements out of which it is compounded, its most effective and most important ingredients will assuredly remain those borrowed from strict and untendentious psychoanalysis"¹².

¹¹ The Orange Revolution (Ukrainian: Pomarancheva revolyutsiya) was a series of protests and political events that took place in Ukraine from late November 2004 to January 2005. The protests were prompted by reports that the results of the run-off vote of 21 November 2004 between leading candidates Viktor Yushchenko and Viktor Yanukovich were rigged by the authorities in favour of the latter. The election was claimed to be marred by massive corruption, voter intimidation and direct electoral fraud. Nationwide, the democratic revolution was marked by a series of acts of civil disobedience, sit-ins, and general strikes organized by the opposition movement.

¹² Freud S. (1919a) Lines of Advance in Psycho-Analytic Therapy. – SE 17, 158-168.

As far back as World War I, when psychoanalysis was only at the origin of its development, it was obvious that the “gold of psychoanalysis” could be used in very limited quantities. When dealing with massive needs caused by social upheaval (such as wars), other methods should be used. However, today the situation calls for taking into account the new contexts. The specialists dealing with crisis situations today must take into consideration the space within which the modern masses are concentrated. The very masses Serge Moscovici called a public (or audience), in the sense that everyone was in front of his/her own screen, but nevertheless these masses were more controllable than a single man in the crowd.

The rapid capture of mankind by Internet networks catastrophically aggravates the state of belligerency. The modern subject is literally captivated by a screen space where there are no boundaries. Today this results in the fact that massive attacks of an ideological nature develop within the space of the Internet and call people to the streets, involving them in insuperable conflicts that huge numbers of people, who move from the imaginary to the real, register (in Lacanian terms) and are led to facing death, blood and grief. This makes the modern subject abandon his virtual omnipotence, feel the reality of his body and its imperfection (recognize his own castration), accept the finiteness of life (the inevitability of death) and realize the value of self-presence. Therein we could see certain optimism, but only provided that psychoanalysts and other specialists of the helping professions help subjects to live through tragic events, in the full spectrum of contexts, and facilitate the grief work. It is important to symbolize these tragic events in the social field, to historize them; in other words to facilitate the removal of repression and acceptance and recognition of all pages of history, even the most tragic. No matter how difficult this may be, today this task is of great importance in the zones where the most heated conflicts are taking place, both for psychoanalysts and politicians.

The Current and Historical Background of the Conflict in Ukraine

Obviously we can come close enough and examine in detail the tragedy of what is happening only if we are directly in the epicenter of the events, because from the outside everything seems quite different. Today the main role in developing a vision for certain events is played by the mass media (and primarily the Internet). Engaged by certain political forces, they practically carry out a total information dictatorship.

Depending on the location, there are different views on the conflict in Ukraine. These often show diametrically opposite ideas on the origins of the conflict, its historical motives and on the events themselves. In my opinion, however, the conflict in Ukraine erupted not between the Russian and Ukrainian parts of the population, but in completely different planes. The

Ukrainian tragedy of 2014 is due to both current supranational reasons and historical one. I shall try to highlight them below.

Here I recall the thought by Ernesto Laclau, who developed Freud's idea of social intercourse by means of identifications. This idea is that there are no political identities – national, ethnic, class, ideological or cultural – but only processes of symbolic determination through which particular groups and identities are identified. There are no collective identities, but only dynamic identification processes, which are always unstable. The events in Ukraine literally exemplify this idea, since there is no certain national identity (it is simply impossible in such a variegated social community that has always been influenced by different cultures and languages). Moreover, identification processes are rapidly changing as the situation develops.

However, I am amazed at the question by my European colleagues concerning the Ukrainian conflict (between the Ukrainian and the Russian parts of the population), which shows that the Europeans neglected the real participants of this process. I will leave aside the titans fighting on the stage of globalization – I mean the superpowers trying to divide the spheres of influence. But it should be taken into consideration that when the last revolution broke out in Kiev, its slogan was: “We are for European integration!” The people in Maidan who fought the current authority chanted: “We want to go to Europe!” In this way they rejected their national identity. At first glance the expression of such a wish as a matter of fact is paradoxical, since it is impossible to change geographical location. Moreover, geographically Ukraine is situated in Europe, and as an independent state it can choose the most acceptable ways of development. But the word ‘*want*’ in itself signifies a lack; to be more exact, it is a lack of identifications. The alternative of the movement to Europe is the movement to the Russian Federation, in other words towards the Soviet past. The people of Maidan stood up against this movement in favour of ‘the new promising future within the European family’. Among the protesters there were Russians, Ukrainians, citizens of Ukraine who had both Ukrainian and Russian heritages (this category constitutes a vast majority in Ukraine), Jews, Tatars and other ethnic groups, as well as the representatives of the European Union and the USA. In this context we can clearly see the “neurotic's family romance” described by Freud and acted out by powerful world forces as a trump card, as a script tried and tested in other parts of the Earth.

Obviously it would be naive to only see the clichéd globalist script within the Ukrainian events, as it would be to assume the exclusive uniqueness and isolation of these events from the countries that channel political processes towards what is favorable to them. I would therefore prefer to avoid dealing with the repetitive script already being acted out in other countries, and I would like to focus on the historical and psychological aspects specific to Ukraine.

23 years ago, after its dissociation from the Soviet Union, Ukraine achieved for the first time independent statehood within the borders set for it by the Soviet Empire after World War II. Prior to that there was only an idea: Kievan Rus, as the state that gave rise not only to the whole great Russian statehood and the idea of Rus power and might, but also to Orthodoxy, existed from the late 9th to the mid-13th century. Then the times of ordeal came. Several parts of Ukraine existed as parts of different states: Poland, Hungary, Austro-Hungary, Lithuania, Russia, etc.

The territory called Ukraine has until recently (now the borders are uncertain) been torn apart by neighboring states and has been influenced by different cultures, languages and state structures throughout many centuries.

So, for a long time Ukraine existed not as a state, but as an idea. One should keep in mind that the source – Kievan Rus – based on the ideas of integration and Orthodoxy really gave rise to a powerful state machine – the Russian Empire, which later turned into the Soviet Union, of which the Republic of Ukraine was a part. However, Ukraine was more of a signifier. The words ‘*Ukraine*’ and ‘*the Ukrainians*’ began being used in the 17th century, when its lands and people were under the reign of different countries. The choice of this signifier defined the location of the territory ‘*on the edge*’. The terms ‘*Malorossiya*’ (Little Russia) and ‘*the Malorossy*’ (the Little Russians) were also used, and they speak for themselves.

This kind of signifier role E. Laclau cites as an example in his *On Populist Reason*: “Long live Poland, for if there were no Poland, there would be no Poles!” This was said at a time when Poland did not yet exist as a state, but there were Poles with Poland yet to be created. The thing is that Poland, long before becoming an independent state, existed as a signifier; and history later gave a political body to this signifier.

Similarly, every Slavic state had its own ‘*ukraine*’ – the territory on the outskirts. So, Ukraine as a signifier means an edge, a suburb, the outskirts, a boundary. This marginality of Ukraine poses the question of our modern conflict: “The edge, the end of what we want to be: part of the European or Eurasian world?”

The tragedy lies behind the name ‘*Ukraine*’, since to be on the edge means the inevitable end. But herein we can try to find a more optimistic sense. Incidentally, the Ukrainian mentality had already been noted by Freud with reference to the case of Sergey Pankeev. When dealing with this patient born in the territory of modern Ukraine – in Kakhovka (now in the Kherson region), and who spent his childhood and youth in Odessa, Freud marked out the features peculiar only to the Slavic soul. He noted that there are at once two poles of ambivalence in psychical representations (without the repression of one of them).

The people who lived on the very fertile lands (the territory of Ukraine has 40% of Europe’s chernozem soil) were constantly under the rule of different conquerors. Therefore peasants were constantly oppressed by

foreign governors. However, the features of historical development connected the agricultural humility of the Ukrainians (who were the most oppressed part of the population under foreign states) to impetuous Cossack outlaws. Kozakdom originated in the territory of the Ukrainian lands. Fugitive peasants, who did not want to obey, united into the troops free from the state, and chose on their own which state to be at war with or which to be aligned with. Probably, the connection between these two opposite poles – peasant humility and depression and the Cossack love of freedom and the unwillingness to obey anybody – created the specific character of the Ukrainian people: subjection and passivity is replaced by the overturning of all possible laws and a search for identity within other cultures and nations; in other words, the Ukrainian people very often changed the country or state to which they attached themselves with a continuous expectation that benefits could come only from the Other (state).

The Ukrainian peasants obeyed numerous conquerors and were influenced by different states, sometimes showing the prodigies of humility and ability to adapt to any conditions. Leopold von Sacher-Masoch, who in his diaries called the long-suffering people in his mother's estate not far from Lemberg (now Lvov) "my Russian peasants", grew in such surroundings in early childhood. Masochism is one of the characteristic features of Ukrainian culture.

The Cossacks constituted the protest against any prolonged subjection to any state and any law; they chose on their own whom to be at war with and whom to join. And only Catherine II managed to make them a part of the Russian state for long enough. Incidentally, she established the 'pale of settlement', which ran just across the territory of modern Ukraine and sidelined certain nationalities. First of all the Jews, who were forbidden to settle in the capital cities and in that part of the Empire where they could hold back the development of "Russian" trade, production and economies. Such a historical background has led to the development of tolerance to ethnic and religious distinctions among residents of Ukraine. Therefore, not the question of national or religious differences, but the question of belonging to one or another state (the European Union or the Russian Federation) is more apposite for stirring up hatred in the conflict occurring in Ukraine.

However, it is obvious that when it becomes necessary to make a choice, the discarded party becomes the enemy (like in Oedipus constellations). In this case, work in society is necessary, which can symbolize what is happening and bind the affects. It is absolutely clear that politics and ideology create any community. They capture each subject, appearing within the narcissistic dimension when the ability to control oneself is lost and the relationships with oneself and with the others are not dialectic but paranoiac. The impossibility of self-control leads to the necessity of subordinating the other, the others. Thus, psychic processes determine social events by uniting people

into groups captured by the same affects in confrontation with other hostile communities.

The Repetition of the Conflict as a Symptom, as a Trauma Reproduction

Frequent changes in the ‘owners’ of the territory resulted in the necessity of expunging the previous periods of history from people’s memories. This fact prevented the Ukrainians from integrating their past as a prop for ethnic identifications. In other words, for many centuries it was impossible to construct the Ukrainian people as a subject of identifications. Constantly there were blind spots – a prohibition against the capability to rely retrospectively on their own entire history.

The Soviet epoch was no exception. Within this time not only previous historical pages were censored, but large tracts of the Soviet period were also withdrawn. State policy forced people to forget, to repress the most traumatic events. This led to the fact that massacres, fratricidal wars, destructions and losses could not be mourned; there was no grief work and psychic work on symbolizing dramatic events. Thus the history of Ukraine turns into tragedy: when instead of standing up to external destructive forces, the people are in a continuous state of search for someone who will offer them a relentlessly worse fate. All this has caused and aggravated the maniac-depressive aspects of psychopathologies in society.

One of the characteristic symptoms formed by this continuous cancellation of historic facts is the tearing down of historical monuments, the complete destruction of ‘outdated idols’. Wooden gods were dumped into the Dnieper in Kiev at the time of the forced Christianization of Kievan Rus by Prince Vladimir. After the October Revolution of 1917 almost all princely and royal monuments were crushed, the churches and monasteries were destroyed or rebuilt. Then the wave of destruction of Lenin monuments and communist symbols swept through Ukraine. This symptom could sound as follows: “If we must always give up our history, then we ourselves shall fight against it extensively, destroying everything that may remind of us it”.

Soviet history began with the Great October Revolution of 1917. This event was positioned by the ideological apparatus as a starting point – the birth of a new world. It was actually the beginning of the heroic mythology of the Soviet people that constructed the symbolical ranks of Soviet society. The revolutionary epos had its own heroes covered with the veil of romance. This epos allowed the creation of rituals that combined the people, united them into a community and one territory due to a revolutionary wave, and also transforming anxiety and the sense of guilt associated with the bloody events that followed revolution into Soviet patriotism. The essence of any revolution is ‘patricide’, which always refers us to the Oedipus conflict. In 1917 patricide took place both in a symbolic and in a real sense – the tsar and the entire

royal family were dethroned and killed. The sin of ‘patricide’ was so great that even their mortal remains were hastily destroyed¹³.

The ‘Soviet brothers’, symbolically united by this common crime, gradually agreed to obey the law that prohibited ‘patricide’. These arrangements were promoted by the punishments that followed (in the form of property nationalization, “dekulakization” (defarming), holodomor (forced famine), etc.) as well as by the figure of a new father in the person of Stalin, who personified the fear of punishment, and also by wars that gave an opportunity to league together against common enemies.

The Second World War (we call it the Great Patriotic War) became a kind of act of atonement for the sense of guilt caused by the bloody civil war (1918 - 1924); and the victory over the enemy served the purpose of uniting the people of the Soviet Empire.

However, for Ukraine this history was not so unambiguous, because before the Second World War (until 1939) part of its territory belonged to other states; and in this territory different ideological and identification processes developed. This historical aspect has caused the split (the conflict) of Ukraine today. Once again we can see that the confrontation is not on the national plane, but in a belonging (relationship) to different states. Using a psychoanalytic metaphor we could say that we hear the cry of a child who cannot find integrity in Oedipus identification: “Where are my real parents?” This strong experience of splitting (if we extrapolate roughly the psychopathology, which characterizes the individual, to social processes) demonstrates the borderline syndrome, when the fear of disintegration produces the insufferable fantasies of invasion combined with antisocial behavior and a strong dependence upon the Object. All this leads to disorders in reality testing and to a complete destabilization in society.

The Question of Language

Do language differences influence the conflict in Ukraine? Certainly, language is the main aspect for distinguishing one nation from another. Language is not only the font where the subject is born, but it is the cultural field which allows identifications to be formed.

Until the 18th century that very language which may be called now the basis of modern Ukrainian was called ‘*Rusky*’. The turn between the 16th and 17th century we can conditionally admit to be the beginning of the independent history of Ukrainian as the language of the Ukrainian people. The origin of modern Ukrainian is related to the name of Ivan Kotlyarevsky, but it was Taras Shevchenko who became its founder. They were the first to write their works in a vernacular language based on Ukrainian

¹³ This history seems unrelated to Ukraine directly, nevertheless, it should be mentioned that the significant part of modern Ukraine was then a part of the Russian Empire (author’s note).

serednenaddnipryanski dialects. Before I. Kotlyarevsky and T. Shevchenko there was the Old Ukrainian written language (13th – 18th centuries) developed on the basis of Old Russian literary traditions and influenced by colloquial speech and directly influenced by Old Church Slavic, which represented “almost exclusively slavish imitations of Byzantine models, which came to us primarily from the South Slavic lands – Serbia and Bulgaria, and then appeared on the Russian grounds as well”¹⁴.

Since the territory of modern Ukraine was practically all the time a part of other states that had their own state languages, the development of the Ukrainian language was at a loss. And only in the twenty odd years of state independence did Ukrainian begin its development as a state language. This gave a certain impulse to its development and defined the problems associated with the peculiarities of the dialects from different regions of Ukraine influenced by the other languages and cultures. Today we may note the absence of a universal common language for all the regions of Ukraine. Moreover, for the present many academic disciplines cannot be taught in Ukrainian in full, since there are no adequate translations of the original texts. Psychoanalysis is an example of this.

Some Aspects of the History of Psychoanalysis in Ukraine

It may be said that Ukraine has very close contacts with psychoanalysis, and first of all because its founder Sigmund Freud is rooted in its territory. His mother Amalia was born in Brody, Galicia (now in the Lvov region), and his father Jacob was born in Tysmenitza (now in the Ivano-Frankovsk region). Up to now the townspeople of Buchach in Ternopol region show honor to a grave of Freud’s grandmother. Though at the time these towns belonged to the Austro-Hungarian Empire, it is still quite obvious that Ukrainian culture partly fed psychoanalytic ideas. Freud’s relatives (his mother’s cousins) lived in Odessa, and Amalia herself spent some time in the city. The irony of this is that the address where Freud’s relatives lived (including his mother or some time) was 5, Ekaterininskaya Street. The street was named in honor of Catherine II the Great who established the ‘pale of settlement’ that forbade the Jews to settle in the more prosperous cities of the Russian Empire. However, in Odessa Freud’s relatives made use of their talents. They kept a variety troupe, printed Marxist brochures, and in general they were at the center of the cultural and artistic life of the city. Due to this,, Freud met some patients, including the well-known Wolf-Man – Sergey Pankeev.

It should be noted that the earliest translations of Freud’s papers into Russian were made in Odessa. In 1905 (literally immediately upon the publication in Austro-Hungary) Jacob Kogan, a psychiatrist from Odessa,

¹⁴ Bulych S. (2011) Essay on the History of Linguistics in Russia: 13th – 20th centuries.

translated Freud's *Jokes and their Relation to the Unconscious*, and the same year Moshe Wulff translated *The Interpretation of Dreams*. He was the very Moshe Wulff, who, according to Freud, was worth "the whole school".

In a certain sense, therefore, Ukraine was a source of psychoanalysis both for Europe and Russia. Still today, in the territory of the former Soviet Union, psychoanalytic texts are read mostly in Russian and there are practically no translations of Freud's texts into Ukrainian. And even in Russia the complete standard edition of Freud's works has not been published yet; for today only 6 volumes out of 26 have been published.

Consequently, whereas Ukraine was an original source of psychoanalysis and took pioneering positions, nowadays it is far behind its neighbors in this field.

I was asked by my foreign colleagues, particularly by the organizers of the conference for which this paper was written, about my training in psychoanalysis before the collapse of communism. This point should be clarified. There was no communism in the territory of the Soviet Union. Moreover, even socialism was very relative; for example until the mid-1960s the villagers from the countryside had no passports. So, peasants were attached to their land like serfs in the feudal society. Perhaps, the 'specter of communism' in our history seems to our European colleagues both a dream and a threat to the liberal world order of capitalist countries. In the same way, there was no psychoanalysis, but only traces (phantoms) of it existed during this period. Needless to say that psychoanalytic theories were presented at best either within critiques, or by authoritative scientists as their own ideas (without attribution, anonymously), and psychoanalytic texts could only be read in the special repositories of the largest libraries classified "only for specialists". Being a student mastering psychology, I read Freud's papers in the special repository of the State Public Library named after M. Saltykov-Shchedrin under the watchful eye of the armed guards, so that there could be no opportunity to write down the texts or make photocopies. Psychoanalytic knowledge, and sometimes practice, spread by word of mouth, like ancient epics. Such a lack gave rise to a great interest. People read self-published literature, made hand-written or photographic copies. Some of them paid for this with their freedom. All these conditions gathered round psychoanalytic ideas intellectuals from different fields, but, unfortunately, created no opportunities for the development of psychoanalytic practice and, as a result, there were no specialists capable of contributing to the theory of psychoanalysis.

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The Program of Development of Professional Consciousness of Attorney in the Process Of Psychological Support of Professional Activities

The article presents and analyzes the program of development of professional consciousness of attorneys in the process of psychological support of professional activity. The substantive side of the professional consciousness of attorneys includes ideas, basic settings that reflect the reality of person consciousness, the concept is also an idea of this reality.

The program of development of professional consciousness of attorneys includes the following stages: diagnostic, procedural and evaluation and control. At the first stage, a system of psychological diagnostics was developed to identify the levels of development of professional consciousness, as well as determined goals and objectives, content and methods of work.

Application of the training complex for the development of professional consciousness of attorneys will allow to take into account as much as possible the existing methods and means of training professionally significant cognitive qualities of attorneys in order that they most effectively contribute to improvement of processes of remembering, concentration of attention, analysis and synthesis of the received information for its further use in educational and professional activity.

The task of developing the professional consciousness of a attorneys is not simply to adequately reflect the needs of social development in the amount of rights and responsibilities. The attorney must correlate the identified rights and obligations with the applicable law in order to avoid possible contradictions with the positive law. Attorneys are able to professionally express the needs of the legal development of society in legal concepts and categories, to reflect on the basis of the law content of legal phenomena and processes.

In conducting a developing complex for the formation of the professional consciousness of attorneys each classroom exercises the function of their psychological support, the formation of a sense of self-worth, a sense of self-confidence, considered such issues as responsibility, manipulation, conflict resolution, the development of positive I-concept, stress management.

As, says P.P. Baranov, professional consciousness is a complex system of education, which contains various elements that form its structure, and

consideration of which is important in connection with the changes experienced by the modern professional activities of lawyers [2].

According to O.V. Klishina, professional consciousness of a modern lawyer, its main components are distinguished by the ability to continuously develop and improve in the process of legal activity, the ability to overcome the difficulties in one or another section of such activities, which contributes to the manifestation of creative activity of an attorney. Hence, the readiness for a certain type of legal activity is not only the previously acquired specialized legal knowledge, skills, skills, legal settings, mental qualities of a specialist, but also the actualization of these components, their active use to enable the implementation of specific legal actions at this moment. Such an internal attitude of the lawyer for concrete actions, the mobilization of all components of professional consciousness for the implementation of active and appropriate enforcement actions can be called situational (temporary) readiness for law enforcement activities [3].

In the eyes of G.P. Climic, professional consciousness really has a multicomponent character because it reflects a set of qualities inherent in the processes and phenomena of professional training and professional activities of specialists. It directly integrates certain knowledge, values and ideological principles, emotional and volitional guides, traditions and norms, institutional forms, etc. necessary for achieving the goals. In its structure, one can distinguish the following elements: rational-ideological, emotional-psychological and instructional-behavioral [4].

The program of development of professional consciousness of lawyers includes the following stages: diagnostic, procedural and evaluation and control. At the first stage, a system of psychological diagnostics was developed to identify the levels of development of professional consciousness, as well as determined goals and objectives, content and methods of work.

At the second (procedural) stage of the study professional-psychological training (PPT) was conducted. In the professional psychological training (PPT) the following courses were used: special course "Development of professional consciousness of attorneys"; working program of the special course "Development of professional consciousness of attorneys"; developing complex for the formation of professional consciousness of attorneys.

Application of the training complex for the development of professional consciousness of lawyers will allow to take into account as much as possible the existing methods and means of training professionally significant cognitive qualities of lawyers in order that they most effectively contribute to improvement of processes of remembering, concentration of attention, analysis and synthesis of the received information for its further use in educational and professional activity.

At the third (assessment-control) stage of the empirical study, a comparative analysis of the data was carried out. At this stage of the study

generalization of the received data, their verification, confirmation, summarizes the research.

Taking into account the results of the conducted research, a program for developing professional consciousness of lawyers in the process of targeted psychological influence was developed.

The main tasks of the program:

- to intensify the cognitive activity of attorneys, to promote the formation of stable attitudes towards professionalism in the attorneys (cognitive sphere);
- To form the need for attorneys to uphold justice, protect their interests and the client (emotional and volitional sphere);
- preparation for the implementation of their own civic position (motivational and value sphere of personality).

The content of the program implements the following areas:

- the goals, character and content of the development of professional consciousness are determined by the objective needs of the individual and society;
- the effectiveness of the development of professional consciousness of lawyers is determined by the ability to realize socially useful and socially meaningful activities;
- development of professional consciousness is determined by providing self-actualization and self-realization of a attorney in the process of professional and educational activity.

The psychological support for the development of the professional consciousness of lawyers is based on the principles of determinism, subjective activity, development, and an individual approach [6].

The structure of the program for developing professional consciousness of lawyers in professional activities is presented in Table 1. The study of the effectiveness of the influence of psychological conditions on the development of professional consciousness of attorneys involves the allocation of criteria that can determine the dynamics of professional consciousness.

The aim of the PPT is to improve the content components of the professional consciousness of the attorney's personality, which characterize: cognitive processes, motivational-target sphere, peculiarities of professional orientation, communicative abilities, peculiarities of emotional states, peculiarities of professional consciousness, typological peculiarities and mastery of the system of theoretical knowledge and practical professional psychological skills i skills required in the activities of a lawyer, formation of readiness for effective behavior in the professional activity.

The training course includes theoretical background and practical exercises, compiled based on the latest achievements in the field of training technologies. It is intended for students of legal universities, institutions for the training of lawyers, practicing attorneys who are studying in advanced training courses.

Table 1.

Program of development of professional consciousness of advocates in the process of psychological support of professional activity

GENERAL DIRECTIONS OF WORK ON PROFESSIONAL CONSCIENCE DEVELOPMENT: PSYCHODIAGNOSTIC STUDIES; FACULTY; ADVISORY WORK; CORRECTOR-DEVELOPING WORK; ON THE DEVELOPMENT OF COMPONENTS OF PROFESSIONAL LIABILITY OF ADVOCATES					
Stages	DIRECTIONS OF FORMATION OF RIGHTS	TASKS ON THE REALIZATION OF TECHNOLOGY	TECHNOLOGICAL MEASURES	ACTIVITY CONTENT	RESULT FORMATION OF LEGAL CONSCIOUSNESS
Stage I - Diagnostic	Detection of the degree of development of components of professional consciousness	1. Awareness of the need for the development of professional consciousness. 2. Self-organization in educational activities 3. Development of the need for self-development. 4. Adaptation to educational activities.	Psychodiagnostics of the level of development of professional consciousness. Assistance to a psychologist, experienced lawyers: counseling, correction, rehabilitation, prevention, development of personality traits.	Implementation of the program of socio-psychological training on the development of components of professional consciousness of lawyers. Implementation of the special course "Development of professional consciousness of lawyers"	Adaptation to professional activity. Increase self-development motivation. Reconstruction of the leading educational-cognitive activity in a professionally oriented.
Stage II - Procedural	The formation of professional activity and the development of professional consciousness	1. Organization and carrying out of psychological and legal studies and assimilation of special disciplines of professional activity of the lawyer. 2. Implementation of scientific and methodological recommendations for increasing the efficiency of assimilation of professional activities. 3. Orientation to the development of components of professional consciousness.	Assistance to a psychologist and experienced attorneys when entering educational and professional activities: focusing on the formation of an individual style of activity; consultations; work with special literature, writing scientific articles, in-depth study of law and its assimilation.	Implementation of personality-oriented approach; differentiation of the content; individualization of the choice in the organization of professional activities. Application of technology for the development of reflexivity and self-referral of lawyers as a component of professional consciousness in the form of a professional reflexive practice. Formation of professional activity styles. Application of training technologies for the development of components of professional consciousness. Application of the program for promoting the development of emotional intelligence, the implementation of the training "Development of emotional intelligence" and a special course "Phenomenology of emotional intelligence: socio-psychological aspect." A special course on personal and professional development and the formation of key components of professional consciousness.	Mastering of a new social role and professional experience of a lawyer. Formulation in conjunction with a psychologist and assimilation of group forms of inclusion in the system of interpersonal relationships. Formation of a positive setting for human rights activities, development of a sense of significance and social security. Actualization of professional reserve ability of lawyers. Development of professional orientation, significant qualities and abilities of the personality of the lawyer: focus on professional development, orientation towards professional achievement, connection of vital meanings with serving the profession of lawyer. Development of key professional competencies. Formation of personal qualities: principledness, self-confidence, creative style of activity, high intellectual abilities, leadership qualities, psychological and communicative culture.
Stage III – Control and evaluation	Formation and improvement of the level of professional consciousness and legal awareness	1. Improvement of best practices in the professional activities of a lawyer. 2. Performance of functional tasks of legal activity. Acquisition of practical and individual skills and abilities in the realization of legal awareness in professional activities.	Study of the level of formation of skills of professional activity: counseling, diagnostics; self-examination; self-assessment of professional activity of a lawyer, corrective measures.		

Conducting classes from the special course (PPT) can be carried out both theoretically and in practical form in the form of professional psychological trainings and the implementation of various exercises.

Structurally, the special course consists of five interrelated modules. Favorable conditions for the work of the group are created through reflection, a positive emotional atmosphere that reduces psychological tension, as well as by mastering the basic rules of conduct during classes, the main of which are: activity that involves the inclusion of all participants in the work of the group, the manifestation of intellectual, emotional, motor activity; communication on the principle of "here and now", which involves addressing the present, the fact that worries the participants right now, discussion of events occurring in the group; emotional support of participants during the discussion of exercises and tasks, identification of positive qualities of a person; sincerity and trust in communication; the inadmissibility of direct human assessments (evaluated not by the quality of the participants, but only by their actions); the confidentiality of everything that happens in the group. The complexity and responsibility of the tasks, as well as the content and the way of their implementation, stipulate high requirements for organization and methodology for their implementation.

In the implementation of the PPT "Development of the professional consciousness of lawyers" we were guided by certain principles of its organization. As general principles were made: scientific substantiation and expediency of the training; professional orientation of the training; systematic and consistent in its conduct; responsibility, awareness and activity of the participants of the training; availability of training.

Given that the conduct of PPT is academic and detached from professional activities, so that the results of the training with high probability can be transposed into practice and applied in it, it must meet the following requirements for organization, tools and content: creating the minimum difference between professional and training situation by means of realization of all available experience of professional activity in the training process; a broad illustration of examples from the practice of the various topics under consideration, exercises for skills development, group discussions and other training procedures; trained skills and transmitted ideas should not be in principle in contradiction with existing requirements for advocacy; the information offered to attorneys during the training should be formulated so that they see and understand its practical application; the set up during the training and the relationship must correspond to the professionally important skills and skills of the attorney.

When conducting PPT widely used interactive methods: the ability to interact, stay in dialogue. Almost all PPT participants have the opportunity, through organized interaction, to acquire new knowledge, to conduct a reflection on what they know and think. The joint activity is carried out in an atmosphere of benevolence and mutual support. During the dialogue, the participants learn how to think critically, solve complex problems on the basis of an analysis of circumstances, weigh alternative thoughts, participate in

discussions, which allows you to get not only new knowledge, but also develop the cognitive activity itself.

To improve the quality of professional consciousness advocates are influenced by psychological methods: diagnosis of the level of formation of professional consciousness, prevention and correction of deformation; counseling attorneys; purposeful work on the formation of psychological qualities and abilities (mental, self-regulation, communicative) enhancement of psychological culture.

The following means may be used to enhance the activity of lawyers during the conduct of the PPT: clarification of opportunities and prospects in knowledge, application and use of the right; creating a positive emotional background in the classroom; a variety of tools and methods used in the class; correct setting of tasks; optimal workload, constant control, maximum inclusion in the activities of all attorneys present in the class; adherence to didactic principles: communication with life and practice.

It actualized the desire of lawyers to know themselves and others, which helped to realize not only their commonality with other people, but also their distinction from them, to understand their strengths and weaknesses, to correlate their value orientations with legal values, to find a point of support for self-realization in modern society. The developing complex for the formation of professional consciousness had the following directions:

- training of correction and development of professional motivation of specialists of the legal structure includes: formation of confidence in the achievement of the set goal; elucidation of their needs and vital values in the professional sphere, the ability to determine the vital and professional values and, if necessary, make adjustments to them; professional motivation, its structure, dominant motives, clarification of the value-motivational sphere of the person and its development; overcoming motivational conflicts. The motivational training program is aimed at mastering certain knowledge, skills and abilities that promote professional self-improvement of future lawyers, mastering the general social and psychological knowledge. Solving the tasks set before the motivational training program involves the following measures: meetings with high-level specialists; lectures and conversations with the help of which the general basis of action is formed in a certain subject area, which allows to proceed later to the disclosure of meaningful meaning of specific psychotechnologies; group and individual classes, trainings and games. The conduct of individual and group classes and games was carried out with the help of psycho-technologies of neuro-linguistic programming.

- training "Development of emotional intelligence", provides for a comprehensive impact on cognitive (assessment), emotional (experiencing) and behavioral (communicative behavior) of the personality sphere. The main stages of the training (familiarity, the main part, farewell) and the structure of training sessions (warm-up, specific exercises, relaxation) correspond to the classical scheme of conducting trainings. The training program consists of

two blocks - "Development of intrapersonal emotional intelligence" and "Development of interpersonal emotional intelligence". Basic methodical techniques of social psychological training (group discussion, role playing) and means of artheraphysis (dance therapy, music therapy, etc.) can be used as the most productive methods of development of emotional intelligence.

- special course "Phenomenology of emotional intelligence: socio-psychological aspect" promotes development of cognitive sphere and stimulation, motivational sphere of lawyers-future attorneys. The program of the special course consists of a cycle of lectures and a complex of diagnostic and informative occupations. The content of practical classes is aimed at self-knowledge by participants in the experiment of their own opportunities in the field of communicative interaction and communication.

Training on the development of cognitive processes of lawyers. The program of the training complex consists of three thematic blocks:

1 block - "Training of attention and observation": definition of personal parameters of attention and training of the process of its concentration; choice of own optimal way of concentration of attention (test "Determination of concentration of attention on the basis of a digital table by Schultte method");

Block 2 - "Development of professional memory": training of short-term and long-term memory; visual and auditory memory training; mastering mnemonic techniques of memorization (test "Definition of short-term memory parameters when subtracted from a given number");

Block 3 - "Training of operational logical thinking": definition of the personal level of logical thinking; Training of operative logical thinking by solving the logical tasks of the investigative specificity on the basis of the knowledge gained (test "Assessment of the efficiency of thinking").

The methods of group discussion of problem situations help to clarify own opinion, development of communicative qualities and ability to defend their point of view. In analyzing the specific situations of choice, not only the level of legal awareness of PPT participants, but also the level of moral development is diagnosed. As a result of discussion of legal incidents, students have an opportunity to understand the consequences of choosing one or another type of behavior that is adequate in legal and moral terms to themselves and others. When conducting PPT, considerable attention is paid to the psychological climate in the group. Positive psychological climate is not a product of the spontaneous development of the group, can not be achieved by itself. In the management of the process of group cohesion actively used social psychological mechanisms: beliefs, mental infections, suggestions, group emotional identification. The psychological climate not only forms a direct relation to the world, gives an evaluation of the activities of the members of the group, but is a kind of feedback mechanism, which through the moral and psychological atmosphere has a significant impact on each member of the group.

At the same time, methods are used specially for the formation of various types of learning motives: emotional (promotion, creation of a situation of success, free choice of tasks, etc.); cognitive (stimulating influence of the content of teaching, stimulation by means of life situations, creation of successful learning situations, interactive methods, creation of problem situations, brain attack, accounting of cognitive interests of attorneys, resolving legal incidents); volitional (joint development of rules of conduct in the group and their implementation, overcoming cognitive difficulties); social (encouragement, manifestations of empathy, support for interest in the results of group work, creation and support of mutual assistance situations, clarification of social and personal significance of knowledge of law, the nomination of certain requirements, encouragement and condemnation during the classes, operational control).

The study of theoretical and practical issues, the solution of which can reduce or prevent the advocates from improper performance of their professional duties, which, in turn, will avoid the process of involving the lawyer in disciplinary responsibility, is closely intertwined with the study of the causes and conditions that facilitate the commission of a attorney's offenses. Both in this case and in another case it is a question of observance of the deontological norms established by the advocacy community or enshrined in the Law of Ukraine "On Advocacy and Advocacy", and the execution of which is capable of preventing a lawyer from committing various abuses and violations that lead to the bringing of a lawyer to disciplinary liability. In addition to adhering to deontological standards, the professional skill of a lawyer is determined, on the one hand, by a combination of knowledge that he possesses, on the other hand, a variety of abilities and skills for effectively managing knowledge, skills and skills for the proper performance of the tasks facing a lawyer.

Assessing the cooperation of the advocacy community from the standpoint of the present, it is difficult to deny the necessity and expediency of exercising control over the quality of work of young lawyers, including a random check of their lawyers' files. The ability to conduct a dossier, to produce a legal position on the case shows a certain professional level of a lawyer-beginner. If during the inspection it will be established that the lawyer does not conduct a dossier, he is not preparing for court sessions, and the legal position is only in his mind, then, without bringing the case to a disciplinary proceeding, you can specify the lawyer to prevent such training.

It is necessary to organize conferences and hold seminars with beginner lawyers, trainees and attorney assistants, as well as experienced lawyers who have worked for many years in the advocacy.

Attorneys working in the regions, as a rule, do not specialize in the conduct of affairs in a particular direction (civil law, criminal law, administrative and legal). As a rule, the attorney concludes an agreement with the principal for each case, regardless of its branch affiliation. It is clear that

one can not blame lawyers for incompetence, however, as in any other profession, narrow specialization is partly a means of ensuring a qualitative (in this case legal) activity. On this basis, the lawyer community in Ukraine could work out a mandatory rule that attorneys claiming to be "universal lawyers" are obliged to periodically, for example, once every two years to pass the course qualification improvement in certain legal disciplines.

Moreover, in order to ensure an objective and impartial attitude to the assessment of the legal knowledge of a attorney, the commission decides that the lawyer's knowledge of the law in force (in a broad sense, including the rules of international treaties, and knowledge of international practice), should include judges, as well as the teaching staff of higher education institutions.

A significant role in improving the skills of lawyers should be given to the Internet's Internet resources. It provides lawyers with access to a large amount of background information, in addition, there is the opportunity to share experiences, to get knowledge about methodological recommendations on various issues of law practice and, most importantly, these measures contribute to the organization of training and advancement of lawyers.

Practical training is possible only through practical activities. It is fundamentally important that any explanation of "how to do", any demonstration ("do as I") is only informational training for your own learning. The simulation of practical situations at the seminar includes the whole familiar set of "trials and errors", and skills are mastered through an understanding of their own experiences.

Conclusions and prospects of the study

1. Professional consciousness is the most advanced form of consciousness of lawyers. The choice and application of methods for researching the professional consciousness of a attorney was carried out on the basis of the principles of a systematic approach, that is, taking into account the fact that the professional qualities of the personality of the attorneys are not distinct and random, they are functionally combined in the integral structure of professional human rights protection activities.

2. Carrying out the mentioned measures as a compulsory course of advancement of lawyers will help to formalize advanced training into a real qualification for assessing the legal fitness of a attorney.

3. The program of development of professional consciousness of lawyers has a powerful influence on the formation of practical skills of attorneys, thereby preventing possible violations and abuses in the exercise of advocacy.

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The Discussions of Methodological Approaches to Pre-occupational Training at Lyceums as the New Philosophy of Medical Education

The management of pedagogical staff under conditions for implementation of humanistic paradigm for education requires the significant attention. M. Mykhaylov emphasizes that the orientation of the staff to provide with personal development of each pupil may be reflected in planning to use the new forms and means of educational process – conference, thematic discussions, Olympiads, research work, round tables, thematic parties (for example, “Cossack funs”, “Ukrainian kickback”, “Auction of ecological ideas”, “Intellectual potential of lyceum”, “Health generation of lyceum”, etc.)¹.

The establishment of favorable conditions for development of creative capabilities at pupils is significantly defined by the content of learning material, application of active forms and learning methods in educational process, which assist to development of divergent thinking, problem vision, fantasy and imagination. Unlike traditional forms and methods of study, which efficiently assist to the development of sinistrocerebral logical thinking operations, the active forms and methods, as R.M. Granovska mentions, are directed to psychological liberation of dextrocerebral processes on unconscious information handling, development of intuition, stimulation of insight, aspiration².

Let's mention that the motivation of learning cognitive activity plays the significant role for personal development of pupils in the process of their pre-occupational training at lyceum. In opinion of I.A. Ziaziun, the important and complex task is to transfer the content of education into inner world of personality. For that, it is necessary to organize the psychologically grounded activity of two subjects “*teacher-pupil*”, being equal in relations, striving to actualize the formation of inner personal motivation at pupils in satisfaction of their essential needs³.

Under conditions of cardinal changes that take place in the social life of Ukraine, there is the acute problem on formation of socially mature, industrious, creative personality of citizen, being capable to show its creative potential in practical activity, to sustain the competition, to defend and to

¹ Mykhaylov M. *Training of lyceum pupils for study at university // Native school, 2000.- No 2.- P. 15-16.*

² Granovskaya R.M. *Elements of practical psychology. – 2nd edition. – L.: PH of Leningrad university, 1988. – 560 p.*

³ Ziaziun I.A. *Intellectual creative development of personality under conditions of continuous education / Continuous professional education: problems, searches, perspectives: Monograph / Edited by I.A. Ziaziun / - K.: Publishing House “Vipol”, 2000. - 636 p. – P.11-57.*

protect own opinion, interests under conditions of market relations. The solution of this problem is reflected in construction of system of education. The social economical development of Ukraine, the spiritual revival of Ukrainian nation are distinguished by many factors, among which the leading place is for professional potential of personality, in which formation the pre-occupational training of pupils' youth at establishments of new type – lyceums acquires more and more importance. The activity of abovementioned secondary schools shall closely be related to the work of higher schools of the corresponding profile, and their activity is significantly stipulated by specificity of future occupation. G.O. Ball and P.S. Perepylytsia emphasize the actuality of their activity and mention that the modern training at different links of professional education is first of all based on general education school, and, unfortunately, the traditional learning and upbringing system that prevails in the latter does not assist to formation of psychological readiness for receipt of professional education and for further independent work, all the more – under market conditions⁴.

The educational establishments of the new type are designed to revive and to reinforce the intellectual potential of Ukraine. “Each pupil shall find “own” organizational pedagogical structure for acquisition of education, in which he/she would feel mostly comfortable, namely in it”⁵.

Characterizing the “educational process at educational establishments of the new type, it is impossible to overlook their conceptual basics”, - P.I.Drobiazko⁶ thinks. Authors V.F. Palamarchuk and B. Chyzhevskyy mention that the modern world is the ecological, economical technological, historical social multicultural system of interrelations, influences, contradictions, and, thus, the perception of the world as a single system of diverse forms for existence of cultures, languages, ideas, opinions, realization of this diversity and unity stipulate upbringing such human qualities at youth as tolerance, respect for other cultures, religions, beliefs⁷.

It is obvious that gymnasiums, lyceums, private schools shall become the experimental sites, where the new content of education, new technologies, structural models of learning, ways of upbringing, ways for development of pupil, etc. are designed and tested.

The place of lyceum in the structure of educational establishment of the new type is stipulated by Provisions about secondary general education school. The regulatory provisions by Ministry of Education and Science of Ukraine consider lyceum as a secondary general education school of academic level that performs the general education, pre-occupational and scientific

⁴ Ball G.O., Perepylytsia P.S. *Psychological pedagogical principles for organization of specialized pre-professional training of schoolchildren // Pedagogy and psychology of professional education, 1998. - No 5. - P. 149-159.*

⁵ Drobiazko P.I. *Ukrainian national school: origins and modernity. – K.: Publishing center “Academy”, 1997. - 146 p.*

⁶ *Ibid* – P.188.

⁷ Palamarchuk V.F., Chyzhevskyy B.G. *Conceptual basics for educational establishments of new type // Native school, - No 2. - P. 47.*

practical training of gifted and talented pupils' youth⁸.

The main purpose of lyceum is to assist to establishment of creative personality for citizen of Ukraine. The pedagogical ways for formation of such personality are defined pursuant to the ideas about integration of content of education, developing and problem specific learning, self-development of pupils that is reflected in the new or updated content of education, in the corresponding system of principles and learning methods.

The content of education is described in work curriculum of each lyceum, which acts pursuant to the basic one. But we need to address to the history in order to understand the specificity of lyceum education nowadays.

As V.P. Kysilyova thinks, the word "lyceum" itself means that as if some special magic force is hidden in it. The breath of antiquity comes from it, the brilliant season of childhood from "golden age" of world culture, morning of education, when a teacher had nothing but his/her own thought, talent and spiritual achievements, created by humankind. And he/she paid no attention to any norms and rules, except the thirst of knowledge! The word "lyceum" or "lýkeion" came from Ancient Greece. Lýkeion was the sanctuary in Athens, dedicated to the god of the sun and poetry Apollo. The same name was granted to old Greek philosophical school, which was founded by Aristotle in 334-335 A.C. (there is no common opinion on exact date for foundation of that school among researchers), and existed for about eight hundreds in the suburb of Athens near the Temple of Apollo Lycia⁹. The analysis of information that came to us testifies to the fact that lýkeion was an original folk university, where the concrete researches of natural scientific characters was held in addition to lectures and discussions. The classes were performed in the morning, and at noon the lýkeion was opened for a wide circle of visitors. Aristotle established the lýkeion as an original school, which purpose was the spiritual improvement of human, study of nature, space, philosophical understanding the creation of the world and human society.

Studying the ways for establishment of the school, V. Kysilyova mentions that lyceum received its second life in France. The first French lyceums were opened in 1802 according to the order by Napoleon, and there were already 75 lyceums in 1864. Lyceums were classical secondary male schools on state budget with 6 years period of study. They were boarding schools for training of clerks and officers with strict military regime. Thanks to serious humanitarian training, a wide program of school reading, numerous independent classes, and a lyceum graduate had the literary oral and written speech, and in its turn it developed the culture of thinking. The significant attention at senior forms, where the learning was performed in two classes (natural scientific and humanitarian), was paid to teaching mathematics,

⁸ Provisions about secondary general education school // Information collection by MHC of Ukraine. – K.: Education.– 1994. – No 12. _P.2-17.

⁹ Kysilyova V. Establishing the system of lyceum education in Ukraine // Pedagogy and psychology of professional education, 1999. - No 3. - P. 362-369.

natural science, history. After completion of course the pupils pass through competitive examination at Cathedral, after successful passage they received the degree of bachelor.

In Russia the lyceums were called vocational schools, which combined the elements of secondary and higher education. S. Rozhdestvensky wrote about this type of schools: “Universities, gymnasiums and parochial schools according to directives of 1804 were the main types of general education schools – higher, secondary and primary. At the same time the new type of school – “gymnasiums of higher sciences” or “lyceum”, which combined the university and gymnasium courses, started being developed¹⁰. The new educational establishment included all best things that were at private boarding schools, which enjoyed the great popularity at noblemen, and the best things that were at state schools. Such educational establishment, being between the university and gymnasium, with the status of higher school, as V. Kysilyova mentions, was lyceum in Tsarskoye Selo, founded in 1811 by Emperor Oleksander. The peculiarity of the new school was its purpose – to train a small number of boys, who are famous of talents and moral qualities for important needs of state service¹¹. At that time lyceum in Tsarskoye Selo was the only educational establishment that set such a great purpose. “The purpose of lyceum was to grant the general education, which is the basis for any other, special education, so that any pupil could choose a service due to his inclinations”¹². The lyceum in Tsarskoye Selo is considered in the history of pedagogy as the first lyceum, which was founded in Russia. But the detailed analysis of archival materials, made by V. Kysilyova, testifies to the fact that the ideas of lyceum education in Ukraine have appeared much earlier. Thus, “Provisions about lyceum” in Russia were approved on 12, August, 1810, and the first lyceum was opened on 19, October, 1811, while Ukraine already in 1805 received “The highest permission” to open the pilot lyceum “Gymnasium of higher sciences” by Prince Bezborodko in Nizhyn (it started working since 1820). The purpose of gymnasium was to provide Little Rus' noblemen “with comfort while upbringing their children in devotional rules, to acquire the knowledge in languages and common sciences”¹³. As O.E. Ostapchuk states, the strong traditions of lyceum education have been laid in Ukrainian ethical lands long ago¹⁴. Due to other sources the first lyceums in Ukraine were opened in 1805 – Kremenets and Lviv. V. Kysilyova analyzes the history in appearance of the first lyceum in Ukraine – Richelieu lyceum and mentions that each of lyceums had its own peculiarities in organization of educational

¹⁰ Rozhdestvensky S. *Historical review of activity by Ministry of people's education. 1802-1902.* - SP., 1902. - P. 74-75.

¹¹ Kysilyova V. *Establishing the system of lyceum education in Ukraine // Pedagogy and psychology of professional education, 1999.* - No 3. - P. 362-369.

¹² Pavlova S.V. *Do you remember, when Lyceum appeared... // ... And to become equal with the age in education: Collection of scientific works – SP: Education, 1992.* - P. 6-20.- P.10.

¹³ Kysilyova V. *Establishing the system of lyceum education in Ukraine // Pedagogy and psychology of professional education, 1999.* - No 3. - P. 362-369.

¹⁴ Ostapchuk E.E. *Organization of scientific methodological work at lyceum: Dissertation by Candidate of Pedagogy: 13.00.01 - K., 1997.* – 207p.

process and they were characterized of early narrow specialization. Kremenets and Richelieu lyceums had the pedagogical direction, and Nizhyn lyceum – physical mathematical and then legal direction. Despite the fact that Nizhyn lyceum was founded from “Gymnasium of Higher Science by Prince Bezborodko”, they failed to preserve the polyhistory of study at lyceum. Only lyceum in Tsarskoye Selo existed for more than a half of century as a school of higher general education (1811-1877).

V.P. Kysilyova in her researches on history of lyceum education emphasizes that “lyceums existed not so long in terms of historical time. In Ukraine they started reviving since 1989/90 academic year. The process for their establishment was in a certain manner stimulated by Law of Ukraine “About education”. And 73 lyceums were working already in 1991/92 academic year, 105 – in 1992/93, 124 – in 1993/94, 106 – in 1994/95. Now the process for their spontaneous quantitative grows to a certain degree slowed down and the period for qualitative transformations started”¹⁵.

In our opinion, the latter tendency has the positive meaning as the formal establishment of lyceums without qualitative reconstruction of educational process enforces to discrediting the idea about creation of such schools itself. At the same time P.I. Drobiazko writes that 400 educational establishments of new type are now working in Ukraine¹⁶. Although at initial stage of revival the lyceums in Ukraine were considered as schools of alternative education, we fully agree with the opinion of those scientists and practical men (V.A. Kapranova, A.M. Matiushkin, V.O. Moliako, V.F. Palamarchuk et al), who think that schools of new type, in particular, lyceum, shall not be an alternative to secondary general education school. According to this position “the elite character of lyceums and gymnasiums does not mean the special social status but the development of new pedagogical technologies, authors’ programs, models of educational practice”. It is necessary to emphasize that new types of schools now work in close interrelation with scientists.

We think that the note by P.I. Drobiazko that “opening gymnasiums, lyceums and colleges justifies itself and is perspective in those regions, where the material, staff and academic methodic conditions for successful work with pupils’ youth are established”. The new types of schools in their beginning are not limited by own searches for new forms of work, its content, specialized directions of pupils’ learning and involve scientists, teachers of higher schools and even invite teachers from Diaspora as specialists in foreign languages. The specialists of higher school are not only the teachers and advisors but the direct helpers in arrangement of educational work at schools of new type”¹⁷.

Having studied the work of secondary general education schools,

¹⁵ Kysilyova V. *Establishing the system of lyceum education in Ukraine // Pedagogy and psychology of professional education*, 1999. - No 3. - P. 362-369.

¹⁶ Drobiazko P.I. *Ukrainian national school: origin and modernity*. – K.: Publishing center “Academy”, 1997. - 184 p. – P. 159

¹⁷ *Ibid.* – P.161.

V.Kysilyova¹⁸ distinguishes the following characteristic peculiarities, being common for all lyceums:

- Conformity in projects on system of lyceum education to the call of the times.
- Orientation to progressive pedagogical ideas and theories by leading European scientific educational centers.
- Upbringing the youth concerning the national, public, economical social principles.
- Free talented personalities of teacher and pupil are in the center of activity.
- Great need in creative activity.
- Intermediate link between gymnasiums and higher schools.
- Forming the pedagogical thinking of teachers at lyceums taking into consideration the achievement of pedagogical and other sciences (mathematics, physics, philosophy, etc.)

The pre-occupational training of pupils' youth is most purposefully conducted at lyceums, gymnasiums and work training centers, as G.O. Ball and P.S. Perepylytsia fairly mention, it is often brought almost to professional one. The same work is also performed at lyceum, gymnasium and specialized forms of general education schools. Different forms of club work at schools and out-of-school establishments, elective courses, clubs of occupational direction, scientific, artistic and technical creativity, folk crafts, etc. significantly assist to pre-occupational training. Thus, the specialized pre-occupational training of schoolchildren may have various organizational forms and content¹⁹.

It is worthy to mention the statement by V.G. Kremen that many higher schools fruitfully cooperate with future university entrants starting from school, lyceum and gymnasium. It enables creating the integrated curricula and programs, involving professors into teaching process at low levels of education, strengthening the material base of educational process that will significantly improve the quality in training of specialists²⁰.

The analysis on practical activity of lyceums allowed distinguishing *the advantages* for these educational establishments: curricula and programs; teachers and tutors of high qualification; involvement of teachers from higher school into educational process; direct relation with higher school at organization of learning and upbringing; boarding school system, which anticipates twenty-four-hour staying of pupils at school that assists to establishment of creative environment and extension of its educative

¹⁸ Kysilyova V. *Establishing the system of lyceum education in Ukraine // Pedagogy and psychology of professional education, 1999. - No 3. - P. 362-369.*

¹⁹ Ball G.O., Perepylytsia P.S. *Psychological pedagogical principles for organization of specialized pre-professional training of schoolchildren // Pedagogy and psychology of professional education, 1998. - No 5. - P. 149-159.*

²⁰ Kremen V.G. *National education as a social cultural phenomenon // Teacher, 1999. - No 11-12. - P. 12.*

opportunities²¹

Besides, the researchers of abovementioned problem think that the necessity in establishment of such lyceums is stipulated by humane purposes²²:

- Withdrawal from school monotony;
- Humanization of education;
- Improvement of education quality and its fundamentalization;
- Development of capabilities and gifts of pupils' youth;
- Improvement in level of culture in youth environment.

The content and organization of scientific methodic work at schools of new type was considered by O. Sydorenko, who, analyzing the organization of internal school scientific methodic work, defined the main directions in organization of work on improvement of occupational mastery at pedagogical staff, determined the peculiarities for formation of content, structure, forms of scientific methodic work in comparison with general education schools, disclosed the main principles for internal school scientific methodic work and described the experience of its organization at schools of new type in Kharkiv region²³. The abovementioned researcher mentions that Yu. Babanskyy, N.Vaschenko, I. Zhernosek, S. Krysiuk and other scientists consider the scientific methodic work as a part in system for improvement of teachers' qualification that is carried out during intercourse period. S. Batyshev, Yu. Gilbukh, M. Drobnokhod are inclined to consider it to be an element in organizational structure for management of educational process. T. Besedina, V. Bondar, M. Krasovytsky, B. Bezpalko considers it as a form for organization of study and implementation of achievements in pedagogical science, advanced experience and mastery of new pedagogical technologies.

The statement that the first place among the most important directions, where the formation of content for scientific methodic work at establishments of new type is carried out, is for provision with methodic culture of teachers – learning the most important state regulatory documents that define the methodology of modern education, is essential²⁴.

In opinion of N.F. Grigoryev, A.V. Arsentieva, the study at lyceums in group of 10-20 persons is reasonable. They mention that the content of academic courses may to a certain degree repeat the school program but the learning material shall be united into content-rich units that enable significantly accelerating the review and integrating the pupils' knowledge. Of course, the practical training of pupils – solution of tasks, problem situations, analysis of facts and phenomena, etc. requires the special attention. Besides,

²¹ Grigoryev N.F., Arsentieva A.V. *Role of Chuvash university in formation of regional system of continuous education // School of spirituality, 2000. - No 1. - P. 14.*

²² Grygorchuk L.I. *Forming the readiness of attendants at pre-university training faculty for study at higher technical school: Author's abstract by Candidate of Pedagogy. - 13.00.04. - Ternopil, 2000. - 19 p. – P.15.*

²³ Sydorenko O. *Content and organization of scientific methodic work at schools of new type // Education and management. 1998. - Volume 2. - Number 4. - P. 21.*

²⁴ *Ibid.* P. 25

the mastery of skills on independent work with learning material, formation of their readiness for self-education, development of creative capabilities acquires the important meaning for pupils²⁵.

The involvement of pupils into creative learning activity gets the special importance at lyceum. In opinion of western researchers, for efficient organization of creative learning activity of pupils it is necessary to fulfill two conditions: to perform the psychological pedagogical diagnostics for level of creative development at pupils and perfectly to define the content of the subject, being taught, and the purpose for activity of teacher at lesson²⁶. However, we agree with the opinion that these conditions should be added with the following one: the efficiency in organization of creative learning activity at pupils depends on the skill of teacher to take into consideration the laws for progress and stages of creative process.

As S.D. Maksymenko mentions, while assessing the academic load it is necessary to distinguish the complexity as an objective characteristics of task and difficulty as a subjective characteristics. The academic loads of pupil in fact depend first of all on its complexity. While developing the rates for academic load it should not be ignored that, firstly, what kind of activity a pupil carries out, and, secondly, what personal sense some or other learning tasks has, and, so, what interest it causes. In this connection it is reasonable to remind: still I.P. Pavlov showed that when the information does not cause to interest, the center of its active rejection is formed in the brain cortex. And to enforce pupils to work without interest means to form not creators but thoughtless executors²⁷.

As it concerns the issue on organization of pre-occupational training of pupils at lyceum, we are based on conceptual provision by B.O. Fedoryshyn, who states that in methodological terms he stands up for position to limit the age contingent of pupils that are engaged into work on professional information, early adulthood and youth age. Herein his position is opposed to predominant position for dislocation of “striking” core for professional orientation to the most primary school age of child that shall provide with “occupational self-determination at junior schoolchildren” (M.M. Zakharov, 1988). This researcher thinks that the predominant concepts for early professional orientation are based on absolutization of its professional information component with its intensive saturation with professional agitation that is directed not to the favor of interests for overall development of child’s personality in early school age but against it²⁸.

According to positions by B.O. Fedoryshyn, the professional orientation in

²⁵ Grigoryev N.F., Arsentieva A.V. *Role of Chuvash university in formation of regional system of continuous education // School of spirituality, 2000. - No 1. - P. 15.*

²⁶ *Gifted children: translated from English // Under general editorship by G.V. Burmenskaya and V.M. Slutsky: Foreword by V.M. Slutsky. M.: Progress, 1991 - 376 p.- P.242.*

²⁷ Maksymenko S.D. *Learning load and preservation of mental health at schoolchildren // Journal of AMS of Ukraine. – 2001. – V.7. – No 3. – P.467-474.*

²⁸ Fedoryshyn B.O. *Psychological pedagogical basics of professional orientation: Dissertation by Doctor of Pedagogy: 13.00.04. - K., 1996. - 389 p.*

any of its structural components acts as the system of special purposeful human activity namely in that age when, on the one hand, the issue about change in status of personality is actualized (schoolboy – student, schoolboy – self-employed person), and, on the other hand, - when the psychological prerequisites for conscious and competent solution for problem of occupational self-determination are formed. B.O. Fedoryshyn thinks that one of the most efficient forms for professional orientation work with pupils' youth is the system of lessons (classes) in professional information for pupils at 9th, 10th and 11th forms of general education school. The personality of pupil is in the center of lesson in professional information. He acts as an active and interested subject of lesson that works to meet its actualized cognitive needs and needs in self-fulfillment. The reflection of these human needs in developed content and forms for professional information work, implementation of systematicity principle in construction of this work provide the professional information system with the character of active operating system, directed to “professional orientation maturation” of personality, development of its capability analytically to design the psychological structure of any professional activity to psychological sphere of own personality.

As L.M. Zhuromska mentions, the psychological service of lyceums is designed to serve to establishment of conditions for development of pupils' personality, formation of stable interest to chosen occupation at them, conscious occupational self-determination. She mentions that the purpose for activity of lyceum's psychological service shall be subject to the tasks of lyceum in the whole. This researcher suggests the following directions for activity of lyceum's psychological service that assist to development of pupils' personality: psychological pedagogical education for all participants in educational process; overall diagnostics; consulting teachers, pupils, parents; corrective developing work; advanced professional orientation of lyceum pupils²⁹. As L.M. Zhuromska emphasizes after selection of lyceum pupils the vector of psychological diagnostics shall change its direction. It becomes more directed to pupils' cognition of their individual psychological peculiarities that is the basis for self-development and self-correction.

Thus, lyceum education shall be non- disparate. Otherwise, as V.G. Kremen states (he considers the personal developing learning to be the scientific priority of nowadays), the learning content due to logic of its scientific understanding shall be the stimulating means for general psychological development of schoolboy, first of all, his establishment as personality.

In opinion of V.V. Prysakar, the establishment of professional orientation subsystem, which includes the pre-occupational learning, where the needs, interests, purposes of pupils are studied, their motivation sphere is formed, sets the establishment of professional suitability of future specialist, in

²⁹ *Pre-professional pedagogical training of pupils' youth in the context of implementation of special complex program “Teacher” / Collection of materials by all-Ukrainian conference: in 3 parts. 8-10, April, 1998. – Part II. – Kryvyi Rih – Dnipropetrovsk, 1998. – 216 p. – P.174.*

particular, teacher as its final purpose. Such conditions are established at organization of pedagogical forms at educational institutions of the new type: gymnasiums, colleges, lyceums. The pupils in such forms, where the division is carried out due to the level of development, capabilities and interests, learn the basics for occupation of teacher, acquire certain practical skills and abilities. In the process of concrete subject activity, participation in self-management they have the possibility to show their inclinations, needs, abilities, to persuade in conscious choice of future occupation³⁰.

P.I. Drobiazko thinks that the task to develop the new system of management was set to scientists and practical men with the appearance of alternative educational establishments. It is possible to implement it subject to overcoming with the state monopoly in organization and content of learning and upbringing of growing generation, creation of creative atmosphere for closest communication of staff members, provision with the corresponding work regime, learning design, creative and business relations of teachers with environment, establishment of the new mechanism for management³¹.

As M. Mykhaylov emphasizes, the personal pragmatist approach as a condition for humanization of educational process at lyceum requires the humanistic reinterpretation of functions for management of process for training of pupils for study at higher school, search for methods and means for humanization of the whole life of lyceum pupils³².

O. Sydorenko tells about solution of problems in learning and upbringing of pupils that is provided by thorough science-grounded selection of education content and its methodologically correct implementation into educational process. Teachers and pupils are constantly in the state of collective and individual creativity, intellectualization of interrelations. Besides, the concepts for development of schools of the new type anticipates the personality-oriented approach to organization of activity at establishment, which takes into account the peculiarities and psychophysical qualities of all subjects in educational process³³.

D.I. Rumiantseva and V.P. Goncharova ³⁴ researched the specificity in management of general education schools of the new type. In their opinion, it is:

- In organic combination of state authorities and organizations, which function on public bases, in management of school, in refusal from formalized management structures and command-and-control methods of management;

³⁰ *System of continuous education: achievements, searches, problems / Materials of International scientific practical conference in 6 books. – Chernivtsi: "Mytets", 1996. - 248 p.- P.150.*

³¹ *Drobiazko P.I. Ukrainian national school: origin and modernity. – K.: Publishing center "Academy", 1997. - 184 p. - P.172.*

³² *Mykhaylov M. Training of lyceum pupils for study at university // Native school, 2000.- No 2.- P. 15-16.*

³³ *Sydorenko O. Content and organization of scientific methodic work at schools of new type // Education and management. 1998. - Volume 2. - Number 4. - P. 21-30.*

³⁴ *Rumiantseva D.I., Goncharova V.P. Specificity in management of schools of new type. / Management of school under modern conditions, - K., 1994. - P. 57-67.*

- In definition and regulation of mechanism to form the resources of educational establishment taking into consideration the state, municipal, own material funds and allotments by charitable organizations and contributions of private persons;
- In establishment of conditions for scientific organization of labor, mode of the largest assistance to all members of pedagogical staff taking into consideration the national, regional and other peculiarities of educational institution;
- In establishment of conditions for upbringing and learning of children;
- In development of professional competence at each teacher;
- In orientation of academic programs at establishments of new type to UNESCO academic programs, inclusion of new structure of educational establishments into national educational funds in order to extend the scientific pedagogical relations and material provision;
- In integration with scientific centers and higher schools to establish the joint base and for rational use of pedagogical staff, rendering the assistance to them in improvement of scientific teaching level, performance of joint methodic and scientific researches;
- In orientation of heads at educational establishments of new type to perform all management function in order to receive the positive final result, to perform the systematic purposeful approach in management;
- In provision with selective entry to educational establishment of the new type and contest selection of pedagogical staff for work at them.

The leading management functions under conditions of schools of the new type are prognostication and coordination of actions between separate links of management system inside lyceum or gymnasium and with higher schools, integration with cultural environment.

M. Mykhaylov suggested the concrete model for management of educational process at lyceum. It is implemented in two levels – *microlevel* (management by directorate of educational establishment) and *operationalized* (teacher in academic group directly carries out the management). M. Mykhaylov thinks that the primary functions for management of educational activity are planning, organization, motivation and control. The management as an activity consists namely of these associated processes (communication, taking decisions and control)³⁵.

At the same time V.S. Lutay emphasizes that reforming the management of modern education requires developing the new methodology for solution of contradictions between centralized and decentralized methods of such management, between general state standards of education and free choice of

³⁵ Mykhaylov M. *Training of lyceum pupils for study at university // Native school, 2000. - No 2. - P. 15-16.*

forms for educational activity³⁶.

According to the analysis of theoretical researches and results from experimental check A.P. Chernysh provided with theoretical substantiation of model for management of educational and scientific methodic process at gymnasium. He defined the conditions to improve the efficiency in management of gymnasium. The scientific works by V.M. Alfimov, B.G.Chyzhevskyy, O.Ye. Ostapchuk, G.S. Sazonenko et al. are devoted to research on establishment and development of lyceums in Ukraine. Each of these scientists suggests his own vision of model for lyceum, defines its role and place in the system of secondary schools and provides with organizational model for management of learning and upbringing process at lyceum.

Let's mention that the peculiarity for development of education during the 90-ies of XX century is the extension of rights for general educational school in solution of numerous issues of its activity. The definition of a school type, a certain variant of curriculum, system of educational, extracurricular activity, content of school component, methods of educational process – this is the incomplete list of issues that start belonging to the competence of schools.

V.M. Alfimov – author of over 70 scientific works, most of which are devoted to substantiation of pedagogical basics for organization of educational process at lyceums, in particular activity of lyceum at Donetsk state university, starts his activity in the 90-ies of XX century. He thinks the lyceum enables implementing the need in creative development of personality and formation of intellectual elite for society. In opinion of the abovementioned researcher, the close interaction with higher school, establishment of learning and upbringing complex (LUC), which core is the purposeful continuous complex program for development of pupils help to provide with implementation of those targets. Thus, for example, the lyceum at Donetsk state university is one of the leading components in LUC “lyceum-university”. In 1991 194 pupils studied at lyceum due to nine specializations. The learning and upbringing work at lyceum was carried out pursuant to the concept about upbringing of creative personality. The work at lyceum is conducted as a controlled psychological physiological process on development of senior schoolboy, oriented to the model of lyceum graduate. The program for creative development and self-development of personality is composed for each senior pupil at pedagogical consultation to provide with upbringing. This program offers certain tasks to all participants in pedagogical process, which teachers implement during lessons and tutors supervisors – at extracurricular time – in different kinds of collective scientific, permissive activity, parents at family affairs, collective – at joint classes. A personality constantly addresses to self-upbringing and self-education. According to the system by V.M.Alfimov the development of personality at lyceum pupils is based of principles of pragmatist approach. The differentiation was made to improve

³⁶ Lutay V.S. *Philosophy of modern education: Study guide.* – K.: Center “Master-S” Creative union of teachers in Ukraine, 1996. – 256 p.- P. 254.

the efficiency in work within the specializations. Thus, for example, the senior pupils in mathematical form study due to three different programs. The lesson has the form of individual group consulting³⁷.

V.M. Alfimov in his Ph.D. dissertation “Pedagogical basics for educational process at lyceum”³⁸ generalized the consequences from his scientific pedagogical activity at lyceum. The important conclusions for pedagogical theory and practice were made in the dissertation, in particular:

- The lyceum study may be efficient only under conditions and within such pedagogical education, which anticipates the use of pedagogical technologies, based on account for level in development of individual personal qualities at lyceum pupil and his/her creative capabilities;
- The efficiency in educational process is provided by formation of such contingent of lyceum pupils that is characterized by intellectual activity, aspiration for acquisition of knowledge, scientific creativity;
- The development and implementation of programs for individual development and self-development of personality provides with the high culture of dialog between lyceum pupils and teachers, strengthens the role of independent work by pupils, helps to organize their master of knowledge in own life;
- The high performance of learning process at lyceum is significantly stipulated by implementation of matrix structure of management, which helps to implement the innovative programs for development of creative personality.

The first Ukrainian humanitarian lyceum at Kyiv national university of T.Shevchenko has fruitfully been working since 1991. As its director G.S.Sazonenko mentions, the modern national lyceum shall perform the social order first of all by personality – to teach it to be competitive in the society with market economy, ability to plan the strategy of own life, to be oriented in the system of the most diverse complex values, to define own life belief and style. The researcher emphasizes that the lyceum becomes the school of life self-determination, helps to produce the position in life at its pupils, own world outlook, attitude to themselves and other. Hereby, each pupil during study at lyceum produces his/her own individual lifestyle, optimal mode of intellectual, emotional, physical loads, ways to react to failures and successes, etc. In our opinion, these principles, mentioned by G.S. Sazonenko, are especially important for complex and long term study at medical specialty³⁹.

We think that we can distinguish the following common features in organization of activity of abovementioned educational establishments:

³⁷ Alfimov V.M. *Lyceum today and tomorrow // Native school. - 1991. – No 11. - P. 82-87.*

³⁸ Alfimov V.M. *Pedagogical basics for organization of educational process at lyceum: Author's abstract by dissertation of Doctor of Pedagogy. - 13.00.01. - K.: Institute of pedagogy and psychology of professional education at APS of Ukraine, K., 1997. – 438 p.*

³⁹ *Perspective educational technologies: Scientific methodical guide / Edited by G.S. Sazonenko. – K.: Gopak, 2000. - 560 p.- P.23-24.*

- Implementing the semester pass/fail form of study with six days mode of educational work;
- Performing the lecture, laboratory, practical and seminar classes;
- Teaching the overwhelming majority of specialized subjects, elective classes and special courses by teachers of higher schools, which are the basic ones for this secondary school that performs the pre-occupational training;
- The professional direction of the whole educational process;
- The graduates from abovementioned secondary schools are enrolled to the higher school pursuant to interlocution or results from final exams for school certificate.

It should be mentioned that the establishment of spiritually rich personality of future specialist “is impossible without its perception of common to mankind moral ethic and esthetic values, mastery of spiritual culture of native ethnos, nation, people”⁴⁰. G.I. Ivaniuk and O.A. Maslianytska think so and emphasize that “the knowledge of achievements by native people is the basis for spirituality of human”. Hereby the significant attention should be paid inoculation of love to native language, development of pupils’ speech. Studying the abovementioned problem, L.Ya. Romanova found out the pedagogical conditions to form the professional functional speech at lyceum pupils of economical specialization on integral basis, grounded the purposes, tasks and functions of lyceums at formation of professional functional speech, defined the non-traditional forms and methods for improvement of the abovementioned process⁴¹.

The development of new methodological approaches to pre-occupational training at lyceums requires the new philosophy of education. As V.S. Lutay mentions, the philosophy of modern education cannot be founded only on one certain philosophical system, including in such one that tries to synthesize all main achievements of other systems in it⁴².

It is worth mentioning the opinion by L.N. Cherniavska that the aspiration for self-determination, self-realization, self-fulfillment is one of the most important needs of human, the condition for its mental development. Hereby, the level in development of activity as a subject potential of personality is considered to be the important parameter for professional direction of pupils⁴³.

According to the analysis of psychological pedagogical literature (I. Vilsh, O.P. Savchenko, T.V. Supriata), biographical material about life and work of

⁴⁰ *Practical pedagogy of upbringing: Textbook in theory and methods of upbringing / Edited by M.Yu. Krasovytsky; compiler G.I. Ivaniuk. – Kyiv – Ivano-Frankivsk: Play, 2000. - 218 p.- P. 27.*

⁴¹ *Romanova L.Ya. Forming the professional functional speech at lyceum pupils while studying the economical disciplines: Author’s abstract by Candidate of Pedagogy. 13.00.04. – K.: Institute of pedagogy and psychology of professional education at APS of Ukraine, 2000. - 19 p.- P.6.*

⁴² *Lutay V.S. Philosophy of modern education: Study guide. – K.: Center “Master-S” Creative union of teachers in Ukraine, 1996. - 256 p.- P. 127.*

⁴³ *Perspective educational technologies: Scientific methodical guide / Edited by G.S. Sazonenko. – K.: Gopak, 2000. - 560 p.- P.46-47.*

famous doctors from the past and present times and own researches we think that it is necessary to provide the following moments in educational process of lyceum::

- Forming the humanistic direction of personality at lyceum pupil and general qualities for personality of doctor (world outlook and common to mankind values, professional interests, inclinations, ideals, power of observation, cogency, organizational capabilities);
- Developing the emotional motivation and volitional components of personality (love to people, direction to the good, ability of empathy, adequate self-assessment, aspiration for socially significant purposes, initiative, exigency to oneself and other, abilities to overcome with difficulties);
- Mastering the knowledge about work of doctor, its professional activity, its specificity, role and status of doctor in society, requirements to its personality, formation of skills to find out the adequate forms for communication with people, organizing, constructive, communicative skills and abilities, capabilities of cooperation, co-creativity in activity, skills self-critically to assess its activity, purposefully to perform self-education and self-upbringing, language skills, culture, emotionality, significance of speech.

We should hope that the development and implementation of new ethic rules for professional activity of doctors into practice will become the breaking period in national medicine. “*Medice, non nocere*” (doctor, do no harm) is a well-known principle of medicine. A doctor can do harm when it keeps the absolute passivity. The modern medicine also emphasizes the other important principle – “do the good” i.e. the preference is given to the active position of doctor. In other words, instead of prohibition “*do no harm*” the positive imperative – “*do the good*” acts. In fact a doctor shall work for the benefit of patient. The object of doctor’s work as a teacher is the people, the tool of labor and its result is also a human. It is necessary to follow to such ethic categories as duty, conscience, justice, love. It is necessary to understand people, to have knowledge in the sphere of psychology. A medical man shall develop a certain emotional position at itself, empathy – understanding, compassion to mental state of other human. To learn to be a doctor means to learn to be a human – this is the life motto of medical man is mastered by pupils at medical lyceum.

The Code of professional ethics for medical nurses of Ukraine emphasizes the importance in mastery of high moral qualities by medical nurse, such as humanity, consideration, mercy, attentiveness, honesty, responsibility. The Code distinguishes the main conditions of nurses’ activity: professional mastery and professional competency, as well as emphasizes the necessity so that the abovementioned Code would become the standard for moral ethic

behavior of medical nurses⁴⁴.

We fully agree with the opinion that the source for development of personal features and qualities of individual is the social experience, accumulated by previous generations of people in the process of their cognitive, labor, moral, esthetic, creative activity. The sources, which assist to establishment of self-organized personality, are contained both in the subjective and external sphere. The external social environment influences on development of capabilities for self-organization through need-motivation sphere of personality⁴⁵.

B.G. Chyzhevskyy and V.V. Sgadova distinguish the following unsolved problems, faced by the schools of the new type⁴⁶:

- Creating the clear system of state education with determination of the place for schools of the new type in it;
- Creating the state system for training and re-training of pedagogical staff to work with gifted children;
- Determining the differentiated level of pupils' knowledge depending on the type and specialization of educational establishments;
- Producing the appropriate curricula and programs, study guides, textbooks, didactic material, including with short-run series to work with gifted children;
- Forming the system of continuous education which anticipates the search and support for gifted pupils' youth.

In opinion of most national and foreign scientists, the main peculiarities for systematic approach to analysis and further synthesis of operation of management by educational establishments are the relativity of system, possibility to distinguish the qualities according to the purpose and tasks: practical direction of systematic approach; impartiality of research. The systematic approach enables designing the efficient rational objects; as well as educational establishments and systems of their management⁴⁷.

Analyzing the secondary schools – strictly speaking the integral system and object of management, V. Sharkunova considers the relatively stable (static) structures but does not almost touch their dynamics i.e. so-called procedural functions of management. Their implementation is the direct practical basis for activity of management and collective of pedagogical establishment. All structures of school are so organically related between themselves, that have a certain influence on each other and each is implemented in others together with them. For example, such component of management system as planning is reflected in all structural components of

⁴⁴ Dubasiuk O.A. *Training of bachelors – senior nurses // Professional training of bachelors at establishments of the second accreditation level: organizational and scientific methodic provision: Collection of scientific works.* – Kharkiv. – 2000. – P. 74-80.

⁴⁵ *Social professional establishment of personality: Monograph / Radul V.V., Mykhaylov O.V., Krasnoschok I.P., Kushnir A.V. / Edited by V.V. Radula.* – Kirovohrad: Polygraphic publishing center of "Impex LTD.", 2002. – 263 p. – P.18.

⁴⁶ Chyzhevskyy B.G., Sgadova V.V. *Association of gymnasiums and lyceums of Ukraine // Primary school, 1993.* - No 2. - P.2-3.

⁴⁷ Sharkunova V. *General education schools as a system and object of management // Education and management, 1998.* – Volume 2. – Number 1. - P. 43-47.

educational establishment: learning, upbringing, work with staff, material provision, work of different subdivisions, etc. And vice versa: such component as the content of educational process will be implemented only through all components of management structures.

That's why, analyzing the activity of educational establishments, V.Sharkunova makes the conclusion that their management is legally separated into independent, specific direction – *pedagogical management, management in the sphere of education*, etc. the systematic approach to the analysis on activity of educational establishments proves that they confirm to the leading provisions in theory of systems and are the qualities of integral complex formations – dynamic social pedagogical systems.

The purposeful function of management at schools, gymnasiums, lyceums, etc. is the management of educational process, which can conditionally be divided into management of learning process and pedagogical control for upbringing of pupils. Learning, which is organically related to the spiritual development, upbringing the qualities for citizen of Ukraine, has the specific peculiarities. They are reflected in certain laws, principles, content, forms and methods for organization of joint activity of teachers and pupils, which is described in many works by national and foreign researchers. On this basis, V. Sharkunova thinks that it is reasonably conditionally to separate the learning from upbringing as an independent object in the management structure of educational establishment.

Research of Cognitive Style of Enterprises With Different Level of Personal Reliability

The basis of economic and social success of developed countries of the world is not the activity of the state apparatus, but a private initiative of citizens. This initiative, through the implementation of successful start-ups, stimulates the innovative development of the state. There is also a significant number of small and medium-sized enterprises, although they have little to do with innovation, but, due to their flexibility and rapid adaptation to changes in the economy, they provide economic stability and welfare of the society.

Today, the cognitive approach is becoming more and more popular in the study of the phenomenon of entrepreneurship. Obviously, such an interest in cognitive processes in entrepreneurs is caused by the peculiarities of their activity: the need to make decisions in conditions of uncertainty of the market, for just the time and resources available to study the situation. As a result, entrepreneurs often have to rely on intuition, insight, which can lead to both successful decisions and false positives (Kolomiece, 2017).

That is, the cognitive component of the personality's reliability includes a certain level of development of the cognitive sphere of the individual: professional perception, memory, thinking, imagination, attention, which collectively is an intellectual and cognitive component of the reliability of a specialist. This is manifested not only in the accumulation of information about professional activities, but also in increasing the number of descriptive categories, in increasing the level of selectivity, complexity and integrity of information, in increasing the ability to analyze and find new non-standard solutions to professional tasks, to identify key relationships that make it possible to resolve problems with making the optimal solution with insufficient volume of necessary information and with limited time in processing it. (Maleev, 2014).

The development of entrepreneurship has become increasingly innovative over the past decades. This was particularly widespread in successful countries, where innovation processes have spread to all areas of activity. Innovation has become a major factor in creating added value, boosting productivity and economic growth. In connection with this, there was an urgent need for scientific and methodological support for managerial actions to stimulate creativity, giving birth to new scientific and technological achievements, which, in turn, become, in fact, innovations through the stage of commercialization.

An analysis of empirical studies allowed T.V. Kolomiets and T.Yu.Kulakovsky to reveal a series of cognitive prejudices that are inherent in entrepreneurs (Kolomiece, 2017; Kulakovsky, 2017). They include:

- the effect of excessive confidence (J. Russo, P. Shoemaker), in which the subjective belief of a person in his/her judgments significantly exceeds the objective accuracy of these judgments. It is precisely this that can explain the entrepreneur's ability to make decisions, ignoring the pressure of criticism and lack of information. This effect may be the result of "accessibility heuristics", "anchoring effect", "confirmatory bias" and "bias in the past" (Russo, Schoemaker, 1992);

- belief in the law of small numbers and the illusion of control (M. Simon C. Houghton K. Aquino) - the tendency of people to believe that they can control or, at least, influence the results of events that they really can not influence. Both factors reduce the level of subjective perception of risk (Aquino, 2011);

- the propensity of entrepreneurs to excessive confidence and the use of representativeness heuristics (L. Buzenitte J. Barney) (Barney, 1997);

- entrepreneurs are prone to optimism (S. Taylor, J. Brown);

- the tendency to be overly optimistic, redefining the possibility of a favorable development of the event. Prejudice of optimism has the following basic forms: excessive positive self-esteem, excessive optimism, excessive optimism about future plans and events, and excessive optimism generated by the illusion of control (Brown, 1988).

Methods and procedures

The research was conducted in 2015-2018. The survey was attended by entrepreneurs of Donetsk (n = 238) and Poltava (n = 210) regions. In total, 448 entrepreneurs were surveyed.

In the study, by observing and analyzing the results, it was fixed the necessary qualities of the subjects. The diagnostic procedure was sustained, taking into account objectively fixed parameters of the selected methods. The results obtained using various methods and techniques were interpreted by us from the point of view of the content as well as the dynamic characteristics of the phenomenon under study.

For comparative analysis, the sample of investigated entrepreneurs was divided into three groups of individuals - with the optimal (group 1), sufficient (group 2) and lower (group 3) level of personal reliability, according to the following criteria: the results of the expert evaluation (15 leaders of the unions and associations of entrepreneurs of Ukraine, with seniority of work in a managerial position of not less than 5 years in the subordination of which there are at least 30 employees); testing according to the method of "Personality Questionnaire on Moral and Legal Reliability of the Individual"

(E.Yu. Strizov) (Strizhov, 2011); method of "General GET TEST test" (Pachkovsky, 2006); Modified questionnaire "Expert Assessment of Personality of Employee" (B.G. Bovin) (Bovin, 2007). On the basis of the empirical research carried out from the questionnaire "Expert Assessment of the Employee's Personality" by B.G. it was included the "Entrepreneurship" instead of "Physical activity" scale, which contained 15 constructs separated on the basis of entrepreneurial competence (EntreComp) (Bacigalupo, Kampylis, Punie, Van den Brande, 2016).

Results and Discussions

So group 1 - the optimal level of personal reliability - included 147 people aged 18 to 48. The business experience is from 2 to 12 years. The level of moral and legal reliability is high. They adhere to traditional moral values, seek to live in truth and conscience. They take into account and apply traditional moral standards in their behavior. They recognize their personal responsibility to other people for the observance of moral norms. They understand the need to adhere to these norms. They are persistent to the norms of selfish, pragmatic and criminal morals. In assessing the results of their activities, the category of "labor" and "money" are used in close connection with the category of equity. Entrepreneurial competencies were established in the areas of: "transformation in action" (taking initiatives, planning and managing, working with ambiguity, uncertainty and risks, collaborating with others, learning through experience); "resources" (self-awareness and self-efficacy, motivation and persistence, resource mobilization, financial and economic literacy, mobilization of others); "ideas and opportunities" (creativity, assessment of ideas, ethical and reasonable thinking, identifying opportunities, forecasting).

General abilities to entrepreneurial activity are developed on a high level: "the need for achievements (further development)", "the need for independence / autonomy," "propensity for creativity (creative abilities / inclination)," "the ability to go for reasonable (weighted) risk", "purposefulness and determination".

Group 2 - a sufficient level of personal reliability - included 152 persons from 20 to 43 years old. The business experience is from 2 to 10 years. The average level of moral and legal reliability. It can not be called a stable and meaningful system of moral values. They are mainly adhered to under the influence of the social environment and control of managers. They may restrict their behavior if it can harm other people. Moral notions and norms in the structure of mentality are not comprehended and not verified in practice, they exist in consciousness in the form of social stereotypes and emotional experiences.

Entrepreneurial competencies are established in the areas of: "transformation in action" (taking on initiatives, planning and management,

work with ambiguity, uncertainty and risks); "resources" (motivation and persistence, resource mobilization, financial and economic literacy); "ideas and opportunities" (assessment of ideas, identifying opportunities, forecasting).

General skills in entrepreneurship are developed at a high level: "the need for achievements (further development)," the need for independence / autonomy, "the ability to go for reasonable (weighted) risk," "commitment and determination."

Group 3 - reduced level of personal reliability - included 149 people aged 18 to 46. The business experience is from 1 to 11 years. The low level of moral reliability that can be attributed to the pragmatic stage of development, the characteristic features of which are: the main content of moral values is individualism and pragmatism. Higher values are money, private property, personal freedom and material success. This category of workers is characterized by readiness for risk, agility and flexibility of self-regulation, a developed motivation for success. The meanings of ethical concepts of "honesty", "justice", "dignity" are abstract and do not overlap with personal interests.

Entrepreneurial competencies in the following areas are formed: "resources" (motivation and persistence, resource mobilization, financial and economic literacy); "Ideas and opportunities" (evaluating ideas, identifying opportunities). Only one general ability - "the need for independence / autonomy" is developed at a high level (Lantukh, 2016).

To study the peculiarities of the cognitive sphere, the researchers used the Kirton Adaptation-Innovation Inventory (KI) (Kirton, de Ciantis, 1994). The results of the study are presented in Table 1.

Table 1

The generalized cognitive style of the subjects with different level of personal reliability based on the Kirton Adaptation-Innovation Inventory (KIR)

Cognitive style	Investigated		
	group 1	group 2	group 3
Superadaptive	-	9,2	26,6
Adaptive	15,4	24,8	37,2
Slight Adaptive	24,0	29,2	18,4
Slight Innovative	19,2	23,9	17,8
Innovative	38,4	12,9	-
Superinnovative	3,0	-	-

Note: Differences between groups are reliable at the level of statistical significance $p \leq 0.05$

Among the representatives of the first group of investigated (the optimal level of personal reliability) there is a presence of 3.0% of entrepreneurs with a superinnovative cognitive style. They, by definition of M. Kirton, think unordinary; come up with tasks from unexpected positions; call into question basic guidelines, including the generally accepted; solve tasks, redefining them or even changing their conditions; serve as catalysts for changes in the formed groups; generate a lot of ideas, including those that look like risky, inappropriate, and foolish; offer solutions that do not fit into an existing paradigm, are not acceptable to most, at least become so immediately (Kirton, de Ciantis, 1994).

Innovative cognitive style is characteristic to 38.4% of the studied group 1, they prefer the unstructured and often changing conditions of work. Their approach is to re-evaluate and redefine the problems and conditions in which they arose, and, accordingly, to obtain unexpected and perceived initially hard decisions. They value themselves for "doing things differently," but they often struggle to promote their ideas. Also, "innovators" do not always bring to the end their started projects.

On the other hand, "innovators" prefer to generate ideas for radical changes. They do not always see in the practice of doing business anything useful, considering it as a starting point for changes. Therefore, they do not bother themselves with a thorough analysis of the strengths and weaknesses of the system that needs to be changed. At the same time, they sometimes can not be finalized for two reasons: first, a radical approach to change requires significantly more resources than with an evolutionary, gradual approach, and the available resources are quickly exhausted. There is a shortage of resources, and the main efforts of managers now must be aimed at covering it, which makes the prospects of change more uncertain. Secondly, simply because they lose interest in it and shift their attention to the next new idea or project (Zub, 2017; Kirton, de Ciantis, 1994).

In 29.2% of the studied group 2 (sufficient level of personal reliability) there is a weak adaptive cognitive style and in 37.2% of the group 3 studied, the level of personal reliability was reduced), adaptive cognitive style was observed. "Adapters" prefer stable and well-structured working conditions. They strive to work, improving existing methods and practices, offering such ways of performing tasks that can be realized without destroying the existing situation. They value themselves for "doing better than others" and "working effectively". They also share their ideas and achievements with colleagues without difficulty.

Entrepreneurs with adaptive cognitive style prefer the changes that occur gradually. This refers to the changes initiated by themselves and to the changes proposed by others. They usually initiate changes aimed at improving the operating system. However, with this approach, entrepreneurs risk going past opportunities that open beyond the established limits.

Entrepreneurs with adaptive cognitive styles are committed to structured and stable working conditions. They improve existing methods and practices, and offer ways to accomplish tasks that do not violate traditions.

In 9.2% of the studied group 2 (sufficient level of personal reliability) and 26.6% of the entrepreneurs included in group 3 (lowered the level of personal reliability) there is superadaptoric cognitive style. These entrepreneurs are characterized by: accuracy, conformism, methodology, prudence; looking for solutions to problems with tried and clear ways; rarely come into conflict with the rules, provide stability in the group; occasionally generating quite moderate safe ideas, focused on gradual incarnation; offer solutions that fit into the existing paradigm and are acceptable to the majority.

Conclusions

Entrepreneurial activity needs intellectual basis of implementation, innovative decisions, gives cognitive factors the opportunity to determine the very essence and reliability of this type of activity. Innovative and entrepreneurial activity is essentially the activity requiring specific cognitive abilities, the presence of specific strategies for solving problems of economic activity and can be represented as a set of solutions to problem tasks of different kinds and different levels of complexity. The reliability of innovation and entrepreneurial activity in this case is the result of the development of special cognitive styles, a reliable cognitive strategy for solving problem tasks.

Subjects of entrepreneurial activity with different levels of reliability have different cognitive styles of thinking, expressed in relation to work, understanding their place in the work process, choosing the desired methods of decision making and understanding the place and role of control procedures.

Groups of subjects with the optimal, sufficient and reduced level of personal reliability have different characteristics, which, depending on the circumstances, can be both advantages and disadvantages. Consequently, the productive contribution of an individual entrepreneur can be strengthened if the desired style of thinking will correspond to the surrounding work environment, the task and the role he proposed.

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The Influence of Family Education on the Emotional State of Autism Spectrum Disorder (ASD)

Our observations show that due to its peculiarities, a child with ASD (autism spectrum disorders) is already so limited in the possibilities of his social and personal development. The presence in the family of an autistic child makes to it-increased demands. The experience of communicating with healthy people here is not always suitable, but parents are oriented first to him. That, as far as quickly they will learn to understand, and, help the child, depends not so much from him, how many from them. What higher level of empathy, the more probability that less than conflict situations will be. Working on itself and promoting the level of the psychological competence, parents, undoubtedly, facilitate position of child.

Definition of problem: L.S. Pechnikova [10] in her work examined 50 mothers of children with autism aged from four to fourteen years attending a special group for the correction of ASD (autism spectrum disorders) at the Institute of Correctional Pedagogics of RAO. The scientist conducted a study of the relationship between the maternal attitude to the autistic child and the presence of a healthy sibling in the family. Author educed, that the paternal relationship of mothers of children with autism had a contradictory structure: at cognitive level an estimation of child is rejecting or infantilizing, reflects difficulty of mother in understanding of the child, construction of model of his education and possibility to disembugue in a social environment. As a researcher marks, the emotional relation of most mothers remains adequately accepting, positive.

The literatures testify that maternal attitude toward such child depends about his birth: in families, where child with autism - only, more often there is his emotional acceptance. The row of scientists marks that the least a favorable psychological situation folded in regard to the second one after another birth of child with ASD: mothers more often have a complex of role inferiority and impossibility of flexible adaptation to the features of sick child. The difficult task of changing one's own expectations and attitudes towards the child, on the one hand, and the inability to change the biological and emotional status of the child, on the other, lead to the rejection of the child by the mother and her own neuroticism.

A.Walker [15] believes that fathers tend to avoid the daily stress associated with raising an autistic child, spending more time at work. Nevertheless, and they experience feelings of guilt, loss, though it is not talked about it so obviously, as mothers of ASD children. Fathers also disturbed by weight of stress that is tested by their wives; the special material burdens

related to education of difficult child lie down on them that is felt all sharper in connection with that promise to be of long duration, almost lifelong, an author underlines. D.E. Zhukov [16] writes about the special vulnerability of family with ASD by a child that increases in moments of age-related crisis and in those moments, when family passes the certain critical points of the development. Our observations show that some parents perceive the child's illness as a catastrophe for the family, express ideas of self-blame; there is a clear connection between the perception of the child's family with autism and the ability of the family to adapt.

The therapeutic approach, developed under the leadership of K.S. Lebedinskaya and O. S. Nikolskaya [8] assumes constant interaction of specialists with parents. In the riverbed of this approach, the methods of educating of parents to the methods of correction work are exhaust with ASD by a child in a game and daily co-operation. Concrete receptions of bringing in of attention of child, organization of his behavior, educating to skills, overcoming of undesirable forms of behavior is based on knowledge of parents of character of violation of psychical development. V.E. Kagan [5] notes that closing itself in close space of intermingling with a child, where every step requires emergency efforts and brings (if brings) very modest results, - parents sooner or later begin to feel and experience this disparity. To save in this long-term marathon a form and not to get off from distance, it is necessary to think about that, not to convert inevitable self-restraints into complete renunciation, an author writes. The unpinness of child must not become a signal to the isolation of parents, to rolling up of their contacts. What they will be are these contacts, depends on the economic situation of family, presence of helping relatives, inclinations and preferences of the married couples, their possibilities to co-ordinate efforts so that everybody continued to develop and realize itself in life. T.V. Skripnik [11] emphasizes, it is important not the number of hours spent with the child, and output-input of parents ratio, is important. Complete abandonment of parents from itself forges a child, limits the circle of the phenomena and events, with that he can clash and through them to meet with life, find itself in her.

The row of authors mark, maximally to help a child, adults it is necessary to study to help not only to him but also to itself - to fill up the life-breaths and experience of self-realization, study to test satisfaction even in difficult situations, to work out problems.

T. Grendin, in an autobiographical book, writes "... when I was six months old, my mother noticed that I stopped caressing her, and the whole thing freezes if she takes me in her arms. A few months later, when she tried to embrace me, I pounced on her like a trapped animal, and scratched her hand. According to a mother, she could not understand why I look at her, as on an enemy. In fact other children in my age calmly sit on hands, babble and snuggle up to the mothers. What does she do not so"? [4].

S. A. Soshinsky [12], describing the life of a child with autism spectrum

disorder (ASD), notes "a cause that could not but tell, - the features of his mother, who could not, and it seems, has not yet learned to communicate with her own children. A mother exemplary executed and duties on the care of children... However, she did not speak with them, did not communicate! Id Est did not speak and did not communicate in that sense, in what only a mother can speak with the child". The author notes that the mother should introduce the child into the world of complicity and empathy, the resonance of souls, on the energy of which later all cognition and training of the child by adults is established, which was not in the life of the boy. "The genetic makeup Andrew, the problems of intrauterine development, and the lack of communication in his own family - all could contribute to the development of his ASD," sums up the author.

Our supervisions show that the state of stress for family that continues to "battle" for the child, after this time quite often becomes chronic, that is in a great deal related to absence of some system of help of ASD to the children, with that in existent child's establishments children do not "get" accustomed with unusual, difficult behavior.

D.E. Zhukov [16] notes that the child ASD family is often devoid of moral support from acquaintances, and sometimes even close people. The surrounding people in most cases do not know anything about the problem of children's autism, and it can be difficult for parents to explain to them the reasons for the child's disorderly behavior, his whims, to take away from himself reproaches in pamperedness. Often, the family faces unhealthy interest of neighbors, with malevolence, aggressive reaction of people in transport, in a store, on the street and even in a children's institution, the author writes. L.P.Barakat, J.A. Linney [3] in the researches, discovered, that stress is most pronounced in the mothers of ASD child. They not only experience excessive restrictions of personal freedom and time because of the super dependence of their children, but also have a very low self-esteem, believing that they do not perform their maternal role well enough.

Fathers, notes O. S. Arshatskaya [1] as a rule, avoid the daily stress associated with raising a child's ASD, spending more time at work. Nevertheless, they too are experiencing feelings of guilt, disappointment, although they do not talk about it as clearly as the mother does. In addition, fathers are concerned about the severity of stress experienced by their wives, they burdened with special material burdens to provide care for a "difficult" child, which felt even more sharply because they promise to be long-term, actually lifelong, the author writes. Our supervisions showed that in exception condition brothers and sisters of such children grow: they test domestic difficulties too, and parents often force to sacrifice those interests. At some instant, they can feel deprived attention, to count up, that parents love less than of them. Sometimes they, dividing caring of family, mature early, and sometimes "pass to opposition", forming the special protective personality options, and then their estrangement from caring of family becomes

additional pain of parents, about that they talk rarely, but that is sharply felt.

K.S. Lebedinskaya, O.S. Nikolskaya [7] note that the vulnerability of a family with an ASD child is amplified during periods of its age crises and in those moments when the family goes through certain critical points of its development: the child's admission to a pre-school institution, to a school, to reaching the age of transition. M. M. Libling [9] writes that for a family raising a child with ASD, the issues of socialization often arise regardless of the formal level of the child's intellectual development, regardless of the formation of his orientation to be a student, to go "like everyone else" to school, from the possible possession of some academic skills. The difficulties of contact with adults and especially with peers, adaptation to new conditions, arbitrary organization of attention, the assimilation of socially correct forms of behavior, and, conversely, the abundance of reactions that are strange for all, disrupting the behavior of other children, often call into question the possibility of such a child at school.

Based on own supervisions, we concluded, that the attempts of providing of professional psychological support to similar families are done for us recently, and while they carry episodic character. We are convinced, that such support must develop, foremost, as a help to family is in her basic caring: education and introduction to society of child with ASD.

E. R. Baenskaya [2] believes that there are similar, quite typical in their manifestations, variants of autistic development. Similarly, there are similar attitudes of parents on understanding the characteristics of the child and the approaches to his upbringing. There are three types: "directive", "passive-cautious", "actively-cautious". Of these types, only the latter is productive for the adaptation of a child with ASD, the scholar writes.

In therapeutic activities, not only children with ASD (disorders autism spectrum) but also members of their families, primarily mothers, need it, notes A. S. Spivakovskaya [13]. The question, in particular, is that every effective psychotherapy work with children requires plugging in the process of parents of child; here advantage gives oneself up to the playing methods. Other problem having direct attitude toward the parents of child with ASD is this his idea about itself and his self-appraisal, an author marks. Considerable part of presentations of child with ASD about itself formed based on subjective estimations of surrounding him people. Mainly such information children get from parents (both negative and positive).

L.S. Pechnikova [10] believes that the biologically determined deficiency of the adaptive mechanisms of an autistic child could be compensated for by the support of the family. But such support is far not always, moreover, quite often as a mechanism starting the highly emotional state for a child, improper behavior of mother, impossibility or unwillingness to feel and understand the necessities of child and reconstruct the behavior taking into account these necessities, comes forward, an author marks. Family expects changes from a child, being not in forces to change, that in a high degree not logically. A child

it called to accept the outer world, not accepting his internal, let even and special, world. Step to meet, thus, must do the weakest and unprotected. Positive changes are possible only at an oncoming traffic, an author writes.

Equally important for parents is the ability to develop and preserve the child's skills and abilities inherent in their ordinary peers, starting with the simplest - self-service, and ending with labor. The quantity and quality of ASD manifestations decrease with long-term therapy, but as a rule, the ASD child goes to the poorly prepared world, which contributes to the next spiral of disadaptation, stresses T.V. Skripnik [11].

Data of psychological researches refute a presence for the mothers of children with ASD of high degree of realization that it needs to the child for his most optimal development. D. N. Statt (according to T. M. Kozhanova [14]) distinguishes several types of inadequate maternal attitude, the most unfavorable in relation to the occurrence of autistic forms of behavior. The first is a mother, that so emotionally depends on a child, so enhance able anxious, that represses a child the inadequate affectation. The second type is the periodic, sudden rejecting of the child for a mother subject to depressions. The third type is a mother fully rejecting the child, without emotional and indifferent to him.

I. B. Carvasarskaya [6] adds another type, the fourth one, which occurs quite often: chaotic, speaks and moves a lot, is excessively "contact", talkative, and sociable. He is infinitely ready to talk about the child with anyone, especially with a psychologist, without paying any attention to the child's condition, his fatigue, his desire to leave. Does not feel the child, reacts only to extreme manifestations. The therapist must rigidly point out that the child falls out of their attention. Such mothers remove their own anxiety by talking about the child, for them their ideas about the child are very important, and not the real state of the child. In addition, the author notes that in her psychological practice she had to face the fact that parents of deeply disabled older ASD children do not perceive, "block" information related to the manifestation of achievements that do not correspond to the usual level of functioning of the child. Parents of children with ASD of younger age often meet another extreme - attributing to the child those skills and abilities that he really does not possess. Both of these positions, of course, equally interfere with the effective development of the child. In the first case, it is the non-use of reserves that actually exist, those that, in case of proper use, move the child further along the path of mastering the surrounding world and adapting himself in it. In second case there is this ignoring of more simple level of tasks standing before a child, desire to jump over, not mastering, some very necessary for valuable development stages, the scientific writes.

M.M. Libling [9] believes that one cannot treat a child with ASD outside of his emotional and psychosomatic symbiosis with his mother. The mother of the child with ASD needs to expand the social and professional needs that she cannot satisfy being emotionally and actually too firmly tied to the child,

an author marks. Because of our analysis of the literature, we can distinguish another group of problems associated with the development of the child with ASD, which parents create, oriented to the child's social norms. With positive dynamics, the moment of increasing the level of destruction in behavior inevitably comes from which it becomes necessary to build relationships with the child at a different, higher level of understanding and explaining to the child the conditions for successful interaction of people in society. Some parents perceive the increase in the level of destruction in the behavior of the child as deterioration of his condition, and not as an inevitable development crisis and casts doubt on the value of therapy for such a child as a whole.

Among other factors related to the parents of a child with ASD and influencing its dynamics by some authors is the possibility of coordinating the actions of parents, a doctor, a psychologist and an educator - this is closely linked to the success of social adaptation of the child with ASD.

With this level of support, parents are taught how to "emotionally attach" to the child, so that, by shaping the impact of the environment, help him to understand them, to comprehend the emotional meaning of all events occurring with him. Parents the same as and specialists, in this system must produce for itself certain skills allowing to them to become some "instrument" for a child, mediated his contact with an environment, forming the methods of the highly emotional co-operating with her.

Conclusions

In this way, the family raising a child with ASD is a system with established relationships in which the child takes his place. Inclination of child with ASD to creation of plural stereotypes influences on the system of mutual relations in family and in a great deal compels to create family the stereotypes of reacting on behavior of child. To understand the problems of a family with a child with ASD, and to outline the main directions for helping such a family, it is possible not only and not so much through special experiments and observations, as in the process of correction involving the family as a whole. In many families, the child's illness causes an increase in emotional tension, the growth of negative emotions; the family itself becomes destructive and is unlikely to be able to help the child as effectively as those families who can adapt to the complex task of raising a child with ASD, to rally, to reduce the level of conflict. To understand the problems of a family with a child with ASD, and to outline the main directions for helping such a family, it is possible not only and not so much through special experiments and observations, as in the process of correction involving the family as a whole.

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The Questions of Methodology and Methods of Psychological Studying in Scientific-Psychological G.I. Chelpanov's Heritage

Life way and creative G.I Chelpanov's heritage are a vivid example of self-realization of a person, extremely talented and multiface-gifted personality.

A graduate of the Imperial Novorossiysk University (Odessa), which he deliberately chose to study under the guidance of M.Y. Grotto - an outstanding psychologist, educator and organizer of Russian psychological science of the 19th and 20th centuries, G.I Chelpanov, like his teacher, who had played a decisive role in his scientific and professional development, devoted all his life to the creation and development of scientific and organizational foundations of national scientific psychology.

After graduating from the Moscow University Master's program, which he had chosen on prof. Grotto recommendation, George Ivanovich moved to Kiev in 1892 (in Moscow at that time, he did not find any vacancies). In his person, St. Volodimir Kyiv University received not only an instructor of philosophy, but a brilliant lecturer, a talented teacher, a creative author of many scientific and methodological works (texts of lectures, textbooks, manuals), most of which were constantly re-published in pre-revolutionary Russia.

One can not ignore the decisive prof. G.I. Chelpanov's contribution to the creation of organizational and staffing conditions for the formation of national psychology as an independent science - the opening of a psychological seminar (Psychological Seminary) as a form of informal training organization of specialists in psychology through non-auditional student's study first in Kiev (1898), and then, after his moving to Moscow, in Moscow (1907) universities.

Thanks to pedagogical talent and prof. G.I. Chelpanov's personal charisma, Kyiv Psychological Seminary, which grew out from a small psychological circle, quickly acquired the characteristics of methodically thought-out, designed for several years of studying the systematic educational work of students. Within the framework of attending and preparing for such seminars, students acquired an opportunity in the mode of informational education not only to acquire new, more profound knowledge, but first of all they gained experience of independent theoretical-analytical and experimental research activity, for which the library, which was assembled by the forces of participants in the seminary, the laboratory equipped with special devices were opened, systematically under the direction of Georgiy Ivanovych, discussions were held on the scientific adventures prepared by the students. The experience of such a scientific research work of the students in Kyiv and Moscow Universities laid the foundations for the emergence of educational specializations in psychology and philosophy in pre-revolutionary Russia.

In the 15-year perspective, this activity, combined with the financial and material capabilities which G.I. Chelpanov found out due to the coherent tragedy of family circumstances of his own family and the family of the entrepreneur and philanthropist S.I. Shchukin (both widowed in 1907), led to the creation of the first and the largest at that time in the world of the Psychological Institute (from 1912, the official opening in 1914) in Russia. Georgiy Ivanovich was not only the initiator of its foundation, but also the author of the project (together with G.G. Shpet), the founder and the first director of the Institute, to his repressive, in essence, dismissal in 1923 by the successors of new Soviet government.

Formally, it coincided with the achievement of Chelpanov's retirement age. In fact, he was fired as one who did not share the vulgar-materialist views of the adherents of the new psychology as an ideological science. In January 1923, at the First All-Russian Psychoneurological Congress, the organizer and leader of which was Chelpanov, his students P.P. Blonsky and M. Kornilov made a sharp critique of the teacher's views on Marxist positions. According to eyewitnesses, Chelpanov's position in the unfolding debate was supported by the vast majority of participants. Despite this, ideological confrontation soon ended for a scientist to lose not only the post of director of the Psychological Institute, but also the place of professor of the Moscow University.

The director's chair and office were occupied by K. Kornilov until 1930, and then he was in a similar position, having appeared for the authorities not to court. The prominent scientist and educator - the founder of the first national school of fundamental psychological research, G.I. Chelpanov was deprived the possibility of productive work for 13 years by the Soviet government till his death in 1936, and his meaningful psychological and philosophical items mercilessly cut off from the assets of national science and pedagogical practice.

Instead, many talented graduates of the Psychological Seminary of different years became qualified staff of the Psychological Institute named after L.G. Shchukina - the first scientific institution of pre-revolutionary Russia, in which laboratories, by the efforts of G.I. Chelpanov and his colleagues equipped according to the latest samples of the experimental laboratory culture of the early twentieth century, scientific researches on psychology were carried on planned and systematic.

Professor Chelpanov's scientific and pedagogical activity remained the main direction of his professional self-realization as a multifaceted personality throughout all his life. A brilliant lecturer, demanding and creative teacher with wide erudition and didactic thinking, G.I. Chelpanov taught a lot of philosophical and psychological disciplines from the university departments. His lecture-halls have always been crowded. The brilliant methodological culture, which was manifested in the speaker's definite

position, his excellent, clear scientific language and dialogical manner of presentation, the installations on the complete, comprehensive and substantive disclosure of the subject of discussion have become the impetus for the choice of scientific and professional path of self-realization for many famous psychologists, philosophers and representatives of other humanitarian specialties. At different time, his students were such well-known philosophers as S.N. Bulgakov, M.O. Berdyaev, V.V. Zenkovsky, O.F. Losev, P.S. Popov, Shestov, G.G. Shpet, and others. Many of his students became famous psychologists of the Soviet era: P. P. Blonsky, M. A. Rybnikov, V. M. Ekzemplyarsky, S. V. Kravkov, P. A. Shevarev, A. A. Smirnov, B. M. Teplov, M.I. Zhinkin, O.M. Leontiev etc. [7].

What is Chelpanov interestin to a modern scientist? And why is the research direction he initiated called philosophical psychology?

The meaningful answers to these questions are in his work "On the relation of philosophy to psychology" (1907), which is essentially a program product of a mature scholar and crowns the Kyiv period of his scientific and creative path [16]. Chelpanov formulates a clear task of psychology - the study of the laws of mental phenomena, the peculiarities of their interactions. Next, he outlines three main lines of important links in scientific psychology and modern philosophy, defining them depending on what can be understood under philosophy. 1) Philosophy as metaphysics solves the methodological issues of the nature of the mental, its substrate and features of the determination, critically discusses the existence of the soul, the nature of the substantiality of the psyche and serves as the basis for constructing psychological hypotheses. 2) Philosophy as a theory of knowledge enriches psychology by philosophical concepts (causality, differences in psychological and physiological, substance, personality, influence...), the theoretical understanding of which is necessary to explain psychological laws. According to Chelpanov, ideas about the soul, about the person always precede the idea of the various elements that serve to create an understanding of our "self." Therefore, a special study of such concepts is necessary. He also emphasizes that the assertion that empirical psychologists in the study of psychic phenomena only describe mental processes is wrong, since in most cases they always attempt to explain them, and this explanation can only be carried out with the help of epistemologically-treated concepts. [16]

3) The last connection between psychology and philosophy is the application of empirical psychological data for wider conceptual generalizations and the construction of the theory of the psyche or its individual phenomena as a logically related set of laws of its functioning, principles and methods of research. Let, Chelpanov says, someone will describe the phenomena associated with the oakomir quite well, or let him explain any group of visual illusions. But this is not enough for psychology. It is necessary to show the place of these described and explained facts in the problem of space perception, and then in turn you need to indicate which

place the very problem of perceiving space in explaining the basic laws of spiritual life occupies: whether this is the perception of something innate, whether it is carried out by means of association, or by means of so-called psychic chemistry, etc. This is already a philosophical problem.

In addition, in his opinion, it is necessary to distinguish individual psychological researches which are carried out in physiology, psychiatry, zoology, etc., from psychology, which leads to the system of these fragmentary knowledge. This latter psychology should be considered psychology in its own right. This is exactly theoretical, general or philosophical psychology. It explores the basic laws of the spirit. It should be called philosophical because its subject can be investigated only with the help of philosophical treated concepts [16]. On the other hand, it is obvious that philosophy also uses the data of psychology to construct philosophical theories.

At the conclusion of the report, professor Chelpanov touches upon an important and polemical issue for his time, posed by a physiologist M. Sechenov, on who should develop a philosophy. He does not oppose the physiologists against philosophers and does not even absolve the position of a psychologist in the development of this domain of humanitarian knowledge, but he offers a fundamentally new path, which in the end and now moves the world and domestic psychology associated with the development of the subject of philosophical (theoretical) psychology, the methodology of which involves a meta-analysis of a wide range of psychological data. "Let," he says, "psychology is developed by all who, in their special area, faces the manifestations of spiritual life: a naturalist, a zoologist, a psychiatrist, a historian, a linguist. But I think that all the material that they collect will ultimately be brought into relation with the general laws of spiritual activity, that is, in other words, with philosophy. Even if, as it is customary in some universities, there are established departments of psychology at natural faculties. This can only contribute to the success of psychology as a result of the division of labor and specialization, but nevertheless, and this natural psychology will have its roots in life only in theoretical psychology. [16].

The outlined feature of the methodological position of Chelpanov is reliably traced in many of his works, in particular, in one of the first psychologically oriented works "Brain and Soul." Published as materials of lectures read by the author to the students of St. Volodymyr's University of Kyiv and the in public in the academic year 1898-1899, the work has a clear orientation in the search for a subject of psychology other than the subject of physiology and denies the summation of all psychic phenomena to the brain processes. In this work, the reader also finds the formulation and author's solution of the main methodological issues of psychological science.

Criticizing various materialist theories for a simplified understanding of the essence of psychic phenomena, typical for such metaphysical constructions, elementalism and linear determinism on the pages of his work, G.I. Chelpanov offers his own interpretation of the essence of psychic activity,

which rejects the methodological ideas of empirical parallelism popular at that time, which only recognizes the coexistence of material and psychic and psychophysical monism (the essence of which, for example, according to Ebbinghaus, is that spiritual and material phenomena are different, but only because they coexist in time and they are perceived in different ways: from the outside or inside).

As the basis of his own position G. Chelpanov chooses the idea of causality and relying on it in the first case, denying empirical parallelism, leads to numerous facts of the influence of consciousness on the human body. In the second case, discussing the scientific understanding of the concept of determinism in the order of critique of psychophysical monism, G.I. Chelpanov observes that everyday vision interprets causality unambiguously, pointing to one particular cause. But there really is a large number of conditions that provide a certain activity, from which the person chooses only one for convenience. The same thing, according to his words, takes place in scientific activity.

Therefore, the author completes the critical part of the work, stops the need for a **polydeterministic explanatory strategy of the material and mental relations**, and argues that dualism, which recognizes the material and special spiritual principle, in any case better explains the phenomenon than monism. [15, 300]

Thus, the researcher overcomes the limitations of the methodological standard of thinking of classical science, which at that time reigned in the world of scientific consciousness (monsters were such authoritative psychologists as Wundt, Paulsen), and uses heuristic tools from an arsenal of already non-classical scientific rationality, which as a base the categories of the organization of being consider not only matter or spirit, but also different kinds of energy in its interconversions, thereby demonstrating the possibilities of interactions between the psyche and the body.

In the final part of the work, referring to the concept of the soul in his contemporary philosophical and psychological literature, G. I. Chelpanov analyzes the views of D. S. Mile, G. Spencer, V. Wundt and P. Paulsen and summarizes all of them in two existing approaches: **substantiality and urgency**.

Contrary to the belief in the similarity of the idealistic views of W. Wundt and G.I. Chelpanov (see, for example, the works of Radlov, Vygotsky, etc.), in his work "Brain and Soul" G.I. Chelpanov contests with so-called "actualists" position "of the human psyche of Wundt and Paulsen, set out in their program works. The latter conducted the idea of the need to understand the psyche only as a permanent dynamic of mental processes and acts, in which there is nothing stable.

The author's work distinguishes between the proper position of the necessity of recognizing the substantiality of the human psyche and the views

of the spiritualists who perceive it as a certain force external to the psychic activity that instills acts of consciousness.

Substantiality of the soul (that is, the psyche as a holistic and self-identity entity) Chelpanov argues on the basis of two empirical reasons: the facts of the unity of consciousness and the identity of the "self" of man [15]. Under the unity of consciousness, it is supposed the ability of the psyche to integrate various elements of experience, for example, in order to compare them. That is, in his opinion, one should admit that there is something that unites elements into a single whole, combines the elements of consciousness, and this is something that acts as the subject of mental activity, the philosopher calls the soul-substance, emphasizing that **as there is no action without figure, so - there is no phenomenon without substance**. Thus on the pages of "Brain and Soul" there is the idea of the human "I" as a subject of mental activity, which is actually conceived of the main content of the concept of substance or soul.

Analyzing another, characteristic of any healthy psyche, the phenomenon of the identity of "I," G. Chelpanov summarizes that is it is that provides the person with the continuity and responsibility of existence. In this case, it is not about the mathematical content of the concept, which is understood as the complete coincidence of the content of the mental (with time and age, the person changes). But the self-identity of its existence in certain physical and spiritual coordinates of existence is not possible without the recognition of the mental center of a mentally and socially healthy, mature person. **The function of this spiritual center** consists of the constant connection of various mental states, processes and properties as belonging to a certain "I" as a subject of mental life, integrated in the actual space and the only time of existence.

The metaphorically integrating mission of this "I" is compared by the author (after Paulus) with a thread which holds the pearls, since the disappearance of such a base for pearls results in the disappearance of the thread of pearls as a certain thing.

Not only the holistic, but also systemic-subjective, active nature of such formation, Chelpanov illustrates one more example of Paulson's work, where he likens the human psyche to a poem in which every word gets by the author is not accidental, but according to a certain plan. A similar role in the organization of human vital activity is played by the subsystem "I" of the human psyche. The subject, wrote G. Chelpanov, should be considered constant in the things that they see and which are the basis for change [15, 313]. Therefore, the soul (as a system of the human psyche) should be considered an intangible substance, through which a person experiences self-identity and continuous in the life time of existence.

Thus, the concept of substantiality, according to Chelpanov, expresses the holistic and active character of the human psyche. **Substantiality is associated for him with the human "I" as the internal subject of**

mental self-organization, the active ability of the psyche to integrate in the space and time of the contents of own mental life.

On the pages of his work Chelpanov also conducts the idea of polydeterminism as an important principle of organization of scientific knowledge of the psyche. On these grounds, it is necessary to make an important conclusion about the general feature of the metaphysical constructions of G.I. Chelpanov - their methodology, which has clear indications of non-classical rationality (the idea of the subject, procedurality, cholicnost, and polydeterminism of human psychic activity).

Non-classical way of reasoning has also been seen in other works of the scientist of the Kyiv period of creativity. In the dissertation "Problems of perception of space in connection with the study of a priori and congenital. Part II Representation of space from the point of view of epistemology ", defended at the Kyiv University of St. Volodimir in 1904, G.I. Chelpanov, continuing the problems of his own master's study, "Problems of perception of space in connection with the study of a priori and congenital. Part 1. Representation of space in terms of psychology" (defended in Moscow in 1896), observes that the task of psychology is to describe the process of cognition and in the study of the origin of these or other mental constructs. The theory of knowledge also determines why one or another subjective construction or concept (space, time, causality, etc.) is conceived by man as objective, objective [20; 117].

Consistently relying on the idea of I. Kant, which proved the objectivity of human judgment, showing that what is called the objective, objective world is the product of our consciousness, which is created by its subjective forms (the same space, time, causality, etc.), Chelpanov concludes that an objective subjective world appears in the people's minds due to the fact that the connection of representations or judgments obeys a certain **rule** or **norm**. And this correspondence to a certain rule or norm makes one or another connection of representations **generally obligatory**. "Because in this case," writes Chelpanov, "... a well-known notion which can not be obtained from experience ... hence, it has a subjective character, at the same time, serves to create a general, objective cognition, so concepts that have purely subjective origin, become objective in nature because they determine the experience that they are the conditions of a possible experience "[20, 117-118].

Consequently, in his doctoral dissertation G.I. Chelpanov conducts the idea of the structure complexity, polydetermination and cultural conditionality of the nature of human knowledge, the product of which is subjective in psychological adventures, since it is the result of the work of certain mental functions, but objective in terms of cultural and historical conditions of the content consciousness that is formed in a person's lifetime as her/his experience, including the experience of productive (scientific) thinking that mediates the mental activity of her/his subject in a particular situation.

On the pages of the dissertation Chelpanov also substantiates the need to distinguish the work of the psyche mechanisms which are involved in the creating of simple sensory ideas and complex ideas, in particular, the idea of space. The essence of the differences, according to the author, is the greater or less activity of consciousness associated with the use of experience: the consciousness is more active in the formation of spatial representation and more passive in the creation of sensory images [20, 418].

Thus, human perception of space, according to Chelpanov, should be understood as the integration of its innate (mental functions) and acquired (a priori, experiential) mechanisms of knowledge. Each of the groups of these mechanisms, in turn, also represents a complex synthesis of more distinct components (in the first case: visual, auditory, muscular, tactile perception, in the second - the concept of depth, perspectives, etc.).

Extending the world-view and methodological position of G.I Chelpanov, which he adores in his thesis as **idealistic realism**, that is, the recognition of the subjective-objective principle of the organization of the work of the human psyche [20, 418], it is difficult to stay away from his attitude to Marxism or economic materialism (it was the classification of this theoretical approach in a special social -philophonic literature at the beginning of the twentieth century). It was this theory, which had been substantially simplified and vulgarized after the October coup, and became a basic ideological doctrine, which totally determined the methodology of Soviet psychological science, leaving no chance for the existence of any other philosophical vision even recognized scholars in the world.

In the "Additional course logic" (1909) indicating the existence of two opposite approaches to explain the dynamics of the historical process - the idealist (or ideological, because in the the basis is the idea of the necessity of a certain change) and naturalistic, Chelpanov considers the Marxist doctrine as a kind of naturalistic approach, whereby, according to his author - K. Marx: "Not the consciousness of people determines the forms of being, but the forms of being determine the people's consciousness" [12]. Staying in positions of objective analysis, Chelpanov first determines the strong sides of the theory of economic materialism, which mostly criticizes the idealistic view that history is created by ideas. He writes: "Thanks to this theory we have recently reinforced the view that ideas can carry on utopian feature, if they appear at the wrong time. Another undeniable merit of the economic understanding of history is the idea that in history there is a certain substrate on which the movement of history arises. Economic materialism has found this substrate in the social economy ... "[ibid]

As the main disadvantage of the Marxian approach, Chelpanov calls absolutization of the economic factor in the historical process, emphasizing the polydeterministic thinking inherent in him that historical causality belongs to the group of phenomena that can not be explained by one factor alone. Therefore, not neglecting the importance of economic relations, the

influence of external natural factors, it is necessary to recognize, however, the importance attached to them in the historical process of ideas and ideals "[12, 34 - 36].

Consequently, Chelpanov summes up: "If we say that great people accelerate or slow down the process, then we recognize that they are the factors. Thus, among the factors of history there is also a spiritual factor; its size is not important to me, I only need to prove the existence of a spiritual factor. I object to the fact that mental causation is only a reflection of physical, as economic materialism clames. To reduce mental to zero - means distorting the relationship between mental and physical. I argue that mental, in any dose, is one of the factors of the historical process "[12, 39 - 40].

The last Chelpanov's thesis of today sounds surprisingly contemporary and relevant from the standpoint of **post-classical rationality**, within which modern scientific thinking is focused primarily on the analysis of systemic human-centered objects, in which the character of human activity (and not only such as the notorious Soviet project on the rotation of the flow of the Siberian rivers in the twentieth century) is determined by the leading factor of the probable changes of such systems. In a globalized and high-tech modern world, such an understanding reflects the **principle of globality**, the essence of which is to recognize the importance of socio-economic, political, and individual - the personal beginning of social changes. Its socializing meaning is the need to understand the role of personal activity and responsibility of every person, not only for his/her own destiny and loved ones, but also for the fate of civilization.

From the psychological point of view, the character of human activity is determined by its ideological position, individual attitude to life, which integrates manifests itself as a level of its personal (moral) maturity. A morally mature person is able to distinguish between good and evil, understands the meaning of social laws and requirements, independently and responsibly carries out a free choice on a reasonable basis.

Such questions in the European cultural tradition, from the time of antiquity, are firmly connected with the problems of moral philosophy, which, according to the famous English philosopher - evolutionist G. Spencer, forms ethics as the summit of the philosophy system.

European University Science has made a significant contribution to the philosophical development of moral issues, the acquaintance with this scientific and philosophical heritage and today plays an important role in the educational socialization of youth. Famous philosophic scholars from the late 18th and 19th centuries, such as Spencer and Mill, Kant and Schepenhoer, Wundt and Paulsen, from the university chairs and the pages of printed publications systematically discussed the questions of man's nature, the purpose and meaning of his/her life, and the criteria of the behavior morality.

In an almost unknown to modern reader publication of the course of studies "The History of Basic Ethics" (1897), delivered by privat-assistant

professor Chelpanov in the spring term of 1897 in the assembly hall of Kiev St. Volodymyr University, the author presented a detailed review and critical analysis of the main European theories of moral philosophy. Acquaintance with the text makes it clear that the questions of the criteria of human happiness (pleasure, suffering or profit), the nature of man (her/his egoism, altruism and pessimism), sense of duty, freedom of will, responsibility and dignity are thoroughly discussed by him using a wide range of methodological means.

In defining ethics for normative science, that is, oriented towards the achievement of a certain goal (in contrast to the sciences of explanatory, seeking reasons), the author does not promise the students to describe the ideal of a person or the norms of his/her social activity, but sees his task in that, based on the analysis of the most modern at that time, the publications of the original European publications (in the list of recommended literature we find the works of Russian, English, German, and French authors) to convey to them the ability to independently construct their own ideals, find solutions of practical moral problems. [13, 5].

Such a work cannot be overestimated in view of the developmental tasks of the students' age and the inherent moral relativism and increased interest in various moral systems. The lecturer's analysis of moral concepts, which became associated with the cultural and philosophical foundations of European mentality, as well as the leading issues of modern humanities (arts) primarily psychology, capture the intellectual attention of the reader to the last line.

A striking example of Chelpanov's didactic skill is the final part of his last lecture "On Freedom of the Will (continuation)", from which, it is customary, it becomes clear and the inaccessibility of all work to the general public of the citizens of the USSR, since this text expressly expresses his philosophical and methodological position.

«If economic materialism contends that there is a regularity in social phenomena, then in this you can agree with it. If anyone will say that on this basis freedom of will must be rejected, then on the above grounds we do not agree with this. If economic materialism, based on the laws of social phenomena, denies the influence of the psychic factor, the influence of great people on the course of history, then this is just the wrong way of expressing, the dualism of everyday philosophy, allowing for two-way interaction - souls to the body and body to soul. If we turn to the monistic point of view, which is so much spoken about by adherents of economic materialism, we will say that the psychic factor is an expression of economic and other relations and as such has an independent significance ...»

"The interpretation of the free will that I protect," - continues Chelpanov, - has an important ethical significance. With such an understanding of freedom, we first of all renounce the fatalistic view on human actions; In this sense, a person acquires awareness of the self-inflicted

action, consciousness elevates his/her personality to the degree of being, which plays an independent role in historical and world life. Such consciousness leads man to believe in the ability of independent creativity of ideals aimed at rebuilding life and the world. "[13, 142]

The above interpretation of human will's freedom, Chelpanov initiates the development of a problem of psychological causation, which appears in various aspects of discussion in the works of his scientific and theoretical followers (V.V. Zenkovsky, M.O. Berdyaev, V.A. Roments, V.O Tatenko). The idea of a free person who is capable of "starting a causal series from himself" becomes even more relevant today, meaningfully incarnating into the aforementioned principle of glocalism as an understanding of the responsible activity of each person in the conditions of the modern cultural world order. It is also very consonant with the idea of individual autonomy of the human individual in its positive interpretation. Such an idea asserts the value of every person, his/her right to his/her own way in life. At the same time, it introduces increased requirements for its socialization (educational, family, labor) as the basis for the formation of a mature moral consciousness of modern personality.

In the literature there is an opinion that G.I. Chelpanov was primarily a teacher and did not leave the original development in the field of psychological theory [see. P.P. Blonsky, book: Trubetskoy]. Instead, a qualified opinion on the scientific-methodological legacy of this outstanding scientist allows reflexive examine his integral, highly transparent and logically coherent system of general psychological knowledge, which plays a complex, hierarchical per device, dynamic picture of the human psyche in its mutually beneficial relations and mutual transitions. A representative in this sense there is also the last major Chelpanov's work - a textbook "Psychology Essays" published in 1926 [18], which was the peak of the evolution of his system of psychology.

The system of presentation in this textbook is seen in the understanding of the subject of general psychology, the disclosure of which the book is dedicated; in emphasizing its integral peculiarities and origins of this branch of psychology, its interdisciplinary ties with other types of psychological knowledge, in the formulation of the problem of general psychology as the discovery of the laws of the relationship between mental phenomena in their mature and full-fledged functioning, in a thorough analysis of the potential of the empirical (experimental and nonexperimental) methods of studying the psyche. It is interesting in this regard that the text of the textbook, whose author the domestic history of psychology uniquely identifies as a consistent introspectionist, is preceded by an advertising image of the "Russian universal psychological apparatus" constructed for demonstration of experimental psychological methods. In fact, this invention was a compact and mobile psychological laboratory that was contained in a small suitcase and could be used in all conditions. [18] It is clear that under those political

conditions, the idea of its industrial production had no chance of realization, despite the great efforts of the developer.

The determined author's installation of "Psychology Essays" on a holistic, systematic way of knowledge organization is manifested in the sense of his **emotional experience (or psychophysical reaction)** as a basic category of general psychology, the consistent ascending specification of which allows G.I. Chelpanov to integrate in the pages of the work the system of general psychological concepts that describe both the conscious and the unconscious phenomena of the internal and external manifestations of the human psyche in their interrelation. Thus, in the chapter "The Brain and the Subconscious" G.I. Chelpanov emphasizes the conditionality of the scientific tradition of the division of the always integral psychic activity of a person into separate psychic functions (cognitive, emotional, volitional), which should be regarded as not in absolute terms, but only in relative terms (for example, person's knowledge, as he said, is usually motivated and emotionally colored, base on individual experience and the work of imagination). The author also notes that any mental act, the simplest and most complex, consists of three parts - intellectual, emotional and volitional, inseparably linked together. And only the predominance of this or that element over all allows us to attribute the latter to knowledge, feeling or will [18, 62].

By spreading the idea of the integrity of the connection between the inner and outer sides of mental activity, Chelpanov substantiates the conclusion that motion (behavior) is a significant inalienable aspect of the soul's human life [17, 58]. The basis of behavior, he writes, is the usual actions or habits that are established through the experience of human activity and the development of his/her nervous system of the corresponding nerve connections. Habits generate a tendency to a certain kind of action that allows a person to perform them automatically, even without control of consciousness, while the latter may be focused on solving a certain intellectual problem.

Thus, G.I. Chelpanov overcomes the methodological limitations of his contemporary psychologies of Marxism and behaviorism, with their inherent reduced-minded view of the content of the objective and subjective human psyche and their interrelations. Instead, the author simulates a picture of a complex, multilevel activity of mental life, in which higher (conscious) and lower (unconscious) functions are distinguished, which co-operate differently depending on the nature of life situations and human life's tasks [17, 58].

According to G.I. Chelpanov, the integrity of the activity of the human psyche and the social context of its formation and functioning are presented by the category of personality. Its social origin is undoubted for the author. In defining the human "Self" as an active core of a person, he depicts a picture of the formation of the physical and spiritual "Self" of a man, emphasizes the importance of knowing the inner world of other people in the processes of constructing child's own "I", pointing out the importance of the function of

the ideal “I” in overcoming the internal conflict self-satisfaction of a person. Essentially, Chelpanov defines personality by means of the peculiarities of the person's nature (personality, according to him, and there is a character formed on the basis of various kinds of life habits), and emphasizes the importance of forming a moral character, in which motives of duty and social feelings dominate other determinants of human behavior.

In this work, as well as in many other scientific-methodical publications and reports, G.I. Chelpanov sets and consistently solves an important methodological task, which today the psychologists-scientists and their teachers pay little attention to. It consists in justifying the need for professor Chelpanov to teach a certain propaedeutic course (the abbreviated presentation of any science in a systematic form).

In general, propaedeutics (from the ancient Greek προπαιδεύω - pre-teaching, preparing) - is a preparatory, introductory course in any science, preceding a deeper and more detailed study of the discipline concerned. Today, propaedeutics is taught in medicine, jurisprudence and others for the purpose of forming in the academic audience a scientific representation of the content of the main professional concepts, which, in the time of Chelpanov, and today appear in the vocabulary of our compatriots mostly spontaneously and used intuitively.

As an instructor of the University, G.I. Chelpanov knew well the complexity faced by almost every person, even with a conscientious general education, when he/she decides to study a special scientific-psychological literature independently. Even more dramatic there are the attempts of university teachers from the first days of training to "immerse" the audience of yesterday's school-leavers, who stopped their choice in psychology, never studying it before, into the semantic space of modern scientific psychology. Consequently, the importance of a meaningful propaedeutic course in psychology is quite obvious and important for Chelpanov. Moreover, George Ivanovich was deeply convinced of the need to teach a special philosophical propaedeutics, which includes elementary courses in psychology, logic and philosophy, not already in high school, (such a tradition in his time existed at the universities of Germany) and above all in the upper classes of the gymnasium education.

Interestingly, in the philosophical tradition before I. Kant, the name of propedeutics was associated primarily with the general course of Aristotle's logic, which often preceded the study of specific sciences as special branches of knowledge. Later, the task of philosophical propaedeutics was understood as the preparation of students for the transition from the everyday worldview to the scientific, from the worldview of the elemental - to the conscious, from the worldview that holds on the faith - to the evidential, which is based on the mind.

At the beginning of the twentieth century. productive teaching experience at the school of philosophical propedeutics has already been developed in the

countries of Europe and America. And in 1905-1906, according to the order of the Ministry of Education of Russia, psychology, logic and even philosophy have not long been part of the program of training Russian gymnasiums.

During the Kyiv period of the work G.I. Chelpanov prepared the corresponding textbooks on psychology, logic and philosophy for the gymnasium and self-education, which were repeatedly reprinted in pre-revolutionary times in Russia [11; 23; 24]. The high quality of the scientific and methodological works of the author, repressed by the Soviet authorities, is evidenced by the fact that when in 1944 psychology and logic were once again briefly reinstated to the school programs of the USSR, the Chelpanov's textbook of logic was issued by the same authorities in thousands of copies.

The importance of teaching psychology and philosophy in high school and higher educational institutions, ways of staffing and methodological support for the solution of such didactic tasks, G. I. Chelpanov defended both from the university department, as well as in thematic publications and numerous performances at professional meetings (congresses, meetings of scientific societies, etc.). Key works of the Kyiv period, devoted to this problem, presented in the prepared publication, deserve a deep understanding in the current realities of reforming the general education of our country.

Subject interest in this sense, is a little-known "Short repetitive Psychology by professor Chelpanov with the addition of common issues to repeat" for secondary schools drafted by "The circle of teachers" of "School employee" publishing house [15]. This text, on the one hand, serves as a compelling model of author's methodological culture of the best domestic school course on the psychology of the early twentieth century. And other is evidence of undoubtedly recognition of his talent by instructors and teachers' staff in those years. The return from oblivion of these materials, despite their partial differences from the modern scientific and psychological interpretation, opens up to the modern reader the opportunity to touch upon the scientifically substantiated, logically verified system of basic psychological representations of professor Chelpanov, which overcomes the entropy of the initial self-knowledge of the young individual consciousness and makes more productive the efforts of a student from further self-acquaintance with a special psychological literature.

The origins of the constant actuality of G.I. Chelpanov's work from psychology for the scientific and educational community we see primarily in his and today's modern:

- 1). the understanding the subject of general psychology, its sources and methodological foundations of the study, which envisage the widespread use of heuristic instruments of non-classical and post-classical rationality of moral philosophy, logic and the theory of knowledge;

- 2). in the integrity of the analysis of the psyche as a subject of scientific psychology, overcoming the rupture of theoretical (metaphysical) and

empirical and experimental psychology, as well as the psychology of consciousness and behavior; substantiation of the necessity of the creation of the territorial (philosophical) psychology, the subject of which is the meta-analysis of the psychological knowledge of individual sciences in order to develop the most general laws of the spirit (that is, the individual and social psychic life);

3). in the active use of empirical (introspection, observation, genotyping method) and experimental methods, development of methodology and methods of experimental research, wide use of the genetic method as a tool for studying the essence of the psychic phenomenon through the scientific study of the peculiarities of its life-time formation;

4). in substantiation of substantiality and activity as the leading systemic properties of the psyche, which allows to raise the question of research not only of psychic phenomena, but also of the general properties of the psyche and their functioning and development;

5). in proving the subjective-objective nature of cognitive activity of a person, the cultural conditionality of the emergence and functioning of his/her higher mental functions;

6). in the formulation of the problem of mental causation in connection with the problem of human free will, and the violation of the question of polydetermination of mental and social phenomena, substantiating the role of personality in the dynamics of social processes.

From the standpoint of modern didactics and teaching methods, a glance at the philosophical and psychological benefits of Chelpanov attracts:

1). the author's systematic presentation, which conveys a well-defined logically harmonious, deductively consistent and harmonized construction of didactic works;

2). dialogical character of the presentation of scientific and psychological materials, rules and recommendations developed by him on optimal independent work with textbooks;

3). successful use of artistic and verbal visual aids, where scientific and psychological facts are used and analyzed and which are familiar to each reader and, therefore, convincing examples of life;

4). development of methodological support and methods of organization and implementation of both demonstrative and research experiment on psychology

5). comprehensive substantiation of the need for the introduction of philosophical propaedeutics as a special course of the foundations of psychology, philosophy and logic to the program of high school, the development of its methodological support in order to realize the formation on the scientific basis of worldview and psychological culture of the younger generation.

Scientific-psychological heritage of G.I. Chelpanov is difficult to overestimate in the content of those challenges that are relevant today for

domestic psychological science, education and practice. The Ukrainian school, like 100 years ago, still expects systematic teaching of psychology. Psychological practice requires proper not only ethical, but also legal regulation. The stagnation of scientific and psychological production is continuing, which is associated with a shortage of modern funding of fundamental research, a decline in the prestige of scientific activity, the aging of scientific personnel. But the greatest difficulty is seen in the difficulties of modern scholars to leave the old methodological fairway of Soviet psychology and under the silt of various historical and ideological layers find the signs of a solid ground of national science, which raged in the classical universities of our country centuries ago. The reativity of professor Chelpanov, the bright representative of the scientific and academic philosophical and psychological culture of St. Volodimir University at the end of the 19th and early 20th centuries, and his followers, representatives of the Kyiv school of philosophical psychology, deserves a return to the actual status and rethinking the scientific and educational background of his spiritual descendants.

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The Enterprise Information Security System: Innovative Approaches

The process of providing enterprise information security is built in accordance with current legislation and corporate regulatory acts. Any similar process is associated with subjective perception and interpretation of legal rules regulating these relations by actors themselves. Primarily the Constitution of Ukraine, Art. 17, regulates relations arising in the area of providing enterprise information security. They are also subject to the Laws of Ukraine “On Information,” “On the National Informatization Program,” and, finally, to the orders and instructions concerning a given organization enshrined in the charter or founders meeting minutes. With such an array of regulatory norms, cases of different interpretations of the same rules are not uncommon. Issues of understanding the processes of providing enterprise information security are best considered from the perspective of hermeneutics in legal science.

The purpose of this paper is to study the methodological approaches to understanding the category of “enterprise information system security” from the perspective of legal hermeneutics.

Nowadays, hermeneutics represents a branch of modern philosophy. The subjects of contemporary hermeneutics include issues of social cognition and its methods. The central question of the methodology of hermeneutics is how people should understand the senses of what is and what should be, and what limits there exist on interpretative freedom. H.-G. Gadamer expressed its essence as follows: “Hermeneutics is practice... The fundamental truth of hermeneutics is as follows: no one alone can learn and tell the truth. The soul of hermeneutics is to by all means maintain a dialogue, let a dissident have his say too, and be able to assimilate what he uttered – that’s the soul of hermeneutics” [7].

In our time, hermeneutics in law and philosophy is construed as a science dealing with understanding the sense of texts and has different stages of development. The term “hermeneutics” is also used in a theoretical sense: hermeneutics is a theory of understanding, comprehending a sense [8].

Based on the above, we can develop an appropriate definition. Legal hermeneutics is understanding and explaining the sense laid by the legislator into the text of a regulatory legal act. The task of legal hermeneutics is to provide methodologically transition from understanding the sense of a point of law to correctly explaining its essence.

Such kind of transition is the process of cognition, which results in finding the sole and correct version of interpretation of general precepts of law concerning a concrete legal situation.

The specifics of legal hermeneutics is associated with the existence of different legal cultures, including Ukrainian national legal culture, with their own vision of such problems as human rights, law-governed state, partition of power, local government etc., and our legal customs.

Whatever fields of law we consider they consist of a totality of various interpretive calculations. In this sense, law is inherently a purely hermeneutic phenomenon.

Italian philosopher and jurist E. Betti worked out the most interesting methodology of hermeneutic analysis of legal texts. He was saying that there is the world of objective spirit, facts and human events, acts, gestures, thoughts and projects, traces and evidences of ideas, ideals and realizations. This entire world belongs to interpretation. A comment appears as the process the aim and identical result of which is comprehension. A commentator must retrospectively reproduce the real process of creation of the text by dint of reconstruction of the message and objectivization of intention of the author of the text [9].

Betti formulated four hermeneutic canons actively used in jurisprudence:

1) Canon of immanence of hermeneutic scale. Reconstruction of the text must conform to the author's point of view. The commentator does not have to bring anything from the outside; he has to look for the sense of the text, respecting dissimilarity and hermeneutic autonomy of the object.

2) Canon of totality of hermeneutic consideration. Its essence is in the idea that unity of the whole is explained through separate parts, but the sense of separate parts becomes clear through the unity of the whole (hermeneutic circle).

3) Canon of relevance of awareness. The commentator cannot withdraw his subjectivity until the end. To reconstruct other people's thoughts and works of the past, to return to genuine vital reality other people's emotions, it is necessary to correlate them with own "moral horizon."

4) Canon of the semantic adequacy of understanding represents a requirements to the commentator of the text. If the author and commentator are congenial and are on the same level, they can comprehend each other. This is also the commentator's ability to understand the purposes of the object of interpretation as his own in the literal sense of the word.

Legal hermeneutics is to simplify the dialogue of legal viewpoints, since legal concepts and categories (such as freedom, democracy, and liability) have different meaning in different legal systems [9].

Contemporary legal science has begun to understand the prospects of the hermeneutic approach to analysis of legislative texts. Application of hermeneutics to interpret rules of information law and information security has become quite logical.

We will try to apply the hermeneutic approach to interpreting the concept of enterprise information security systems. Any rule regulating relations that provide information security represents a result created by its

author, the content of which must be established by executors or information security subjects. The literal content of a rule always has behind it a second situational sense without adequate understanding of which correct understanding of the sense of the entire rule is impossible. English lawyers have a saying: “A law contains only one half of the content, the other one is hidden, while ideas are within.” Similarly, considering any rules, note that it is necessary to find this hidden idea to apply correctly a law in the course of its interpretation. Hermeneutic interpretation of rules and concepts of information security is just the tool by which the problem of double sense can be solved, in that hermeneutics, in addition to decoding of the literal sense of a text carried out through linguistic interpretation, enables to reveal the content of the legal context.

P. Ricœur notes in his works that hermeneutic analysis of a legal text includes a number of obligatory procedures. Division into understanding, interpretation, and application is generally recognized [11, 12].

Understanding should be understood to mean an art of comprehension of the signs transmitted by one consciousness and perceived by another via their external expression (primarily linguistic).

The unity of the concepts “to understand” and “to interpret” was revealed. Interpretation is not just some kind of separately occurring process, complementing understanding when opportunity offers; understanding is always an interpretation and hence interpretation is an explicit form of understanding. Understanding always involves something like application of the text to be understood to the present situation.

Application is as much an integral part of the hermeneutical process as understanding and interpretation are. In legal hermeneutics, there is the essential tension between the text set down... on the one hand and on the other, the sense arrived at by its application in the particular moment of interpretation. A law is not there to be understood historically, but to be made concretely valid through being interpreted [11, 12].

V. V. Suslov notes that legal consciousness is similar to historical one, that is, a lawyer must investigate the background of a fact being interpreted. Admittedly, he emphasizes the special relevance of the above-mentioned approach with respect to the process of proving. However, the content of the said paper and logical deduction following from it give the impression that identification of the legislative will is the ultimate goal of hermeneutic interpretation [14]. V. V. Suslov recognizes polysemy of legal texts and relevance of the situational sense hidden behind the literal one but reduces hermeneutics to its historical method of interpreting [15].

Take the problem of understanding an enterprise information security system by analogy with historical hermeneutics. Let us consider the approaches of a historian and an information security subject to the same legislative act in force.

There are obvious differences. A subject comprehends the sense of an information law rule from the perspective of a specific case and for a particular purpose. A historian does not have a specific case he would consider. He seeks to determine the sense of an information law rule by modeling and embracing with a single view the entire sphere of its application. He concretizes understanding of an information law rule only due to all these cases of its application. A historian may not content himself with initial application of an information law rule to determine its sense. Being a historian, he must take into account historical changes an information law rule underwent; he must define his task in terms of modeling the initial content. At the same time, one cannot present the task of the subject as bringing information law rules in line with the current situation. If someone seeks to bring the sense of information law rules in line with the current situation he must know, first, its initial content, that is, he must think like a historian. And the sense is that historical understanding serves him to achieve a certain goal. We are convinced that the legal content of a given operative information law rule is completely unambiguous and that current legal practice merely follows its original content. If such were the case, the styles of legal and historical thinking would be identical. Then, the purpose of hermeneutics would reduce only to identifying the initial sense of a law and further applying it in this initial sense as a true one. Similar to an uttered thought, understanding itself of regulations of an enterprise information security system must not pose any problem when, according to them, an information security subject has to put himself under the conditions of the initial creator of these regulations ignoring the contradictions that exist between the original and practical legal content of these rules and regulations. The fact that this is a legal error has recently become apparent.

V. Tsymbaliuk showed in his publication that legal reasons imply a need for reflection regarding historical changes due to which the initial sense of a law and the sense applied in practice get detached from one another. A legal practitioner, alias an information security subject, always means a regulatory act (regulation) itself. However, its content should be determined with account of the case to which it should be applied. Ascertaining with exactitude the content of the regulations of an enterprise information security system requires historical knowledge of their initial content, and only because of the latter, the subject takes into consideration the historical meaning a rule (regulation) itself communicates. The subject may not rely solely on what he knows about the intentions and goals of those who developed these rules and regulations, minutes and charters. On the contrary, he must understand the changes occurred within the information security system of an organization and re-specify the function of the rules and regulations [16].

A subject applying regulations of an enterprise information security system, which came to him from the past, to his current needs, seeks to solve a practical problem. It does not mean that he comments on it arbitrarily. To

understand and comment means that it is necessary to learn and recognize the current sense of the said rules. The subject seeks to comply with the main body of the information security system regulations translating them in a modern way. He seeks to learn just the legal meaning of the rules and regulations of the entire system rather than their historical meaning for which the entire system was put into operation or, for example, of any case of its application.

The rules and regulations of an enterprise information security system should be interpreted by appealing to their own history of creation by construing them in a modern way. He who understands does not opt for his subjective point of view but finds a sense given beforehand. For self-implementation of legal hermeneutics, it is essential that law is equally binding for all members of an organization. Where this rule is violated, for example, at pathological authoritarian organizations, legal hermeneutics is impossible. A leader has a possibility, disregarding the rules he devised himself, without making any effort to interpret them, to obtain any decision that he will consider as correct. The task of understanding and interpretation is worthwhile only where legislative regulations are regarded as universally binding [11].

Conclusions. The rules of an information security system are applied by a subject covered by these rules as any other organization member. The idea of providing enterprise information security stipulates that a managerial decision must be based on adequate (fair) assessment of the situation rather than on arbitrariness. Each member of an organization who delves specifically into the situation at hand is capable of such fair treatment. This is precisely why the organization with an established and well-run information security system, just as a law-governed state, has a guarantee of obligatoriness for all subject to perform their duties; everyone knows what he has to do and what he can expect. Any employee has an essential possibility at his workplace to make a correct interpretation, that is, correctly anticipate a legal decision based on the current rules and regulations. Rendering a sound decision in a specific case requires taking account of the previous practice, and not only one's own. Having an opportunity to exchange information and experience with similar information security subjects is sufficient for it. There always is an opportunity to take account of the totality of experience, and this makes it possible to dogmatically handle any situation and make the best managerial decision.

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The Actualization of Threelinguism Problem as Neurotization Factor in the Occupational Training of Future Physicians

Socially-psychological problems related to language contacts, interaction and interpenetration of two or more language systems repeatedly attracted the attention of scientists of philological, pedagogical culturology, ethnography, sociolinguistics fields. In the presence of intra- and interlanguage oppositions usually different types of interference occur. Current researches of interference are mainly conducted in two ways: firstly aspects of the interaction and interpenetration of languages are analyzed, and, secondly, this question is studied in connection with the method of teaching non-native languages at the theoretical level.

Monographs researches analysis reveals many fundamental papers about interference phenomenon under bilingualism condition (A.O.Anisimova, N.V.Baryshnikov, R.Y. Barsuk, I.V. Dubko, A.V. Schepilov, L.A. Sazhko, F.S.Usmanova, B. Hufayzen etc), while threelinguism situation in this context was not a separate subject of scientific psychological researches.

The purpose of the study is actualization of threelinguism problem as neurotization factor in the occupational training of future physicians.

Foreign students-medics as a rule are African-Asian origin, derived from one language system, as the first foreign language speak English (not always sufficient), and as they study in Ukraine should master second foreign language (Ukrainian or frequently – Russian).

In this context it is appropriate to consider firstly - the question of similarity of language, secondarily - the level of language skills and thirdly – sphere and degree of all three languages using. Almost naturally, that the interaction of three language systems will cause different types of interference. In this connection, we agree with T.M.Chevanina opinion that threelinguism is more complex (compared to bilingualism) linguistic phenomenon that should be viewed as a special type of multilingualism.

Threelinguism is appropriate to be considered using personality approach, in particular – genetic- psychological (S.D. Maksymenko). Personality is a complex and multilevel phenomenon. On the one hand - personality is a community of biological and psychogenic base units, on the other - a stable system of socially, ethnically significant features that characterize the individual as a member of a community. Interaction of all these elements forms a certain type of personality. Personality manifests and reveals its intrinsic properties primarily in the language. Because, being

associated with thinking and psychology of man, his life and public consciousness, it reflects ethnic, social, psycholinguistic features of its carrier.

Educational space, according to many scientists has expressed personality dimension. It realizes in activity and communication relating to a personal educational environment of both-teaching and learning person (O.H.Kuzminska, M.M. Nazar).

Changes in the socio-cultural environment, pace of life, information overload, increasing this stress, often provoke emergence and development of borderline states of mental pathology that brings issues of psychohygiene, psychoprophylaxis and psychological correction in the list of the most important tasks of mental health (K.V.Aymedov, F.B.Berezin, T.P.Viskovatova, B.S.Polozhiy, B.D.Karvasarsky, H.M.Yakovlev, etc). It is known that most sensitive age to different stress factors that influence on person is a student age. This age is the most important intermediate period in the development of personality – from teenager to adult, (leadership activities within which is an occupational skills development).

Analysis of the leading researches (O.P.Venher, V.H.Hamov, O.D.Hrechyshkina, N.M.Dyatlenko, H.P.Levkivska, S.D.Maksymenko, Ye.O.Reznikova, O.H. Soloduhova, F.G. Khayrullin, A.V.Furman, N.Kotsur, L.V.Klochek, L.V.Kosaryeva, N.V.Lyubchenko, O.V.Prudska, I.M.Shapoval) into the problem of adaptation to study at universities reveals that there is influence of psychological factors at different levels (psychophysiological, individually-psychological, socially-psychological). Based on a comprehensive analysis of the interactions between factors and manifestations of adaptation were found differences in the nature of adaptation, its stages and forms (T.V.Aleksyeyeva, Yu.L.Trofimov, S.I.Yakovenko).

Theoretical analysis and scientific researches into the problem of threeingualism of co-operation in the educational space led us to generalize the psychological characteristics of students in Arab countries. Data from the dissertations of Mohammed Osman Necati (1974), Ali Hussein Tahsina (1979), Ahmed Shaaban Atyyya (1979), Siham Abu Darwish Atyyya (1986), Mohammed al-Mutavva (1991), Ahmad Abad and Cihan Al-Imran (1992), Ahmed al-Abadi Kamiha (1996), Ahmed al-Samad Mohammed and Khaled al-Tahhanom (1997) are summarized in Table 1. Not being able to explore the Arab youth in learning in their home countries (as a control), we consider it necessary to determine their psychological characteristics, using materials of other researches.

In general, it should be noted similarities of psychological characteristics of Arab and Ukrainian students on condition of education in home countries. However, adaptation of foreign students to the educational space in another country remains interesting question.

Table 1

Content analyze of dissertations researches into problems of psychological characteristics of Arab countries students

Researchers	The sample of researches	The main results
Mohamed Osman Necati (1974)	866 students(males and females)of all faculties of Kuwait University	This study demonstrated that psychological problems of students occupy one of the first five places on the list. Comparison of male perception of psychological problems importance with female revealed considerable coincidence. In addition, this study showed that students from Kuwait and the United Arab Emirates are equally concerned with the problems of personal relationships and psychological harmony.
Tahsin Ali Hussein (1979)	The sample group consisted of 640 students (males and females) of Basra, Mosul and Sulaimaniyah Universities	Study on the university youth problems in Iraq was intended to familiarize with the most important problems of Iraqi universities students and show to what extent they relate to the factors of gender and the environment (geography). In the questionnaire were questions on the nine groups of problems: educational, recreational, social, religious, emotional, relating to health, economic, sexual and family. The results showed the presence of differences with statistical confidences in the range of 0.05 to 0.01 between nine different groups of problems.
Ahmed Shaaban Atyyya (1979)	555 students (males and females) of teacher training colleges in Alexandria and Damanhur	Conducted survey revealed that students care about such social problems as a contradiction between what is taught in the colleges and everyday life, ignoring the views of young people, confusion of religious issues, struggle between the desire to express themselves and difficulty of implementation, loss of aspirations in life crush, ideological backwardness of society.
Siham Abu Darwish Atyyya (1986)	420 students(males and females) of different faculties of Kuwait University	Results of survey showed that students need more academic and occupational guidance than the recommendations for adapting to environment and psychologist help. It was found that men need occupational and psychological guidance more than women.
Mohammed al-Mutavva (1991)	548 young people, citizens of the United Arab Emirates, school and college age.	The problems of youth were studied in general. The results showed the presence of complex of problems in UAE youth, although their degree and kind differ from the problems faced by young people in the Arab and non-Arab countries. The author found that mental and emotional health of young people is one of the factors that influence on their psychological stability. One of the main problems faced by young people is fear of the future. This is typically for 66% of the surveyed group. Also, 50% suffer from nervous disorders, 57% - unexplained depression, 47% - inability to express their views on many issues and 66% are given to fantasies too much.

Ahmed Abad and Cihan Al-Imran (1992)	431 students (males and females) of the University of Bahrain, whose ages ranged from 18 to 25 years.	Research on Bahraini youth emotional problems. The results indicate that university students have 30 emotional problems among 100 contained in the survey. These problems can be divided into eight categories: weak innate ability and inability to make decisions, anxiety, inattention and inability to concentrate, inability to achieve emotional balance, lack of confidence, excessive sensitivity, fear of failure, fear of committing errors.
Ahmed Kamiha al-Abadi (1996)	Conducted in selected group of pupils and students of secondary schools and universities across the country. The object of the study was the prevalence of the four types of problems: problems of the dangers and challenges, problems of health and finance, problems of conflict with customs and traditions, problems of frivolous attitude towards the future.	The views of young people on prevalence of social problems among young people in Saudi Arabia were explored. It notes the wide prevalence of above mentioned problems among Saudi youth.
Ahmed al-Saadi and Mohammed Khaled al-Tahhan (1997)	UAE University students	At an introduction to the needs of a guideline based on several factors. The measurement was carried out on five groups of problems: psychological, social, vocational, educational, information knowledge sources. The results revealed the presence of 20 needs guidance of university students in the following order of significance groups: educational, occupational, informational, psychological and social.

Studying the spectrum of the most common problems of foreign students J.S. Orudzhev and V. V. Delaryu obtained results that the most important among them are the material and everyday problems, then in descending order of importance, concern about the state of their physical health, education and the last- interpersonal relationships.

The social situation turned out interesting. Analysis of M.V.Popuhaylo and A.I. Tsalkovsky sociological research revealed that 80% of foreign students pointed out that in the process of learning a second foreign language they did not have much difficulty. Every third believer student after arrival to other country stops performing religious rites. Most students show declining interest in native culture in general, although they speak the native language, read national literature, listen to the national music. There is increased interest in Western culture.

Ben Barek Abdulhakim Mohamed Hussein research reveals the psychological characteristics of neurotization of Yemeni students' personality during the study at the University of Russia Federation. The researcher notes

that the Yemeni students have more intensity of neurotic symptoms severity (with the dominance anxiety, excessive fixation on negative events, and trends to isolation), higher levels of psychological distress and breadth of symptoms compared to Russian students, indicating higher probability of neuropsychiatric and psychosomatic disorders.

Intensity of neurotization signs in women was reliably more than that in men. Yemeni students are generally satisfied with the quality of their lives and evaluate it higher than Russian. No significant differences according to the main areas of life quality evaluation were found. Yemeni students are characterized by expressive virtually all types of character accentuation. The most severe type of character accentuation among men is exalted and women - emotive. Yemeni students have more expressive intrapersonal psychological conflicts in comparison with interpersonal.

At the same time, Yemeni students, in general, characterized by constructive coping strategies of behavior, but trend of passive coping strategies appears.

The main indicators of mental distress in Yemeni students are syndromes "depression", "interpersonal sensory" and "hostility". The main factor that hinders the development of psychopathology is hypertimic type of character accentuation.

E.Yu. Sahorova studied dynamics of the life quality and physiological adaptation of foreign students of medical university. Scientific notes that the study of life quality is an informative criterion for evaluating of the level of foreign students adaptation to the learning conditions at the university. The quality of foreign students' life is directly proportional to the level of adaptability. Personal characteristics and the factors that determine work and lifestyle features of university students affect the assessment of foreign students' life quality. Factors of foreign language and novelty of socio-cultural environment significantly affect the process of adaptation of foreign students to the new conditions of life, but are not leading. The latter argument, in our opinion, needs to be clarified. However, the findings of scientist supported by our observations that it is the initial stage of adaptation of foreign students to learning university conditions characterized by the presence of their high psycho-emotional tension that appears predominance of sympathetic autonomic reactions orientation. Thus, attempt to generalize many studies on the specific adaptation to the occupational training of foreign students under threelingualism conditions leads us to the needs of own scientific and psychological research.

The ability to mix in one research context threelingualism concept, adapting to learn in institute of higher education, personality formation and learning in our view is entirely justified and up-to-date. In this regard, it is appropriate to identify specific reference points of threelingualism adaptation in the context of receptive language competence development by English-speaking foreign students. Genetic determination of interdependence of

psychological characteristics of personality neurotization (psychosomatization) and success of occupational language mastering under threelinguism conditions remains relevant question. Determination of foreign students' personality neurotization and selection of the methods of psychological influence on them in the learning process and psychocorrection practice are also unclear.

Among disciplines of the first courses studying, which actually occurs under threelinguism condition, importance is given to medical microbiology, virology and immunology. Theoretical concepts, obtained in this course, are a basis for future clinical discipline -"infectious disease". Active use of science theoretical concepts for building practice as a doctor is not possible without a generalized ways of mastering scientific concepts that can be transferred to new content. Such a transfer is possible when generalization techniques have become for the student "instrument of his thinking" (S. Rubinstein), when students can independently acquire new knowledge. G.S. Kostyuk states that at the beginning in the learning process should be created conditions for generalizations, mastering generalized knowledge, abilities and skills that to be applied in the future to individual cases. However, unfortunately, there is lack of researches on summarize of processes of subjects interaction under threelinguism condition.

So, in the study of microbiology foreign students of englishspeaking forms of education should form a theoretical concepts and appropriate the conceptual framework of science and learn to use it yourself when studying clinical disciplines. These skills, in our opinion, will be the key to master occupational medical language and affect on adaptation processes in educational activities of threelinguists.

However, teaching microbiology courses experience suggests that issue of generalized way is neglected, psychological characteristics of educational actions in mastering the concepts of microbiology are not well-considered and three linguistic situation of educational interaction is not took in the account in the curriculum of microbiology.

In consequence, some students developed indifferent, sometimes even negative attitude towards microbiology as an educational subject. Consequently, students often demonstrate a superficial knowledge, there is no development of creative thinking, and, as result, interference of old and new knowledge in microbiology occurs.

Numerous studies revealed the psychological features and the need to form a system of educational actions, based on which general interaction, underlying theoretical concepts of knowledge content is apportioned.

In our case, this genetic interaction may be dichotomy "microorganism - macroorganism", which will allow to form and appropriate the system of microbiological concepts associated with clinical presentation of infectious disease.

Therefore, it seems appropriate to apply experimentally-genetic approach to microbiology teaching. The logic of this method according to Maksymenko S.D. "... involves more than simply recording during the observation or forming experiment (in our case - learning system of microbiological concepts) features of various empirical manifestations of the human psyche, but their active modeling and reproduction in special circumstances" (in our case – under threelinguism condition). Moreover, specific feature of this method is that model established researcher with cognitive purposes is consistent with the real internal structure of mental process.

Conclusions and prospects

Thus, the need for specification of basic statement of experimentally-genetic approach to teaching microbiology for English-speaking students of higher education under threelinguism condition and practical need for the development and implementation in high school practice more effective forms of learning activities to prevent factors of neurotisation of students of English - speaking education under threelinguism condition determined the problem choice of our study.

Promising concept of further researches is clarifying certain theses relating to both theoretical and applied aspects of the implementation of genetic-modeling techniques in object-practical situations of solution of specially gradated experimental and genetic problems by students. It is advisable to identify psychological and linguistic characteristics of microbiology conceptual apparatus appropriation by students. It is necessarily to develop basic forms of psychological and didactic means of formation of generalized methods of action in mastering the conceptual apparatus microbiology on base of clinically-oriented approach "microorganism-macroorganism", prove original model of generalized methods of action and guiding system.

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Conceptual Foundations of the Study of the Pathologization of the Guilt Experience in the Context of Intrafamily Interaction and Well-Being

Concerning the study of the problem of guilt in the family context, one should also state the completeness of the investigation of the guilt influence on the teenager moral development (D. Druzhynenko), social interaction (O.Korotkova), and the development of a healthy personality (I. Belik).

It is known, that shame and guilt belong to a group of so-called moral emotions. Moral emotions are emotions related to the well-being of other people and society in general (Hyde). Moral emotions act as obligatory mechanisms that stimulate prosocial behavior in the long run. In the context of our study, it is important thesis that the guilt is caused by a moral violation in which someone deliberately or unintentionally has suffered from another person (Fessler, Haley, Izard, Tangney).

The most common cause of the guilt lies in neglecting close relationships by partners and failure to fulfill the commitments to others (Baumeister, Reis & Delespaul, 1995), or as concerns the problems of our research - excessive irrationalization.

As a result, the person becomes completely focused on the harm and suffering that she caused (as if she caused) to another person (Baumeister, Stillwell, Heatherton, H. Lewis,).

The necessity and relevance of our study is also due to the lack of empirical studies of determination and motivation of guilt (Ilona E. de Hooge). Ketlaar and Au (2003) found that, reminding the person about the situation in which she was guilty, one could expect her greater prosociality in the game of social dilemma.

In another study, it has been proved that people acted more prosocially in the game dilemma after made an unfair proposition in the previous round of the game.

Nelissen believes that in a dyadic situation with a man, not connected with feelings of guilt, it motivates the prosocial behavior as a consequence effect. Along with these two behavioral studies, a limited set of studies focused on the effects of shame and guilt without measuring behavior. Tangney and Frijda found that, for example, shame activates both the desire to disappear and to cancel the action or make some corrections. Concerning feelings of guilt, Roseman and Tangney found that the guilt motivated tendency to compensate for own mistakes and losses. The last thesis corresponds to our concept of the guilt compensation mechanism in the family.

Therefore, most studies, despite their undoubted significance and practical value, illustrate the typology of intra-family interaction with HC

child with FD quite constantly, from the point of view of the correlation of characteristics of parental personality, the nosology, family situation and other factors (mostly external ones), bypassing the issues of deep psychological interpretation of the ambivalent attitude towards the HC child and own parental role, but they do not answer sufficiently the question of compensatory mechanisms of the experience of irrational (inadequate, imposed) guilt as a factor of parental moral trauma and shame.

Theoretical and methodological grounds for the research were: the proposition of the genetic-modeling method of personality research and genetic-oriented psychotherapy (S. Maksymenko, K. Maksimenko); modern ideas about the peculiarities of child-parent relationships in families raising children with developmental disorders (L. Bondar, T. Viskovatova, L.Kuznetsova, G. Kukuruza, A. Kukharchuk, I. Mamaichuk, E. Savina, T.Skrypnyk, V. Tkachev, O. Charova and others); synergistic paradigm for understanding of the psycho-emotional states of parents of children with psychophysical abnormality, due to which it was discovered that these states have a cyclic precondition according to the principle of "feedback" (A.Dushka, A. Shevtsov); the provisions of the depth psychological determination of personality development and interpersonal interaction in families (O.Kocharyan, T. Yatsenko); principles of psychosomatic approach to pathology in children with disorders of psychophysical development and their medical-psychological and pedagogical rehabilitation (G. Becketova, G.Mozgova, V. Synev, E. Kharchenko, T. Khomulenko); the concept of differentiation of guilt and shame H.Lewis, J.P.Tangney; K.Kugler, W.H.Jones; the R. F. Baumeister's concept of the role of guilt in interpersonal relationships and R. May's, D.V.Morano's ontological guilt; structural model of V. Stolin's self-attitude and D. Leontiev's life meaning orientations; theoretical propositions of defectology about the essence and structure of personality development disorders, mechanisms and principles of psychopedagogical correction, (V. Bondar, L. Vygotsky, O.Grabarov, O.Diachkov, G.Dulnev, I.Eremenko, L. Zankov, M. Zimtsova, O.Litvak, V.Lubovsky, O.Luria, M.Malofeev, O.Mescheryakov, S.Mironova, I.Morgulis, N.Nazarova, V.Sinov, E.Sotobotovich, I.Sokoliansky, M.Suprun, L. Fomichova, M.Sheremet, O. Khokhlin, M. Yaramchenko).

The set of scientific and psychological research methods was used to solve research tasks and ensure the reliability of the main provisions and conclusions:

- *theoretical methods*: deductive analysis and meta-analysis - for a systematic description of family-friendly interactions and the guilt experience of parents of HC children with FD; inductive analysis - to determine the regularities, systematization, categorization and typology of the experience of guilt and mental conditions of parent of HC children; structural-functional modeling - to build system research models.

- *empirical methods*: an experiment using the included observation, clinical conversation, *psychodiagnostic methods of research*, in particular: 1. The questionnaire for the analysis of products of activity, the analysis of medical-psychological and pedagogical documentation of personal guilt (IGQ-67, adaptation of O. Belinsky), 2. Measurement guilt and shame feelings (TOSCA, JP Tangney), 3. "The questionnaire of guilt" (K. Kugler, W. Jones), the use of which allowed to determine the forms, types of manifestations of guilt. 4. The questionnaire of the attitude towards the child's illness (V.Kagan, I.Juravlev), 5. A test-questionnaire for the diagnosis of parental attitude (A.Vargo, V. Stolin) - was used to measure the types of awareness of parental attitude towards HC children. 6. FPI - Multi-factor personal questionnaire - modified form B (O.Krylov), 7. Short survey of the Dark Triad - SD3 (D. Polhus and C.Williams) - used to determine the states and properties of the personality and non-clinical forms of pathology of individual traits of parental personality. 8. Methodology of diagnostics of irrational belief of A. Ellis, 9. Methodology "Life Style Index" (LSI). 10. Lauterbach test of intrapersonal conflicts - revealed the content of the deep psychological determination of the phenomena studied in the parents. As additional methods the following were used: "Draw a Family", "Method of unfinished statements ". Materials of these methods served as a support for conducting primary and clinical conversations.

Experimental facilities of research: The research was conducted on the facilities of the Dnipropetrovs'k regional psychiatric hospital, department number 42 and Research institute of child and family psychiatry, psychotherapy, psychology, medical and psychosocial rehabilitation, Dnipropetrovs'k. Experimental group - 257 families with HC children (ICP, mental retardation, hearing impairment, autism) and functional disorders (enuresis, encopresis, stuttering, anorexia).

The scientific novelty and the theoretical value of obtained results are:

➤ for the first time:

- the theoretical and methodological principles of investigation of guilt feelings in parents who raise children with disabilities and functional disorders on the basis of genetic-modeling method and genetic-oriented psychotherapy are substantiated

- the guilt experience of parents with HC children with as a psycho-emotional state, as trait of personality and moral experience, is considered in the context of its deep psychological determinations, peculiarities of the experience of family well-being and the attitude of parents to the psychosocial status of HC children;

- the phenomenon of parental moral traumatization describing moral suffering from awareness of child's disability and the phenomenon of secondary trauma due to the guilt toward the child (members of the family, society, etc.) is conceptualized. It was found that the experience of guilt has the appropriate signs by adequacy and locus of origin: "adequate-internal",

"inadequate-internal", "inadequate-externally", "inadequate-internal", "bipolar type".

- understanding of the experience of moral traumatization by guilt through the awareness of parents of moral harm - moral losses associated with moral and physical suffering, restrictions, losses, and moral suffering - negative experiences that manifest themselves in the form of fear, shame, humiliation, state of mind pain, state of depression and apathy is presented. Trends and obsessive thoughts on compensation and, in fact, compulsive compensatory behavior are the main signs of moral traumatization by the experience of guilt.

- the multilevelness of manifestations of nonadaptive types and forms of guilt is elucidated; models of guilt experience with regard to states, personality traits and non-clinical forms of pathology of particular personal qualities of parents are built.

- deep psychological determination of the experience of guilt is determined. It was established that specific mechanisms of guilt have specific mechanisms of psychological protection, irrational aims, intrapersonal conflicts;

- links between types of guilt feelings and types of parental attitude to the child and his disease have been established; models of patterns of parental behavior in overcoming the experience of guilt are determined.

➤ *The following ideas have been developed:*

- that moral suffering as an experience of personal reality is determined by the conflict between the conceptual rational images of reality and the images of reality, the genesis and institutionalization of which are the determination of the unconscious;

- irrationality of the guilt experience of parents of HC children. Irrationality produces inadequate ways of overcoming it and leads to secondary traumatization and inappropriate models of compensatory behavior.

- the typology and features of familiar well-being in families with HC children;

- unconscious determinations of the guilt of parents, which can be detected through existential suffering and irrational personality's aims. The archetypal program of irrational guilt institutionalizes in the mind of the subject a sense of irrational responsibility, which determines non-rational models of parental behavior. Due to the contradictions between programs of different levels, moral suffering becomes in the psychic reality of the individual constantly acting center of anxiety, a point of attention focusing. That is, the constantly existing presence in the existential space of the personality suffering is a prerequisite for the origin and center of the formation of the conscious moralistic self-excuse phenomenon.

➤ the psychological content of the following scientific concepts is supplemented and specified:

- experience of guilt, its levels, forms and interpersonal regulation;
- well-being of the family, which HC children with FD;
- compensatory behavior of parents;
- ambivalence of parental attitude towards a HC child with FD.

➤ the following ideas have been further developed:

- knowledge about peculiarities of family psychotherapy and psychological support of paternity;
- scientific ideas about the conditions and factors of the genesis of personality of the HC child with FD in the context of family space.

We proceeded from the standpoint that intrafamily interaction and upbringing have a genetically adaptive character, which in fact serves the "genetic interest of parents", while in the family the "parent-child" connection acts as means which "perpetuates genes" (E. Wilson).

Models of interaction between the "parents-child" system proposed by M.Schmidt-Rinke, L.M. Stolz, S. and N.Greenspan, S.Brody, S.Axelrad, A.Boormann, E.Goffman, L. Benjamin, A. Vinogradova, V. Druzhinin, G.Mozgova have been analyzed. It is noted that these models have different levels of behavioral predictiveness of both parents and children. It has been determined that in many studies the "father - child" relationship is considered to be mutually reciprocal, as having bijective connection. It is known that the system of "child - significant adult" is constructed by three basic directions of the psychological space: the style of family upbringing, personal "features of the child and the strategy of behavior of a significant adult." (O. Burenkova).

It is generalized that in modern family psychology and psychotherapy there are several approaches to the study of family models, such as: the eclectic approach (N.Epstein, D.Bishop, S.Lewin), problem approach (Tseng, VJMcDermott), factor models of the family (D.Olson), the intuitive taxonomy (S.Avyvazyan, L.Frame), which provides for the emergence of typologies, based on the consideration of the ratio of a significant number of characteristics: motivational structures, conflicts in the process of family construction, methods of compensation, allowing the family steadily exist despite contradictions; circumstances, causing decompensation.

The issues of family wellbeing are considered from the standpoint of deep psychological determination, as the identification processes serve. Therefore, the reason for the wellbeing of marital relations is not the conditions of well-being, but the subjective assessment of these conditions, their refraction in the individual consciousness. Wellbeing in a married dyad is a derivative with respect to identification processes in a pair (Y.Dmitruk). It is determined that wellbeing in marriage and the level of satisfaction between spouses are related to the marital psychological maturity and the choice of adaptive strategies for overcoming marital interaction (A.Sultanova).

Numerous approaches to the pathology of the intrafamily space and interaction in the context of the study of psychological trauma are analyzed. It

is established that the pathogenic situation of family interaction extends the set of factors that determine the psychotraumatic experience. Clinical-dynamic analysis of pathogenic development in general shows that along with individual features, there are general patterns in their formation, which is due to the unity of pathogenetic mechanisms that exist despite the diversity of psychogenic and etiopathogenetic factors (V.Maltsev).

It has been found that numerous approaches to the study of different types of families completely "fit" into a four-dimensional model of analysis, which includes the following characteristics: structural (type of relations and hierarchy in the family, external and internal borders); family microdynamics, which reflects the peculiarities of everyday family functioning (communicative style, distribution of roles, etc.); macrodynamics, which highlights the peculiarities of family history in generations; family ideology that reflects the standards and values of the family.

Regarding the pathologization of the experience, it has been established that guilt feelings toward other family members or whole family can also reach a significant intensity due to such relationships in the family, which, in combination with the characterological traits of the individual, can become a psychotraumatic factor. In this case an individual feels (more or less consciously) like an obstacle to others, guilty (real or imaginary) of all family failures, inclined to perceive the behavior of other family members as accused, reproving. Such state may be due to various reasons, and more often – disharmonious family relationships. Behavioral manifestations of guilt feelings are: on the one hand, "justifying activity" - the individual makes tremendous efforts to become useful for family, to justify their existence; on the other hand, take up as little place as possible - there is a minimalism of demands, extreme compliance, a tendency to assume guilt for real and imaginary faults.

There is reason to believe that a family feels particularly deeply if its members blame themselves or the child for his functional disability. Family members have two main views about family discords: a) biological: families that consciously or unconsciously adhere to this theory consider that reasons for the limited possibilities are some mutations independent on child's will - changes in the body. In this case, the family overestimates the possibility of medical treatment, often it is horrified by genetic heredity, or, contrary to all the assurances of the doctor, they believe that the disease is contagious; b) psychological: its supporters accuse themselves, family members or the child with disabilities of everything, there is a hidden aggression of all members of the family to each other (K.Terkelsen). Two pathologized types of guilt feelings during upbringing are found: the first is the guilt feeling about the past; the second -about the future.

Summarizing theoretical work we arrived at the conclusion about the complexity of the family conditioned experience of guilt by parents due to break of formed individual psychological protection mechanisms, the

transition to a qualitatively different level of interaction of sanogenic and pathogenic mechanisms, concentration of consciousness on a narrow range of affective experiences, which helps to maintain the relevance of the psycho-traumatic situation of the birth of a HC child with FD and progressive neurotic dynamics. Hence, undoubtedly, catamnestic approach in the study of the mechanisms of guilt experience by parents who have CH children with FD may be useful.

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Clinical Psychology in Expert Practice

As we know from the analysis of scientific literature, in clinical psychology there are different fields of using the ideas and methods of the *system approach*, it has been accumulated experience in developing system descriptions of various objects of research.

Clinical (medical) psychodiagnostics is a specialized section of psychological diagnostics - an essential part of psychological science and practice. It represents a systemic activity of medical psychologists who work in various socially important fields of science and practice.

At that psychodiagnostic activity of medical psychologists, as any purposeful professional activity, has a holistic, integrative character, it manifests by the close interaction and interdependence of all parts of diagnostic process. It is exactly the nature of clinical psychodiagnostics allows implement purposeful and detailed study of personality in all the diversity of its individual mental manifestations in different life situations and activity conditions [1].

Despite its phenomenological origin in the depths of psychiatry, clinical (medical) psychodiagnostics is currently an independent form of professional activity of practical psychologists and has its own theoretical and methodological foundations, as well as methodological principles, object, subject and specific practical and applied tasks.

Expertise (from Lat. *Expertus* – experienced, an expert) - a research conducted by a person familiar with science, technology, art or crafts involved on behalf of interested persons, in order to answer questions that require special knowledge.

Expertise is carried out on issues arising in the legal relationship between the subjects of law, in order to resolve disputed situations, the establishing individual facts. The expertise is carried out by a specially involved person (s) - an expert (experts) who has (have) special knowledge, which its initiators do not have [2]. The expert studies must be formalized with a reasoned expert conclusion, which describes the course of the research and gives answers to the formulated questions. The obtained conclusion is evidence that there is / absence of actual data in solving a particular issue or becomes the ground for a trial.

It is known that in general, the expertise can be directed to:

- determination of the quality of the product according to the characteristics of both existing, known and unknown standard;

¹ Психол. диагностика в медико-педагогической практике / Л.И. Вассерман., И.А. Торьковская, Е.Е. Ромицина. — СПб: Речь, 2004. - 242 с. 78

² <https://ru.wikipedia.org/wiki/>

- execution of the action, that is, some characteristics of activity already carried out have to be assessed.

It should also be noted that according to legal status expertise (examination) can be divided into *forensic and extra-forensic*. Most often, they are the same in technique and quality of the conducting. They differ only in the prefix "*forensic*", which means that this study is conducted for the purpose of legal proceedings and in the framework established by regulatory acts.

In most educational and scientific sources, forensic examination is defined as a procedural act consisting of researches conduct and giving an expert conclusion on issues required special knowledge in the field of science, technology, art or crafts; these issues posed by a court, a judge, inquiry authority, a person who conducts the inquiry or the investigator, in order to establish the circumstances to be proved on a particular case. Therefore present type of examination has a special procedural status, which, in turn, determines a special procedure for its ordering, a strict list of subjects that can order and conduct it, as well as their rights, duties and responsibilities. Thus, forensic examination is ordered only by a court (personally or at the request of the plaintiff, defendant, advocate or prosecutor (at the trial stage)), a judge, an inquiry authority, a person who conducts an inquiry or an investigator (at the stage of preliminary investigation); may be ordered at the stage of preliminary investigation in criminal cases or at the stage of judicial review in the framework of criminal, civil, administrative and arbitral proceedings. A forensic expert is responsible for giving a knowingly false conclusion, and the expert's conclusion can be a proof in the case.

The appendixes of the textbook provide the "Instruction on ordering and conducting a forensic examinations and expert studies" (Order of the Ministry of Justice of Ukraine, dated 08.01.1998, No. 53/5 (as amended by the order of the Ministry of Justice of Ukraine dated 26.12. 2012, No. 1950/5)), which defines general issues of forensic examination; rights, duties and responsibilities of an expert; requirements for formalize materials for examinations (researches); requirements for organization of examinations (researches) and paper work to formalize their results. "Scientific and methodological guidelines on preparing and ordering forensic examinations and expert studies" (Order of the Ministry of Justice of Ukraine dated 08.10.1998 No. 53/5 (as amended by the order of the Ministry of Justice of Ukraine dated 26.12. 2012, No. 1950/5)) is also provided for required study.

For a long time, expert activity has spread primarily to the plane of the psychological reality concerned problems of legal proceedings. However, today, the transformational processes in society, raising the general level of awareness among the population on many issues of theory and practice, together with the complication of certain processes and issues, require the involvement of experts in various spheres of life, not limited to judicial practice. Besides, as experience shows, the introduction of various expert

knowledge institutions and, in fact, experts to the practice, guarantees not only successful development, but also reducing the "chances" of further involvement of forensic experts. Thus, it is appropriate to consider so-called extra-forensic expertise as a separate group.

Extra-forensic expertise- a research conducted by a person that is familiar with science, technology, art or crafts to solve issues arising in civil relations between activity subjects, in order to resolve disputed situations, the establishing certain significant facts. Extra-forensic examination is not related to legal proceedings, its scope - civil legal relationships. However, it may be the ground for a trial or a criminal case if sufficient facts are established during examination.

This examination does not have a special legal status, therefore its initiator may be any natural or legal person, and the procedure for its conducting is free. As a rule, extra-forensic examinations are carried out on a paid basis, by independent expert organizations or non-state experts specialized in this field.

The *main purpose of expert activity* can be considered a solution (answer) to the expert task. Expert task - this activity aimed at transforming the potential evidence information contained in the initial data of the case file submitted for examination into the current evidence for solving the case. The main tasks solved by forensic examinations with respect to the nature of the main objectives of expert research, can be subdivided into *identification and diagnostic tasks*.

Methodology of expert activity is the doctrine of the structure, logical organization, methods and means of this activity.

Forensic expert research in its gnoseological nature is a kind of process of objective reality cognition, realized through the use of specific sciences methods.

In the scientific literature *general principles of the admissibility of using methods* and means in forensic expert research (legality and ethics, scientificness, accuracy of results, reliability of results, efficiency, safety) are formulated - fig. 1.

Forensic expert techniques. For the investigation of each type of objects in the forensic examination, a technique of forensic research is developed, i.e. a system of categorical or alternative scientifically substantiated prescriptions for the selection and application of methods, procedures and means (devices, instruments and apparatus) in a certain sequence and in certain existing or created conditions to solve an expert task.

In the appendixes of the textbook there is an excerpt from the Register of the Ministry of Justice of Ukraine of techniques of conducting forensic examinations: 14. Psychological examination. 14. 1. Psychological research. However, practice shows the possibility of using other psychodiagnostic techniques that meet the criteria of validity, reliability.

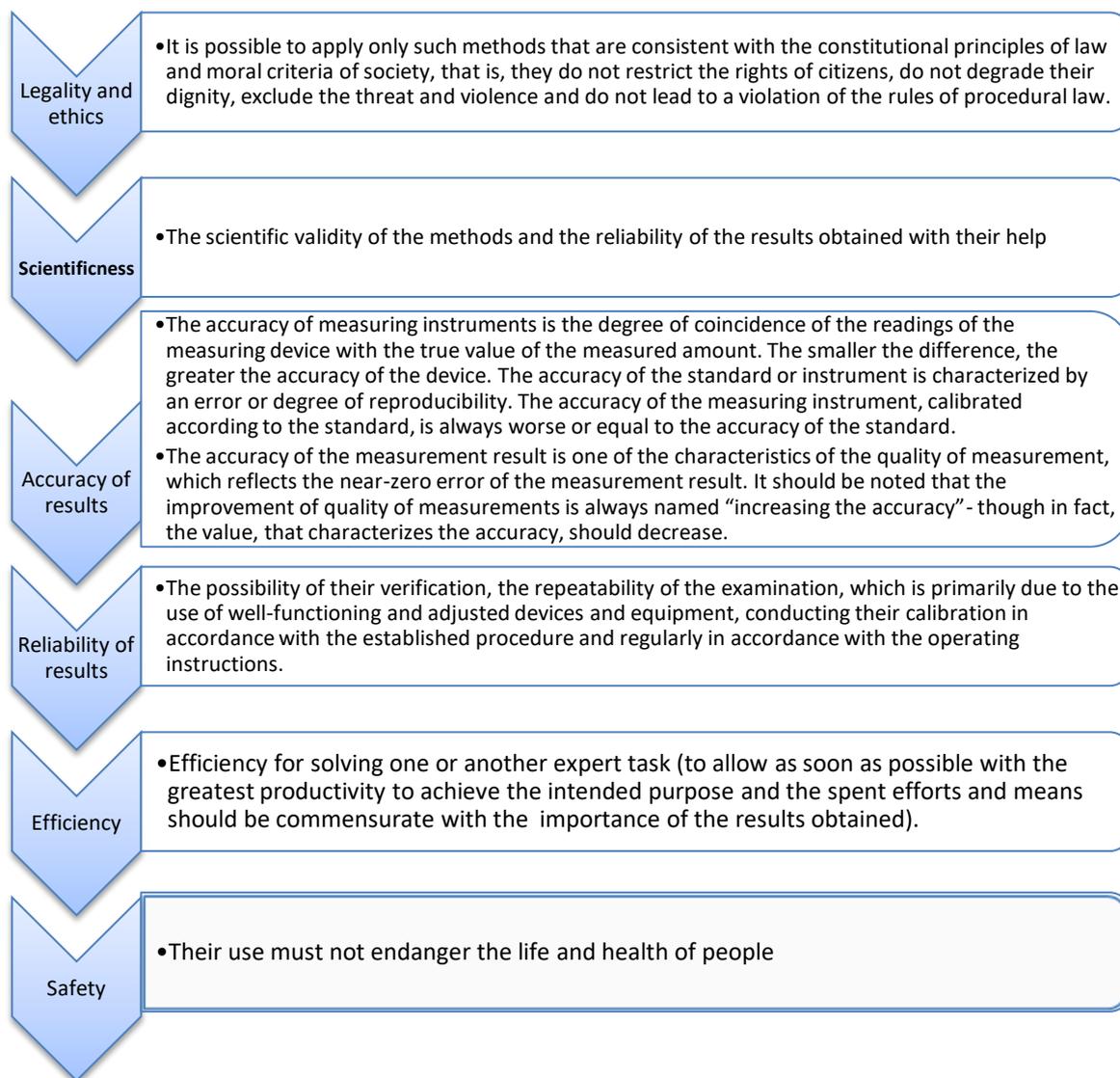


Fig. 1. General principles of admissibility of the use of methods and means in forensic expert research

Each expert technique must contain: 1) requisites - a set of data that certify it, and 2) the structure - a set of basic stages of its implementation, presented in a logical sequence.

1. Requisites of the expert technique:

- 1) name of the technique;
- 2) author (compiler) of the technique;
- 3) organization - the developer of the technique ;
- 4) bibliographic data of the published technique.

2. Structure of the technique :

- 1) expert task;
- 2) object of research;
- 3) essence of the technique (the principle of solving the problem):
 - A) list of subtasks (for a complex) technique;

- B) name of a specific subtask;
- C) object of research for an expert subtask;
- D) principle of solving a subtask;
- 4) set of features that characterize an object;
- 5) equipments, materials and reagents;
- 6) sequence of expert's actions;
- 7) formulation of expert's conclusions;
- 8) reference literature.

Requirements for an expert [3]. Regardless of the level of expertise, it should be conducted by the most qualified specialists. The list of their professional qualities, selected by researchers, includes:

- 1) Presence of special training, competence;
- 2) Creativity, developed creative abilities that allow you to analyze problem situations and find ways to solve contradictions;
- 3) Absence of tendency to conformism (uncritical adherence to the majority opinion);
- 4) Analytical thinking, broad and systematic thinking;
- 5) Lack of conservatism, positive attitude to innovation;
- 6) Personality values, motives, interests;
- 7) Professional abilities, tendencies and orientation of the personality;
- 8) Sense of professional dignity, perseverance and principledness;
- 9) Cognitive style and type of professional thinking.
- 10) Responsibility, honesty, industry.
- 11) Scientific objectivity;
- 12) Adherence to professional ethics.

Among the determinative intellectual actions of the expert in specialized literature it has been named the following actions:

-research-analytic abilities: planning and conducting empirical researches;

-reflexive abilities: the ability to think through reconstruction and simulation of empirical experience;

-anticipatory abilities: the creation of reasonable predictive models, innovative vision and the ability to modify the traditional process;

-ability to dialogue, interaction and cooperation with all participants of the expert process, the customer and other interested parties.

Among the significant number of tasks solved by a clinical psychologist, one of the main is his participation in conducting various types of expertise. In this work, the clinical psychologist is one of the subjects of joint activity

³ Методи психологічної експертизи. Навчально-методичний комплекс для студентів зі спеціальності 7.03010201 "психологія". / Укладач: кандидат психологічних наук, доцент Гончарук Петро Антонович. Київ: ІПО КНУ імені Тараса Шевченка, 2013. – 25 с.

with specialists of other profiles (more often - with psychiatrists, social educators, social workers). Professional competence of clinical psychologists is especially important in the forensic examination.

The main *content of expert psychological conclusion* is not an assessment of reduction degree of some mental functions, but a qualitative structural analysis of the changes in mental activity of the examinee, the result of which must be correlated with the peculiarities of the psychological structure of the activity, in relation to which the examination is conducted [4].

The scientific literature defines the *principles of clinical psychological examination* (in contrast to clinical psychological diagnostics):

- to investigate not only disturbed but also saved functions of the psyche;
- to correlate the mental status with the requirements of the action concerning which the examination is carried out.

It should be reminded that *clinical psychological diagnostics* includes the following components [5]:

- description of the problem or disorder (main and associated signs, degree of severity - duration, intensity, frequency of occurrence and depth of the problem, circumstances in which the emergence or exacerbation of the pathological state);

- formal classification of a problem or disorder (determining type);
- explanation of possible causes or conditions of a problem or a disorder arising.

- prognosis for developing a problem or a disorder (formulation of suppositions about the development of the pathological state in certain circumstances);

- general psychological assessment (allows to plan a further actions and then evaluate their effectiveness in the process of comparing the assessment before and after therapy).

It is important to reveal not only the current state of personality and various mental processes and states, but also to predict the future taking into account compensatory or decompensation aspects.

Types of expert tasks solved by clinical psychologists:

- *Labor expertise* – account of disturbed and saved components of mental activity; correlation of the psychological state with the professionogram and the psychological requirements of the profession

- *Military- medical examination* (suitability for military service, choice of the kind of troops, etc.).

- *Forensic psychological, psycho-psychiatric and psychological examination* - diagnosis of mental states, characterological and personality characteristics, temperament, etc.

⁴ <http://medlec.org/lek-540.html>

⁵ <https://lib.nspu.ru/umk/ef0602739034e7a4/t14/ch3.html>

- *Psycho-pedagogical examination* for the purpose of prognosis for the child development and recommendations of training forms and correction of the psyche.

- *Medical social expertise* MSE (formerly called the Medical-labor expert Commission, MLEC). It is carried out in order to determine the human needs in social protection and rehabilitation measures.

The role of a clinical psychologist in forensic psychiatric examination.

The tasks of experimental psychological research in forensic psychiatric examination is the differential diagnosis, establishment of the degree (depth) of psyche reduction, and at the same time, the behavior of the examinee is taken into account.

The main task of forensic psychiatric examination - *to determine sanity of person*. Sane - punish, insane - send to forced treatment, cure and help in resocialization. The solution to the question of insanity has a specific character, not only concerning determination of psychic state of a particular person, but also concerning a particular crime.

A particularly important role is played by a psychologist in forensic psychological examination, in which he acts as an independent expert (comprehensive psychological-psychiatric examination). The possibility of involvement of a psychologist in the examination process is assumed by the content of the so-called insanity formula, one of the most important principles, underlying forensic psychiatry.

The peculiarity of a *comprehensive psycho-psychiatric examination* is that the expert psychologist often has to attribute the results of the research to the past period, quite remote from the time of the study. In such cases, the psychologist provides data on how the psychological characteristics of the examinee could affect the motives, understanding of own actions in committing the offense, and the behavior in that particular situation. In a complex psycho-psychiatric examination, the psychologist works closely with the psychiatrist and both of them decide, in accordance with their competence, the issues posed by the court and the investigation.

Thus, it becomes clear that, similarly to other areas of medicine and healthcare, there is an increasing integration of clinical psychologists into expert practice. Clinical psychology provides a complex of professional knowledge, allows preparing future specialists in the field of expert practice for the development of professional knowledge and skills.

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Psychotherapy of Neurotic Disorders in Veterans of Modern Combat

We were managing patients with remote consequences of head injuries, who were undergoing a rehabilitation program in a social medical centre for war veterans. During our survey 78.4% patients with a history of a mine blast closed traumatic brain injury (CTBI) were found to have no records of the latter fact in their medical files. We found that military physicians documented TBIs only in an open trauma or if the case of MB TBI was severe. Taking into consideration the specific situation of hostilities, such failure to recognize TBIs was due to frequently impossible early diagnosis and treatment after MB TBI (as well as difficult self-assessment) and due to various combat-related neurological and mental disorders already at early stages of the head injury (partly as complications of polytrauma involving multiple organs and systems). In view of the above reasons, the contusion-type head injury did not receive a targeted medical attention during first aid procedures.

A number of authors attribute the issue of TBI sequelae to progressive post-traumatic changes, which develop immediately post-injury. The essence of these changes is the impaired mechanism of metabolic self-regulation of nervous tissue (Hart et al., 2008; Матяш, 2011. The severe and multifaceted clinical presentation of remote sequelae of head injuries allowed many authors to continue viewing them as a traumatic brain disease or traumatic encephalopathy. The fundamental premise of this understanding includes the phenomenon of energetic and structural remodelling of cerebral structures by virtue of two antagonistic processes: the degenerative/destructive process and the regenerative/reparative process. Traumatic encephalopathy is an aggregate of neurological and mental disorders. The patterns and the severity of neurological and mental disturbances depend on the severity and the site of injury, on the pre-injury mental status of the patient, on his/her adaptive reserves, age, treatment efficiency, etc. An aggregate of complex mental abnormalities occurring in patients with post-traumatic encephalopathy, such as traumatic asthenia, traumatic apathy, psychopathic conditions (abnormal changes in personality), affective disorders, paroxysmal (epileptiform) conditions (traumatic epilepsy) and traumatic psychosis, is an important challenge, since this aggregate adversely affects the progress of disease and the efficacy of rehabilitation.

The treatment in a psychotherapy group (designed as a safe, comfortable and supportive environment) promotes the sense of common goals and appreciation of the person's own value. Belonging to a group reduces the sensation of isolation, promotes restoration of relationships and provides an opportunity to enrich one's experience by adopting the experiences of other

people. Unlike individual therapy, therapeutic groups possess a unique feature of mutual psychotherapeutic action through interaction between group members.

Materials and methods of study

At the Centre of Functional Neurology of Kyiv Regional Teaching Hospital and at the Ukrainian Public Medical and Social Centre for War Veterans we have selected 108 patients for further assessment and treatment, all of which were combat veterans with MB CTBI and PTSD (102 men and 2 women; age 20 to 42 years).

All patients had clinical and neurological assessment and psychological treatment before and after treatment. Psychological testing included the following instruments: assessment of personality using the multilateral personality test (MLPT), an adapted and restandardised variant of the Minnesota Multiphasic Personality Inventory/MMPI (as modified by F.B. Berezin et al. (Березин et al., 1976)); the PTSD additional scale for MMPI; assessment of traits of character using the Leonhard-Shmishek questionnaire of character accentuations; analysis of emotional state using the Lüscher's test; clinical anxiety and depression scale; the Spilberger-Chanin scale of reactive and personal anxiety; Beck depression inventory; the method of structured clinical interview; the scales for clinical diagnosis of PTSD; the scales for assessing the severity of the traumatic event's impact; Method for Determination of Individual Coping-Strategies, (MDICS), the technique developed by E. Heim.

Results and Discussion

As stipulated by the psychology of relationships, which is a foundation of V.N. Miasischev's pathogenetic concept of neurotic disorders (*Мясищев, 1960*), the neurotic conflict and disruptions in meaningful relationships of the personality, are one of the main causes of neurosis. Three types of neurotic conflicts are differentiated according to this theory: neurasthenic, hysterical and obsessive-psychasthenic. However, there may be no direct connection between the personality's type of character and the type of the neurotic conflict.

The findings of psychological assessment in patients with MB CTBI and PTSD included the following principal neurotic disorders: asthenic syndrome in 42 patients (38.1%); anxiety and phobia syndrome in 19 patients (26.7%); hysteria-like syndrome in 8 patients (11.3%) and depressive syndrome in 17 patients (23.9%).

Both MB CTBI and PTSD, being a pair of comorbidities, impact the personality via processes of adaptation/disadaptation, which causes abnormal changes in mental and physical condition of the patients. The latter is an important factor to consider when making decisions on selecting diagnostic and therapeutic strategies for rehabilitation of ATO combatants. Therefore, we have opted for a multifaceted approach to patient management, which

increases the importance and enhances the efficacy of psychotherapeutic interventions. When planning pharmacotherapy, the patients were receiving a multimodality pharmacotherapy (including nootropics, vascular drugs, analgesics, venous tone drugs and vitamin/mineral supplements). The actual selection of medications depended on somatic comorbidities and on the varying changes, presentation and progress of both MB CTBI and PTSD. In a number of cases, a prominent pain syndrome required analgesics; anxiolytics, hypnotics and antidepressants were used as required. The alcohol abuse frequently seen in ex-combatants called for pharmacological correction of alcohol-related conditions. The treatment program also included reflexotherapy (classical acupuncture, auriculotherapy and electroacupuncture).

The abnormal changes of physical and mental condition of patients with MB CTBI and PTSD inevitably change the priorities and values of the individual, disrupt meaningful personal and interpersonal relations as well as impact the ability to evaluate objective reality. Neurotic disorders have their underlying abnormal psychological mechanisms, which calls for their correction with psychotherapeutic methods (Брієр, Скотт, 2015; Ніколаєнко, 2014). We have developed a program of psychological treatment in the format of group psychotherapy. The program included the standard stages generally accepted for psychotherapy in the groups:

- psychodiagnosis;
- psychological education (this stage was intended to provide patients with information to ensure their conscious and motivated participation and acceptance of psychological counselling);
- psychocorrection.

In terms of group of objective, these were therapeutic groups; in terms of size, these were small groups (8 to 12 participants each). We used the group method with its psychotherapeutic action targeted at the predominant emotional states and self-defeating ideations (the latter having a negative impact upon the adaptive potential of the personality). In addition to that, group therapy may have some long-term objectives, such as improving interpersonal relations, personality development and unleashing the spiritual potential of the group. Unlike biological therapies, psychotherapy is targeted at the patient's personality. Therefore, to ensure an effective psychotherapeutic impact, we have taken into consideration individual constitution, character, mentality and personality traits of our patients when using group psychotherapy in patients with MB CTBI and PTSD. Although group psychotherapy was used as the main therapeutic modality, it was combined with individual therapy and family therapy.

While reviewing the available literature and psychotherapeutic experience of our colleagues, it can be seen that working with a group may involve various methodologies, such as emotive cognitive therapy, existential analysis, psychoanalysis, rational psychotherapy, behavioural therapy,

systemic therapy and suggestive therapy (Кочюнас, 2010; Малкина-Пых, 2006). This being said, it should be emphasized that the tasks and objectives of group psychotherapy, the content of the therapeutic process, the combinations of techniques used and the therapist's strategy may vary on a case-by-case basis and may derive their theoretical background from various therapeutic schools (Козлов, 2007). This involves different interpretations of psychological mechanisms behind neurotic disorders and the psychological strategies for their correction. The following considerations are common: the objective (that is, elimination of abnormal symptoms in mental, neurological and systemic somatic dimensions), the therapeutic resources of the group (based on interpersonal and group-related properties) and the ways through which the patient obtains help during group psychotherapy. All of the above include the properties of the specific therapeutic group, the individual social needs of the patients, the resources beyond the therapeutic group and the resources of the patient's own personality.

In our psychotherapeutic work with the group we have employed the method of inclusive observation, a qualitative test. Within this method, the investigator may act in either of the two roles:

- the insider;
- the neutral outsider.

This method has a format of a field study; unlike laboratory experiments, this is a real life test which requires the therapist's involvement and personal participation in group processes during the therapy. This method allows for better interaction between the therapist and the group to assess the patient's adaptation to crises and stressful situations and to assess the development of communication resources, which are essential for effective social interactions. We studied the capabilities of the patients to use their own communicational coping resources; in addition to that, the patients were trained to manage and use coping mechanisms and coping strategies to ensure their adequate response to stressors (Ткачук, 2012). Coping resources are relatively stable characteristics of the personality; these resources may improve or regress during the person's lifetime.

According to literature, in terms of function the adaptive strategies can be conventionally divided into problem-oriented (focused on cognition and directed at solving the problem) and subject-oriented (focused on emotions and directed at the person's attitude to the situation). However, the study has demonstrated that such clearly segregated division was more of a theoretical value. Stress experiences affect all spheres of human psyche; therefore, the best approach is to use a harmonious combination of emotional coping, cognitive coping and behavioural coping.

Group work included psychotechnics intended to stimulate the use of positive resources, such as using metaphors and parables as psycholinguistic instruments, which allow seeing the problem from a new perspective, while preserving favourable ecology of relations in the group and activating

patient's own problem-solving resources. Since cognitive processes initiate emotional responses, emotions impact the perception and comprehension of information, which, in turn, supports the activities of the personality (Бек, 2006). To regulate emotional and cognitive realms of psychic activity, group psychotherapy was conducted using the main methods of emotive therapy, rational therapy, cognitive therapy, behavioural therapy and psychoanalysis (Малкина-Пых, 2006). In addition to these classical methods, additional methods were used, such as body-oriented therapy, suggestive therapy (Ericsson's hypnosis), family psychotherapy, neurolinguistic programming and art therapy.

Conclusions

We have reviewed the emergence of neurotic disorders in patients with MB CTBI and PTSD from the standpoint of pathogenetic concept of neurotic disorders, the latter indicating the reciprocal connection between the personality of the patient and the adverse changes in the patient's system of relations as well as the connections with the patient's mental disorder(s). A conclusion was made that the core of the above disorders is represented by negative/self-defeating skills and false beliefs which lead to personal and interpersonal disorders with involvement of the cognitive, emotive and behavioural aspects of human personality. In our psychotherapeutic work with the group we have employed the method of inclusive observation. An investigation was undertaken into the adaptation of patients to crises and stressful situations and the level of communicative resources and skills of interaction with the society. As a result of multimodality treatment (including group therapy), the patients had an opportunity to acquire experience of attaining common positive goals owing to their sense of belonging to the group (the latter being a model of society). In addition to that, they developed a sense of significance of their own life experience, reconsidering the latter and perceiving it as a valuable acquisition; the patients obtained a chance to comprehend their disadaptive behavioural strategies and developed the skills of using positive adaptive strategies.

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Personal Reliability as a State Of Individual and Social Boundaries of the Psychological Space

Complication of social interactions forms, specifics of the modern information society and communicative overload call for new conceptual and psychological reflections on the issues of environmental influences and the ability of an individual to lead an independent, nonconformist, authentic existence. The de-personalizing impact of modern urbanized society on an individual at the same time puts forward demands for the development of personal originality.

Nowadays, scientific interest in the application of topological and environmental categories in the psychology of a personality continues to grow. Thus, the following concepts have been introduced by foreign scientists: "life world", "psychological time and space" (K. Levin), "transient object" (psychoanalysis), "personal space" (R. Sommer), "the boundaries of contact" (F. Perls), "psychological sovereignty" (K. Nartova-Bochaviev). Subjective human existence is also considered in a plane of the life world (F. Vasilyuk), topology of a subject (O. Tkhostov), external and internal "I" (O. Orlov), inner world (O. Kalmykova), the factors of place and personality separation (B. Mukhina), psychological experience (L. Vorobyova, T. Snegirev), existential spaces (Z. Ryabikina). National scholars study the "levels of subjectivity evolution" (A. Pelipenko, I. Yakovenko), "life world of personality" (T. Titarenko), "way of life" (Y. Shvalb), "personal experience" (N. Chepeljeva), "genesis of an individual's existence" (S. Maksymenko), "personal freedom", "personal reliability" (G. Ball). Such concepts as "boundaries", "barriers", "distance", "higher-lower", "closer-further", "density-remoteness", "borders" are widely used in social psychology, labor psychology, psychology of stress and psychotherapy.

An urgent need for a study of the phenomenon of personal norms and for creation of the concept is caused by the shift of the theoretical and methodological orientation of modern national psychology of personality in the direction of the subject.

At the same time, it should be noted that majority of research, in one way or another, related to the problem of reliability and authenticity of an individual, considers this phenomenon as a highly specialized one: in the aspect of the development and preservation of physicality as a form of subjectivity (O. Tkhostov), from the point of nonconformity and independence of beliefs (V. Chudnovsky), in connection with the phenomena of parent-child's symbiosis (A. Varg), in the plane of psychological defenses of

a person (P. Granovska, I. Nikolska). And yet, the unified theory of psychological reliability that would integrate all significant dimensions of psychological space, social and personal boundaries has not been created.

Thus, we can observe social and scientific necessity in the development of categorical apparatus to describe the concept of psychological reliability through the phenomenon of personal and social boundaries, to obtain high quality and quantity diagnosis, as well as to establish a system of its individual and personal correlates. All of the above makes this study exceptionally timely and relevant.

Personal reliability of an individual is a process that is established and manifests itself in the course of the interaction of participants of the social environment. In addition, it is the state that ensures the reliability of an individual as a whole (psychic, psychological), as well as the feature of an individual, which characterizes one's authenticity, stability under destructive influences and is an internal resource for counteracting destructive influences.

This raises the questions of influence of the "boundary" on the activity of a subject, the mechanism of the "boundary motive", its transformation and the role in the process of ontogenetic development of an individual as the subject of activity. There have been discovered two stages in the development of a boundary motive: the motive – "affect", which appears as a result of the initial indicative actions that develop in the secondary outputs, and the motive – "image" of the boundary subject content, which means the beginning of the targeted activities. Definition of two stages in the development of the boundary motive is conventional and approximate because here we approach the problem of dependence of the boundary motive on the age, development of the system of personal contents. Particular internal attitude of the subject to the established boundaries changes under the influence of the ontogenetic development dynamics (Fig. 1).

The basic motive is the ***motive-affect***, which determines further ***interaction of the subject of activity and the boundary of the established***, formation and development of the attitude to the transition beyond ***virtual subjectivity boundaries***. The primary transition beyond the established solves the useful task of orientation on the ***boundary of the available***, but it results in the transition beyond those boundaries, and at that moment it gives birth to a never previously traced feeling of the ***experience of catharsis***, an unusual state. This experience gains the level of ***a leading motive***. A person aspires to repeat it further in situations where he/she has the opportunity to ***"draw" the border-line***. The experience of overcoming the boundaries stimulates their further transition, which arises at certain stages of ontogenetic development as a motive of activity.

The factors above stipulate the urgency of discussing the concept of ***"boundary" as an orientation point (and a source) of child's***

activity. We should also note that setting and experimental study of this aspect corresponds to the internal need for research in psychology of nonadaptive activity (V. Petrovsky and his collaborators). The problem of the boundary motive was traced earlier in the theoretical works of this scientist.

It should be pointed out that the "boundary" plays a twofold role in the organization of the subject activity: on the one hand, it induces the subject to the division of the fields of one's own activities, but on the other, contributes to their unification; in the effect of the "boundary" impact duality we trace such subject issues as "border", "transition", "connection".

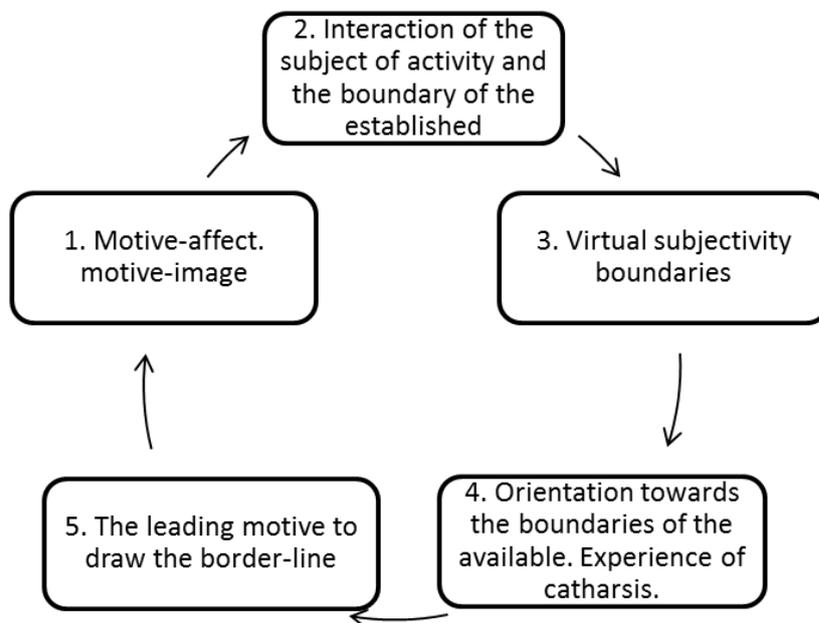


Fig. 1. Determination of the internal attitude of a subject to the boundary

The priority role of the categories of "norm" and "anomaly" in contemporary social discourse leads to the impossibility of their inclusion into the plane of ontological structures as a possible way of resuscitation not only of the humanistic potential of psychology but also of explaining the underlying causes of uncertainty in social evolution. Sufficient heuristic potential in the study of social norms and anomalies attributed to a new sociosynergic paradigm (V. Vasilkov, V. Inozemtsev, and others).

The literature analysis shows an insufficient level of conceptualization and systematization of certain provisions in this area of social knowledge, which would allow to introduce social norm and anomaly not only as a functional / dysfunctional dimension of society, but also as a specific ontological aspect of social reality that goes beyond its constructivist image.

The basis of the conceptual research strategy consists of several key provisions. First, the recognition of the fundamental importance for modern social knowledge of the possibility of ontological planning. Secondly, it is determined that postmodernity (as a situation and thinking, and culture)

articulates the immanent limit of the functional-pragmatic orientation of social knowledge. Therefore, the true relevance and importance of social and psychological study of norms and anomalies should be determined by the need to reveal their characteristics in the ontology of socio-anthropological experience. Thirdly, the concept of M. Foucault, which is one of the main theoretical provisions of the stated problem, promotes the discovery of the limitations of positivist normology and deviantology, defines the characteristic features of discursive formation of "social norm" categories and, in particular, "social anomaly", psychological contents of "medicalization" paradigm of humanitarian knowledge.

The scientific community pays more attention to the concept of "psychological limitations of personality". Through the concept of "boundaries" scientists describe, interpret, set recommendations for a wide range of personal problems: preservation and formation of psychological health of an individual, causes of psychic pathology, psychological peculiarities of personal growth, prevention and correction of disharmony of family functioning, specifics of child-parent relationships, reasons and dependency mechanisms, identity formation, etc.

In the history of the humanitarian thought, the problem of the boundary as knowledge about ignorance or "knowledge of ignorance" (G.-G. Gadamer) was considered from various angles: as knowledge of the boundary (Aristotle: "It is impossible to know until one reaches the indivisible"); "scientific ignorance" (M. Kusansky), incognizant "thing in itself" (I. Kant), "absolute knowledge" (G. Hegel), "overcoming of the self-evident" (L. Tychin), "incomprehensible" (S. Frank), "invisible" (M. Merlot-Ponty), "true ignorance" (M. Montaigne, K. Jaspers), and others.

We believe that the "boundary" is an entity that arises as a result of interaction or establishment of objective relations between the desire to maintain authenticity and the need for social adaptation. That is, the "boundary" unfolds in two dimensions: preservation of the self as the basis of one's own authenticity and achievement of the state of personal happiness and establishment of relations with the surrounding world.

It's worth drawing attention to the problem of "social norm and anomaly", which in the socio-cultural context raises a number of deep-seated problems related to the specific features of civilization and society, and for which, even at the level of its own historical consciousness and in the aspect of intercultural dialogue, the problem of the relation of social norms and anomalies remains as one of the most controversial (fig. 2).

There have been analyzed the basics for the choice of strategies for establishing social boundaries in personality self-development. The essential aspect of self-development of an individual is the phenomenon of social boundary that arises at the intersection of various life centers and has a direct relation to the problem of the integrity of human existence and knowledge.

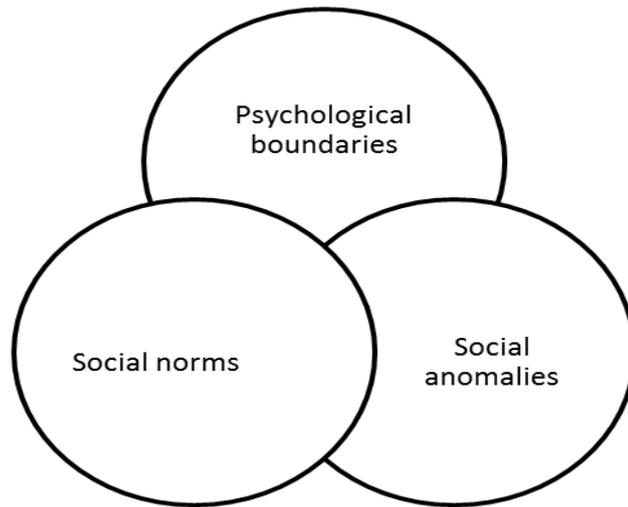


Fig. 2. Dialectical process of ontological consolidation of anthropological experience

The general motivational background for setting the problem of social boundaries and justification for its relevance is undoubtedly the deep crisis of system which modern world community experiences nowadays.

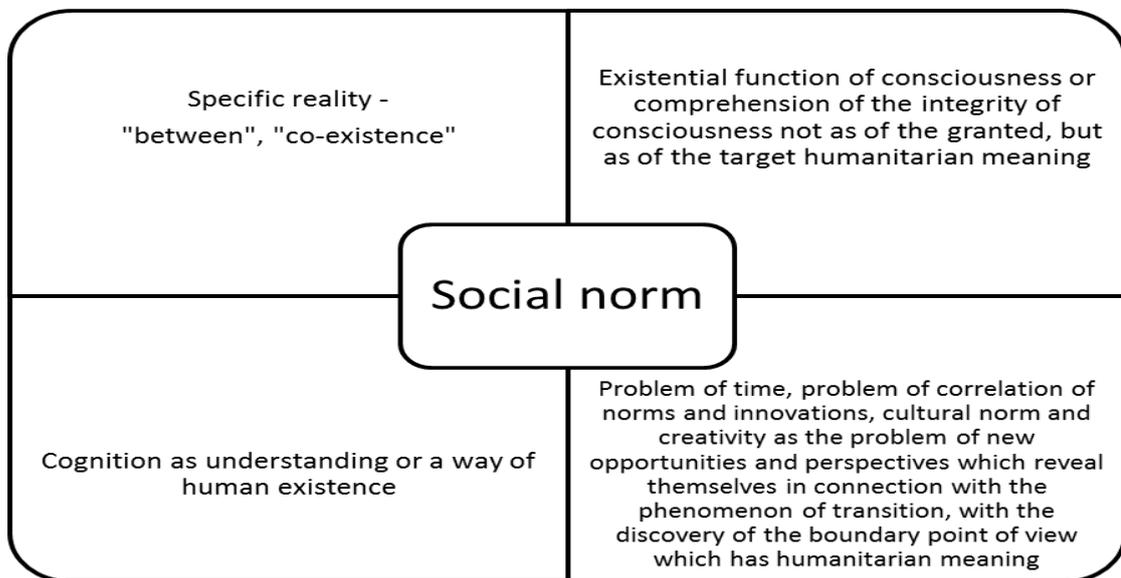


Fig. 3. Ontological content of social norms

The problem of social norms lies primarily in the fact that it sets the boundary of human capabilities (for example, cognitive). In our opinion, it is worth considering the development of a social norm in the context of human existence and culture in general. A human being, as the bearer of the consciousness of culture, is perceived by oneself as a problem, as the unity of various plans of finite and infinite existence, possible and impossible. At the border there occurs a sparkle of thought, an effort to understand one's existence. The boundary manifests itself in this co-existence, co-operation, co-

understanding, co-creation. The essential point in the definition of social norms is that the opposites that form them are significant for one another, which makes possible the change of states, the transition (one into another or into "one's other"). In other words, the boundary is an open space ("between"), where different spaces of meaning are combined. That is why the social norm is a symbol, this reveals its psychological meaning (Fig. 3).

Ontological content of social norms is revealed in their definition as specific reality – "between", "co-existence"; epistemological content – as the existential function of consciousness or the spiritual function of comprehending the integrity of consciousness not as of the granted, but as of the target of humanitarian meaning when the consciousness (cognition) is considered not in itself and not in relation to reality, but within the existence when cognition becomes understanding or the way of a human's life; cultural and historical – as the problem of time, the problem of the correlation of a norm and innovation, cultural norm and creativity, as the problem of new opportunities and perspectives that open in connection with the phenomenon of transition, with the discovery of the boundary point of view that has humanitarian meaning. It's important to mention the role of the so-called "borderline" – the contradictory entity which unites seemingly incompatible regions where "reason and foolishness change places endlessly, enter into a dangerous feedback" (M. Foucault), where a complex mechanism of sense formation leads not only to value meanings, but also to a "zero value boundary."

It is determined that the social norm has become a symbol of attitude within which the movement of meaning is carried out. Movement of meaning involves the other side of the actuality that acquires the definition of senselessness, recklessness, "misunderstanding". Therefore, humanitarian existence as "an existence on the verge of social norms" occurs inside the cultural and historical space which carries not only the meaning of the transition of the border, but also the meaning of the productive restriction, the meaning of the humanitarian recognition of the value of existence of the Other one; in this sense, existence on the verge is the "place" of birth of human similarity (Fig. 4).

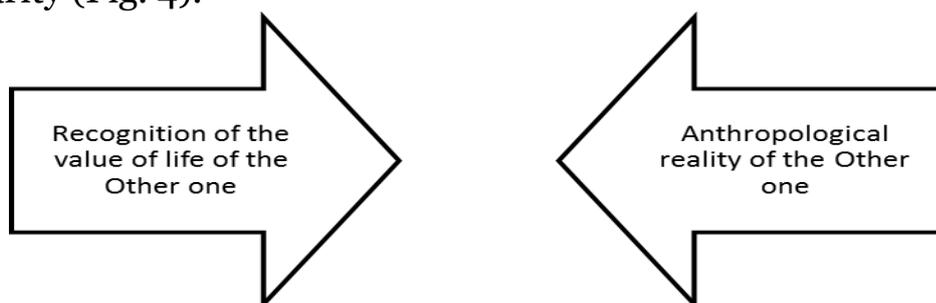


Fig. 4. Humanitarian life as "existence on the verge of social norms"

The "border point" reveals anthropological reality of the Other one, and in this sense it has a humanitarian dimension, it is the point where we start

the search of the meaning of life. "Border point", as a humanitarian point of view, gives understanding of the depth and paradox of the phenomenon of social norm as the border and integrity of meaning not as the given, but as the problem of consciousness, which is solved at the moment of "unity" of consciousness of an individual and consciousness of culture (cultural and historical space). Border "point", as a deep point of life, characterizes the existence of consciousness (meaning) in the stage of constant "new-births". Formation of this living form of existence is accompanied by a state of creative tension, effort and transition.

The problem of the social life of a human is interrelated with the problem of formation of a special ontology ("living space"), which, in turn, transforms cognitive theories of social cognition, causing their axiological tension.

The specific need of a person in identity, anonymity, intimacy, and confidentiality in the psychology of the environment is associated with the notion of "privacy" (Fig. 5). I. Altman in his theory of "privacy" considered in detail the coexistence and polarization of the personality-specific tendencies of openness-closeness.

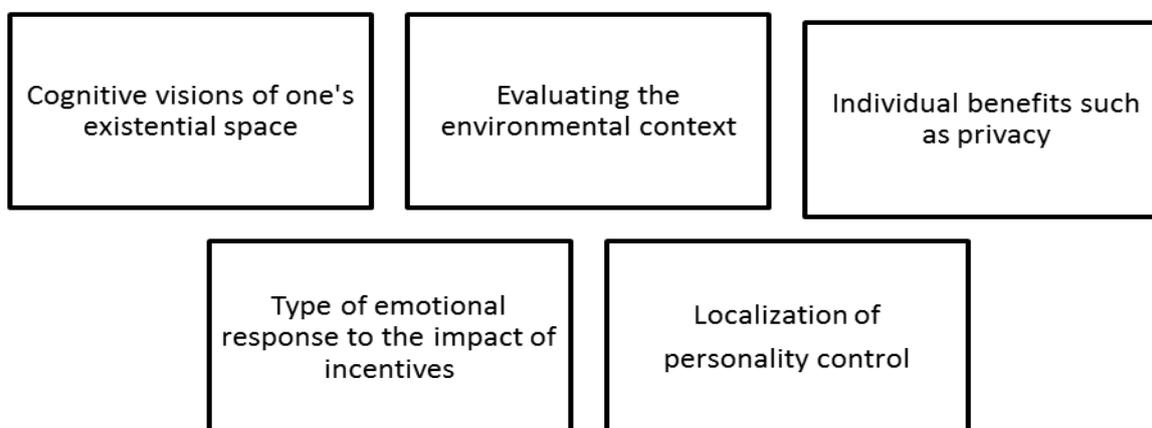


Fig. 5. The experience of one's existential space - privacy

The person's existential space at the level of everyday consciousness is represented by the notions of "personal life". Filled with subjective meanings, which represent unconditional value, "personal life" is protected by the subject from intrusion with the help of regulation of the openness / closure of boundaries (E. Hoffman, E. Giddens, M. Chernoushek, and others). This process is marked as the concept of "privacy". Privacy is the central regulatory process by which a person makes oneself more or less accessible or open to others; it is aimed at achieving such a degree of social stimulation in which people can interact optimally (Fig. 6). Two important aspects of this process are desirable and achievable (actual) levels of privacy.

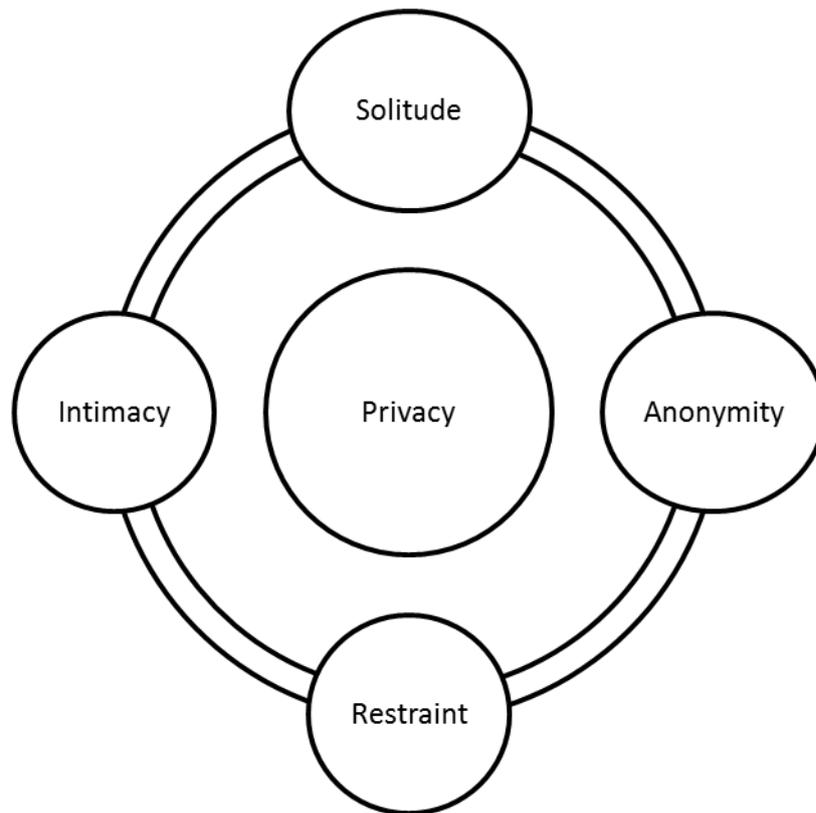


Fig. 6. Privacy types mediation

The phenomenon of "**existential space of personality**" is represented in everyday consciousness by the concepts of "personal life". This concept, which got fixed in the natural language, allows us to investigate and operationalize the phenomenon fixed by it.

The structure of the existential space of an individual reflects the self-reorganized subspaces: occupation and professional sphere, family sphere, other, domestic animals, geographical spaces, educational space, nature, world of things, time of life, "I-concept", body and organism environment, universal values, inner world. These subspaces are represented in the connative, cognitive and affective components of personal sense.

Thus, the process of personality's organizing of one's relationship with the world, embedding of one's existential space into it and regulating the openness / closure of its boundaries is determined by a number of personal qualities, among which one can define the most significant:

- cognitive notions of the existential space of an individual (inclusion of one or the other environment objects, significant others, etc.);
- peculiarities of the subject and spatial environment estimation in which the person decides to include / exclude its objective spaces into one's existential space (degree of personal life satisfaction);
- Individual preferences of one or another type of privacy (solitude, anonymity, restraint, intimacy, creativity), according to which the subject

produces certain patterns of behavior aimed at achieving the desired type of privacy;

- personal features of emotional response to the impacts of environmental incentives in general and in particular the peculiarities of emotional and behavioral reactions to the invasion into the existential space of an individual;
- personality control localization.

O. Tkhostov and D. Beskov in their works offer the ideas of the psychology of physicality and development of self-consciousness of an individual through physical isolation of oneself from the outside world by stimulating his/her spatial boundary (the body surface). Physicality in this case is perceived by a human as relating to a personality in contrast to the outer space. In defining the notion of "psychological boundary of a personality" T. Levy relies on the views of V. Zinchenko who interprets any psychological process as an action of a functional organ (according to O. Ukhtomsky). V. Zinchenko attributes a special role in the formation of functional organs to the "live motion".

Live motion is a functional organ which also changes. The motion embodies and forms the interaction between "I" and "The World". It affects, on the one hand, the World, on the other hand – the "I". Live motion does not resemble mechanical movement of the body in space, "live motion" is "overcoming the space."

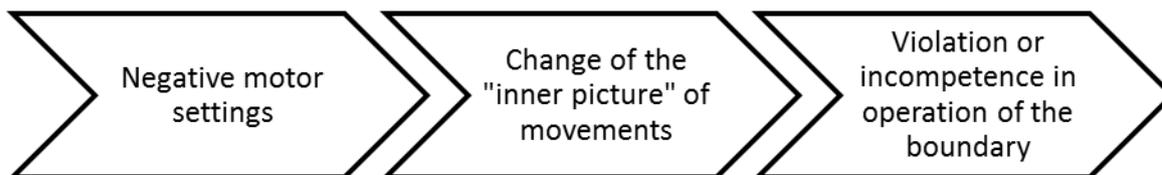


Fig. 7. Function of the boundary as a functional organ operation (according to O. Ukhtomsky)

Consideration of the psychological boundary as a functional organ reveals that the psychological boundary "has not a substantial, but energetic essence: one or the other of its characteristics arises as a temporary combination of forces for solving the problem of realizing the concrete interaction of a human with the world." It is a virtual entity and does not coincide with the boundaries of the physical body (skin). The "fabric" of the psychological boundary is the action committed by a person who is on the verge between the external and the internal.

The concept of "psychological space" has been considered. The peculiarities of this space from various methodological positions reveal the notion of "life space" (K. Levin), "life world" (F. Vasilyuk), "personal space" (K. Jaspers), "semantic field" (L. Vygotsky), "trans-subjective space" (D. Uznadze), "multidimensional world" (O. Leontiev), "multidimensional

space of life" (V. Klochko), "life world of a personality" (T. Titarenko), "sovereignty of a personality" (S. Nartova-Bochavier).

Thus, T. Titarenko, the author of the theory of personal life design which significance lies in the development of theoretical and methodological approaches to a personality, defines its main modes: identification, autonomization, dialogue and practice; processing of the options of choice, which facilitates the meanings transformation through the deployment of new cause-and-effect series of self-realization; the study of the regularities of life claims functioning as a mechanism for self-realization of an individual and the possibilities of their optimization; determination of the factors for stating the vital tasks and their key characteristics that contribute to the self-constitution of an individual; development of a conceptual model of socio-psychological practices influence on a personal life design.

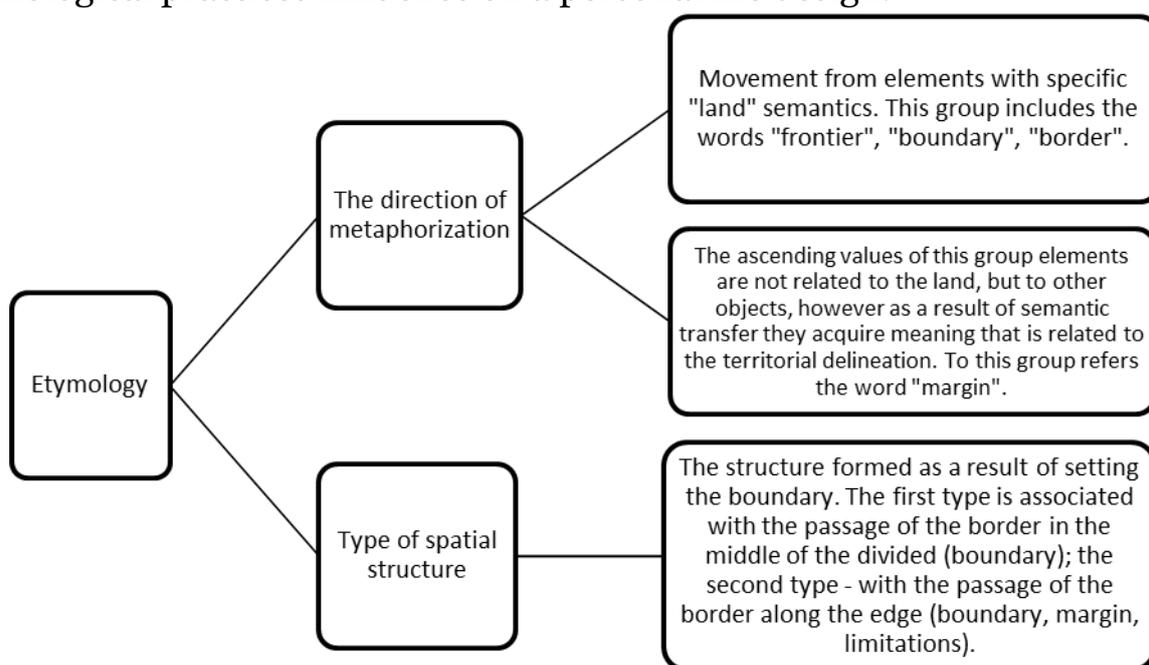


Fig. 8. Etymologic and linguistic modeling of the boundary problem in the language picture of the world

We have compared the lexical thesauri containing the closest synonyms to the word "boundary". Elements of the thesaurus have also been subjected to etymological analysis in order to identify the motivating features, which, in total, set the independent (etymological) meanings of lexeme that express the concept of "boundary". The study of etymological characteristics of the words expressing the concept of "boundary" allowed us to identify the main types of ascending semantic motivating elements (Fig. 8).

The classification of these motivating elements is carried out according to two criteria: *the metaphorization direction and the spatial structure type* that arises as a result of setting the boundary. On the basis of distinguishing the direction of metaphorization, *two groups of motivating elements* were identified. The first group is characterized by *the movement of*

elements with a specific "land" semantics (the ascending meanings that relate to the territory, land, objects, produced or used in differentiating the land domain) to *elements with more abstract meanings*, the field of application of which extends to the sphere of social action, the psyche. This group includes the words "**margin**", "**boundary**", "**border**".

The second group is characterized by *the reverse movement of metaphorization*: the ascending meanings of this group elements are related not to the land, but to other objects, however as a result of semantic transfer they acquire meanings associated with the territorial delineation. This group includes the word "margin".

The second criterion for the typology of ascending semantic motivating elements is the structure formed as a result of setting the boundary. Usage of this criterion has allowed us to distinguish two types of meanings. The first type is associated with the passage of the border in the middle of the divided (boundary); the second type – with the passage of the border along the edge (boundary, margin, limitation).

As a result of the semantic content analysis of these expressions, we have identified four thematic areas related to their usage: I. Thematic area "Politics", grouped around the concept of "state border". It covers such topics as: demarcation and delimitation of the border, frontier, border protection, travels abroad, travels, living abroad, foreigners, relations with other states, foreign policy, war. II. Thematic area "Aesthetics", represented by the concept "line". This field covers all descriptions of visually perceived boundaries and limits in the physical space. It includes lexemes: horizons, edges, borders, side and so on. III. Thematic area of "Analytics", which includes concepts related to the ideal (imaginary) distinction (differentiation) of concepts and phenomena, considerations. IV. Thematic area "Practice", which includes subconcepts expressing the idea of management.

In conclusion, personal reliability means the ability to control, protect and develop one's psychological space, based on the generalized experience of successful autonomous and authentic behavior. Personal reliability is considered as a form of a person's subjectivity, which allows one to realize one's needs in various forms of spontaneous activity, the sense of one's relevance in the spatio-temporal and value circumstances of life which a person creates or accepts. Personal reliability is realized due to psychological mechanisms related to the diagnostics of external and internal reality.

In contrast to the traditional notion of autonomy and independence manifestations, which remained within the intrapsychic paradigm, we consider personal reliability as *the state of the psychological space boundaries*. The psychological space of an individual in the context of our work is a subjectively significant fragment of life, which determines the relevant activity and life style of an individual, which includes a complex of physical, social and psychological phenomena with which the person identifies himself. In particular, the following dimensions have been

highlighted: physicality, social norms, personal norms (boundaries), personal space, personal belongings, social connections, tastes and values. Personal reliability is defined by the state of the boundaries – psychological (cognitive, emotional and behavioral) marks, which delineate the sphere of dependence of one person from another. The boundaries determine the identity of a person, represent the tool of equal interaction and the choice of external influences, denote the boundaries of personal responsibility, determine the specifics of personal reliability. Both the violation and the support of the boundaries are fixed in the "I-concept" and are expressed in the objective behavior of a person.

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The Logic of the Pre-Programmed Fate

This paper illustrates research results of Oleg Maltsev doctor of philosophy, candidate of psychological sciences, in the field of decision-making problems and making judgments under uncertainty. Based on the results of a pilot study, data testing and its analysis in the context of the fate psychology and general psychology methodologies, there were eight parameters derived and presented, which systematically describe the logic of a pre-programmed fate, according to which an individual makes decisions in an automatic mode. In particular, one may find practical examples, description of scientific prerequisites, an overview of logical cognitive systems research from 1930s until present time.

The relevance of the subject "Logic of pre-programmed fate" is conditional to natural causes and environmental requirements. The modern world with its environment of multiplicity of force vectors, time restrictions necessitates one to be capable of processing information accurately and relatively, make judgments and decisions which create conditions for solving and implementing tasks.

At the turn of the 20th and 21st century, psychologists, sociologists, analysts and experts from various fields, from marketing to business administration, conducted a variety of theoretical and practical studies to determine the parameters, functions and the order according to which human beings perceive, process and modify information; with an aim of making tactical or strategic decisions regarding the further course of behavior, scenario, reaction, etc. Unfortunately, as of the moment of 2018, psychologists and representatives of different schools do not share a common opinion and understanding of how perception system operates and for what reason a person even having an inherent ability to make judgments in short time intervals even under conditions of scarce information, makes judgements with a qualitative component being far from 100% true, consequently has no chance to answer a question or solve a problem in a correct manner. In turn, a wrong decision triggers consequences mechanism that force one to spend resources on the elimination of those consequences - resources are not financial only, but moral and psychological also, down to the detriment of health or a threat to individual's safety.

The problem of "error-free decision making" is addressed by a wide range of scientists around the world since the second half of the 20th century. Thus, D. Kahneman and A. Tversky (Israel, USA) are distinguished owing to their experimental developments and practical significance of obtained results. Within the Europe, the most significant contribution in the field of human perception and mental activity studies was made by the professor, director of the Harding Center for Risk Literacy at the Max Planck Institute for Human

Development (Germany, Berlin), as well as by his colleagues from the ABC research group, among which P.Todd, L.Daston, D.Goldstein, S.Lichtenstein and many others should be noted. [4] Within the Eastern European space, it is worth noting activities of research activities of the Memory Institute with the guidance of the Doctor of Philosophy Oleg Maltsev (Odessa, Ukraine), due to a number of specialized studies carried out in the field of solving the current problem of making error-free decisions, the results which are also presented in the current paper.

The goal of the research is identification of practical parameters on the basis of which an automatic system of a human processes incoming data, formulates a problem and generates a decision or makes a judgment in conditions of uncertainty, obscurity, lack of information, ambivalence in regard to its authenticity and reliability.

To achieve this goal there were several **tasks** set at the initial stage. Firstly, on the basis of experimental testing the task was creation of representative sample of answers and questions that allow to identify trends that guide an individual at the time of decision making, provided there are: a) time limits; b) inability to verify the information of the formulated task with regard to parameters' reliability; c) inability to find a potentially exact answer in the environment.

Secondly, according to several stages results of five tested groups from a heterogeneous socio-cultural strata of 800 people population, the task was to check the data for its validity by means of statistical and mathematical analysis methods.

Thirdly, not only the quality of answer or the number of correct answers was taken into account while testing, but also there were conversations conducted as a second echelon to identify the causes and description of cognitive strategies that guided subjects.

Fourthly, it was necessary to comprehensively analyze provided material provided, having grouped the typical categories and selected the appropriate psychological instruments of analysis.

Fifth, the task was to compare an obtained data with the results of forerunner's research practice, such as G.Gigerenzer and his colleagues - to make comprehensive conclusions and determine the further potential of the research.

The methodological basis of the study is: mathematical and statistical methods of analysis by Brunswik and Fisher; Bayesian model of data verification; descriptive method, methods of contrastive-comparative analysis and typological synthesis; fate analytical passive methods of system analysis and active methods for decision prediction and lines of reactions based on the mechanisms of ancestral scene function; Brunswik's heuristic approaches to the study of environmental information typology and signal coding techniques; heuristic models of cognitive research and validated heuristic tools used by German approach of cognitive science. [5]

The practical importance of this study is the deduction of parameters of the psychic on the basis of which one calculates the answer or makes a decision triggered by an automatic function, based on logic, which simultaneously takes into account eight parameters. The given logical system is based on the doctrine and methodology of the fate-analytical school of psychology, on the results of the Soviet scientist G.S. Popov's memory studies, which were tested in the course of multiple experiments by Oleg Maltsev, as well as with the correlating results of D.Kahneman, G.Gigerenzer, L. Daston and others, and is titled as "The logic of pre-program fate". The generation of such a class of logical-parametric model indicates the **scientific novelty** of this study.

The further horizon of researching the automatic logical system, which is unconsciously used by every individual under conditions of uncertainty, lies in the methodological development of tools, approaches and programs that would allow to manageably rely on the given system and not only be fast in decision-making, but also accurate. Undoubtedly, the development of such a fundamentally new system will require further scientific and project designing activities, testing on experimental models and samples of natural and representative types, as well as further validation of obtained results.

According to the researches of Gerd Gigerenzer set forth in the books such as *Simple heuristics that makes us smart* and *Adaptive thinking*, heuristic tools leading to theories generate new ideas about the workings of the mind, but also focus on what goes beyond the mind. Aside from this, "ecological rationality" program also plays its role. Taking into account the fact that tools penetrate into the laboratory environment of a scientist, the "ecological rationality" is insinuates into environments of individuals - into their past and present. [4]

Environmental rationality as a concept refers to the study of the way cognitive strategies exploit the representation and structure of information in the environment to make reasonable judgments and decisions. The importance of studying the relation between the mind and its environment in the 20th century was emphasized by Egon Brunswik, who compared the mind and environment with the married couple who must come to an agreement with each other through mutual adaptation. "This couple should not be divorced, as often is done, in research." Later, Roger Shepard (1990,p. 213), expressed the same idea in other words: "We may look into that window [on the mind] as through a glass darkly, but what we are beginning to discern there looks very much like a reflection of the world." This statement might be the case, and yet there is a question: how can ecological rationality be used as a research tool? [4]

For example, the phenomenon of scattered fragments (puzzles) in human judgment in practice demonstrates an obvious neglect of base rates and

probabilities. Even animals do not seem to neglect base rates. Attempts to explain prior 21st century reasons why human beings neglect the percentage indicators and probabilities while making judgment or decisions were focused on the low-level "software" of the human mind, which subsequently causes some cognitive illusions (for instance, initially it seems to one to be right, but after encountering an obstacle he doubts the fidelity of his primary judgment). Further, the causal culprits may be gaps and other shortcomings in memory, the willingness to solve a problem or computational abilities that are not sufficiently developed. G.Gigerenzer draws attention to the fact that this approach provides a view "inside the head" only with an aim to find an explanation. [5]

The program of ecological rationality offers various questions for discussion, but the key in the context of the research is the following:

In what environments, past or present, the neglect of the percentages would be rational?

The answer is, in cases where information is acquired by means of a natural sample, which subsequently leads to simple calculations (not burdened with a format of percentages or probabilities).

An important aspect is that, under the conditions of a natural sample, it is possible to draw quite rational conclusions without paying attention to the percentage indicators. So the next question, which was researched concerns the format of information. So, what is the format of data coding human mental algorithms was developed for? What is really important for an algorithm which allows you to draw inductive conclusions in the format of numerical information? Eddie presented experimentally obtained information (based on the research on the spread of breast cancer, test sensitivity and a false positive test for cancer) in terms of probabilities and percentages (as most of experimenters did before him). However, at this stage, it is about those scientists who have discovered that it is natural for a person to make **irrational judgments**. [6, 7]

What was the numerical information representation that people encountered in the course of evolution? G. Gigerenzer answers in the following way: "We know too little about these environments, for instance, about the historically normal conditions of childbirth, or how strong a factor of religious doctrines were, and most likely, these varied considerably between societies. But concerning the format of numerical information, I believe we can be as certain as we ever can be probabilities and percentages were not the way organisms encountered information. Probabilities and percentages are quite recent forms of representations of uncertainty." [4]

Mathematical probability appeared in the mid of the 17th century (Hacking, 1975). The very notion of probability did not prevail over the more primitive concept of "expectation" until the mid of the 18th century (Daston, 1988). Percents became something ordinary in the course of the 19th century only, after the introduction of the metric system during the French Revolution

(nevertheless, mainly, percentages were used to describe financial transactions, such as loans and taxes, and not for the description of the subjective representation of individual about uncertainties in his life). Only in the second half of the 20th century, probabilities and percentages became rudiments of the ordinary spoken language of Western countries as representations of uncertainty. Summarizing, we note that the transition to probabilities and percentages took at least a millennium of literacy formation and quantitative thinking capacity, so that the "percentage information format" could evolve as a way of conveying the degree of uncertainty. [7]

In the proper order, we quote the answer of a German psychologist G.Gigerenzer to the following question: "What was the format of the numerical information humans encountered before the 20th century?"

"I propose that the original format was natural frequencies, acquired by natural sampling. Let me explain what this means by a parallel to the mammography problem, using the same numbers. Think about a physician in an illiterate society. Her people have been afflicted by a new, severe disease. She has no books nor statistical surveys; she must rely solely on her experience. Fortunately, she discovered a symptom that signals the disease, although not with certainty. In her lifetime, she has seen 1,000 people, 10 of whom had the disease. Of those 10, eight showed the symptom; of the 990 not afflicted, 95 did. Thus there were $8+95=103$ people who showed the symptom, and only 8 of these had the disease. Now a new patient appears. He has the symptom. What is the probability that he actually has the disease?"

In the book *Adaptive Thinking* one may find a description of experimental phenomenon and validation of approaches and methods, that guide specialists from different areas, who are exposed to uncertainties and probabilities in the course of their professional activity (doctors, detectives, HIV counselors, lawyers, investigators, etc.)

1. According to cognitive psychology studies confirmed by G.Gigerenzer, P.Todd and their colleagues from the ABC Research Group, it was determined that in the range of major part of human history - before the advent of probability theory - people, like animals, acquired information about the uncertainty and risk by means of **natural frequencies** rather than in terms of **probabilities** or **percentages**. Accordingly, human mental algorithms were also formed in such a way as to process the data based on the parameters of frequencies. These informational formats such as the "probability", "base rate", "percentage" are not natural for human perception system, and accordingly they are not used as an information "raw material" for the algorithms of mental system. [4, 5]

Thus, the first indicator on the basis of which one automatically calculates the task in order to make further decisions is the **frequency** parameter.

2. To determine the next parameter, it is necessary to refer to the studies of the 30s of the 20th century Soviet scientist Grigory Semenovitch Popov.

G.S. Popov specialized in the research of memory mechanism with an aim to develop methodologies of effective learning and fast acquisition of skills. Analyzing the ancestral heritage as an element of an ancestral concept, Popov in common with a Hungarian scholar Leopold Szondi, uncovered the notion of an "authority figure" (see "Conductor and his role" in Szondi) as a key phenomenon which is indispensable in solving the problem of skills acquisition.

In the modern world, the scientist O.V. Maltsev being the representative of the fate-analytical school (in particular being the founder of the Research Institute "International Schicksalsanalyse Community Research Institute"), as well as the successor of the scientific doctrine of Popov, conducted an independent study and tested the results of Popov's research. Based on a sample of 800 people, by the end of the validation stage (taking into account the application of the Bayesian model as well), it was found out that in the process of training and learning, it is an authority figure which is the foundation system for developing a skill. Without the presence of an authority figure (an image which demonstrates the behavior line; superiority in power; implementation of the skill), it is impossible to acquire new skills. [2]

Regardless of the preparation level and individual psycho-psychiatric characteristics, each human being freely handles the logic of authority figures. In particular, from the very beginning of personality formation, even in the childhood, an individual faces the strength of an authority that he chooses as a reference model, on the basis of which he will subsequently compare other players. The gravity and importance of an authority is determined according to objective difference in power and various possibilities \ resources \ training, etc. In particular, for automatic algorithms the following informational format is acceptable: judgments such as "Might makes right"; "Elders get more (candies, attention, indulgence)"; "He (the authority) can, but I cannot" and other judgments.

Consequently, the second logical parameter for calculating the future decision is an authority figure (and the aggregate informational component as a data bank which corresponds to this authority figure). The problematic aspect of this parameter is that a person, although capable of choosing and appointing authority figures, cannot choose on the basis of an automatic data processing which of the two / several authorities is "right" or "wrong". This explains the reasons of choices in the favor of criminal authority figures; authority figures that have psychological personality disorders; authority figures that are effective in the same area of activity, but are not effective in the other, and so on.

3. The third parameter of logical calculation system was obtained at the Memory Institute with an application of fate analytical methods of analysis on the basis of a test sample according to depth psychology projective test, which is widely known as the Szondi test. This parameter was defined by Oleg Maltsev as **"an idea of HOW this or that should happen"**. This

principle of automatic orientation in conditions of uncertainty acts as a **template (prototype) of the individual's training mechanism.**

From a practical viewpoint, the judgments of individuals of the kind "I do not like it at this school (karate, cookery, business, etc.)" were analyzed or "Everything has to be different, it is difficult to explain it, but definitely not the way as it is described\shown". In other words, as a result of cognitive strategies analysis and fate-psychological indicators it was revealed that every individual has a strict cliché - an idea of how he should be trained. An individual is unconsciously guided in decision making by such categories.

Analyzing the conditions of subjects' upbringing, in each case it was found that, in the view of the memory flashbacks obtained earlier in a childhood, one unconsciously gravitates towards certain methods of education and denies others. For example, let's suppose that an individual was conditionally brought up by his mother - and her method was not liked by the individual (the mother was strict, screamed at him, used to offend, turned into a friend instead of a child, etc.). Conversely, other people used other methods in upbringing - and they are imprinted in the memory as acceptable and expected ones. For instance, an individual was brought up by his grandmother and her method, conditionally, was favoured. (She was caring, supportive, used to explain things in different ways, and so on).

In terms of principles and conditions of Leopold Szondi fate-analysis doctrine, on the basis of the fate-analytical concept, it is reliably known that an unconscious approach that individual has "this is the way it must be" is not only in favor of the subject, but also in relation to procedures established in other systems and organizations. It is because of this parameter, for instance, one has typical judgments such as: "... I do not like this hospital\it is not the way it should be in the kindergarten that my son goes to\I like this boxing school" and so on. [1]

Consequently, the third parameter asserts the following: an individual has a cliché - an idea of "the way it should be", which is the consequence of the training program.

4. The fourth parameter of the calculation of the logical system was tested by O. Maltsev, in consequence of the analysis and repeated verification by the mathematical and statistical methods of data obtained as a result of long-term testing of individuals of various professions, ages (18-70 years), with different levels of well-being, preferences, philosophical and religious views, and so on. This parameter was called **"the line of figure's continuation"** by G. Popov. Scientific prerequisites and prehistory of research of the given category are certainly presented in scientific psychological and historical-philosophical practice. Fate-psychology describes this phenomenon as "the continuation of life on the basis of the ancestor figure's pretensions," according to studies on the ancestral unconscious by Leopold Szondi. In this given case, the nomenclature of a Soviet scientist

G.Popov - "the line of the figure's continuation" and fate-analytical nomenclature of L.Szondi exactly correlates between each other. [12]

According to Maltsev-Popov study, an individual believes that he must necessarily live one of the fate lines of his ancestor. For instance, judgments and desires of children such as "I want to be a military man just the way my father or grandfather was" or "I want to be a doctor just the way my grandmother was"; correspondingly, one is inclined to live the fate of one of his ancestors and "finish" what his ancestor (visible or invisible) did not succeed to implement in his life. This logic is understandable to any person, and it explains the reason of incidents when a person knows what he really wants clearly and definitely (without previous rational reasoning!) It is in such cases that an ancestral concept plays its role in decision making. [2, 3]

"The line of the figure's continuation" is the fourth parameter.

5. The fifth parameter was deduced by Leopold Szondi during 40s-50s of the 20th century while researching the principles and mechanisms of the ancestral unconscious. It is designated as "a counter-position". To understand the functioning of this parameter, we should look first at a practical example in the area of profession selection: "A person becomes a psychiatrist so as not to become a "psycho" or "an attorney becomes an attorney so as not to become a criminal and go to jail". [1]

A **counter-position** as a principle is validated and described in detail in the works of L. Szondi, namely in the fourth book of the five-volume book titled *I-Analysis*. A counter-position is chosen as a safety-lock from an "imposed fate of the ancestor", which is the subject of secret and unconscious or conscious fear of an individual. In particular, during the conduct of fate-analytical psychotherapy in medical practice, Szondi himself actively used and recommended the counter-principle as a decisive element in deciding the choice of a profession and changing the way of life and activity; as a destiny-forming element for creating a counterweight to the "imposed fate of ancestor" - a "free" fate; for making decisions in the field of dilemmas of choosing a business partner; an object of love; others.

Therefore, we conclude: A counter-position is another logical principle which is taken into account by the automatic system of human body in decision making.

6. **The principle of choosing "better instead of the rational"** was also obtained by the natural-experimental method, which was preceded by theoretical and practical fate-psychological calculations, by an application of the analysis tools of fate psychology to the results of the Szondi test and their further validation. [1,2]

If there is a choice of out of two option, an automatic system considers both categories in order to generate a judgment as to which of the options will be "better/worse" in terms of the future consequences. The scientist G.S. Popov also found that an ancestral concept takes into account the availability of skills in the ancestral concept. Therefore, if in ancestral heritage there is an

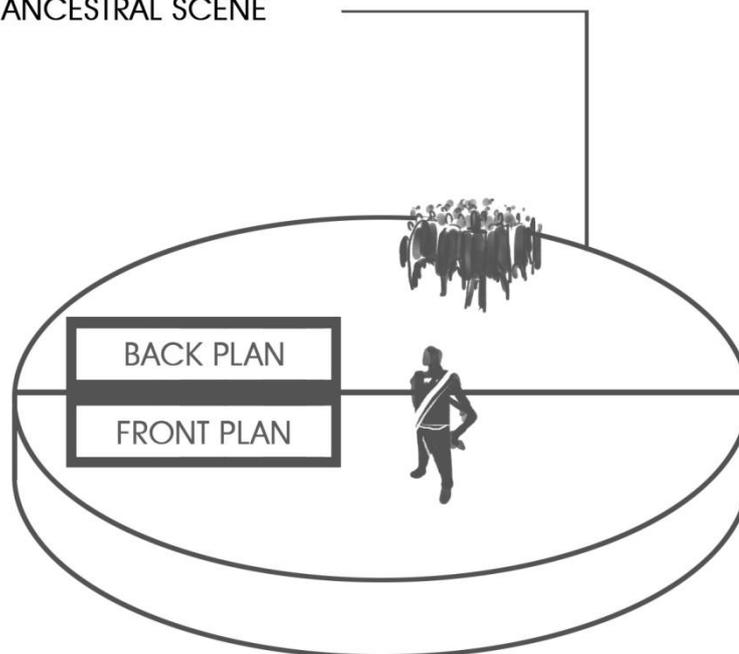
ancestor's figure who has a skill that allows to solve the problem - the choice will automatically be made in favor of having a skill, and such an option - #1 option - is designated as the "best". If, during an analysis of the second counter variant, an automatic system does not disclose information about the presence of a potentially suitable skill in the ancestral concept system, then, regardless of the quality of the proposal or a rational interpretation for this option, an individual regards #2 option as an "unacceptable".

In particular, during analysis of choosing life perspectives, the participants in the experiment indicated that quite often (82% of the subjects) in situations when they encounter new opportunities, without understanding reasons themselves, they did not choose in favor of such prospects, even though rationally realizing that "it could have been sensible\ it would be beneficial\ I could achieve more thing then what I have today", etc.

7. We move on to the seventh parameter of the automatic logical calculation system. This principle of cognitive strategy is described by 92% of the subjects as **"If everything is fine now, soon it will get bad."** Certainly, this mechanism corresponds to the mechanism described by Leopold Szondi, G.Popov, and O. Maltsev in the study of pre-programmed fate; this is the principle of scene reverse. [8]

For a visual representation of this mechanism, please see the following illustration.

1. ROTATING ANCESTRAL SCENE



I-analysis, Experimental diagnosis of motivations of drives, Pathology of I - all these works were written by Leopold Szondi in the second half of the 20th century, they demonstrate in detail the causal relationship of the emergence of an automatic judgment "if it is fine now, it will be certainly bad later on." [13]

Based on the principles of trigger mechanism of an ancestral scene, including those that correspond to the front and back plan's patterns of the Szondi projective test, automatic system of a human is fixated in its orientation to the fact that a socially acceptable front plan provides a "fine" judgment. The back plan, as is known, is the exact opposite of the front plan pattern, which means that reversal of the front plan to a rear one (the so-called "reverse of the scene") will lead to an exactly opposite situation: it was "fine", which means it is going to be "bad". [2]

The mechanism of scene rotation (reversal) explains the automatic logic which is used by an individual, also, while making unconscious choices and decision-making. In particular, for the same reason, there is always the possibility of "frightening" a person in the conditions of a safe balanced present (otherwise one would be absolutely fearless about his future").

The reverse of a scene as an element of the pre-programmed fate logic according to O.Maltsev explains the reason for the formation of stereotypes block class such as "Life as a series of events - black and white stripes"; "And after the gloomy days there will be sunshine"; "Bad luck today - tomorrow\later in the future there will luck for sure" and others. [8]

8. The final, eighth parameter of the automatic logical calculation system based on the foundation of fate-analytical concept, tested by O. Maltsev in an experimental way is formulated as follows: "One believes more in uncontrollable than in controllable." [7]

The notion of chances, luck, fortune, the likelihood that things are going to happen in an irrational way in one's life, generates such a phenomena as a tendency to search for environmental signals, certain signs, secret symbols that are going to determine the chance of luck and, therefore, change the current state of affairs for better, successful and better in quality. Such forms and irrational attempts to predict the future such as fortune telling, in particular, directly originate from the eighth parameter:

An individual tends to have more believed in an uncontrolled confluence of circumstances than in controlled life scenarios.

According to fate-analytical concept, the potential difference that are carried by I-radicals do not allow to connect "I" of a person with the world of reality, in which he exists, with the ultramundane. Regardless of individuals' position and outlook, everyone has a natural desire to unite the "opposing" pairs of opposites, (for instance, the body and the spirit, the unconscious and conscious, this world and ultramundane world, etc. All pairs of opposites are described in the books *Introduction to Fateanalysis*, *Experimental Diagnosis of Drives* and *I-Analysis*). Such a desire to unite pairs of opposites with the goal of creating a single, strong, productive personality according to Szondi is defined by the term "participation". The problem of participation lies precisely in the fact that, according to the provisions of the pre-programmed destiny ("imposed destiny" according to Szondi), the influence of the opposite world, which Szondi defined as "sleep, faith, mania" cannot be forecasted and

depends on the countless variables dictated by insoluble zones of unknown (class of "what is the purpose", "is there a God", "what is order", etc.) and by unknown motor tasks ("I do not know what's next", "it is not known how to proceed," "there are no guarantees that I will learn this fast enough" and so on). [8]

In particular, it was found that in cases when an individual was presented with an information block as if it was by accident, an individual was more confident in the authenticity of that information than, for instance, in "a well-founded and proven scientific conclusion".

Accordingly, the cognitive strategy based on the parameter "all good events will happen by chance/on their own" rather than "I am in charge of the situation, and am capable of changing things to what is needed", was seen in the context of test and validation of the results as a frequently used and applicable in various spheres of life and activity (family, business, employment, etc.)

Conclusions

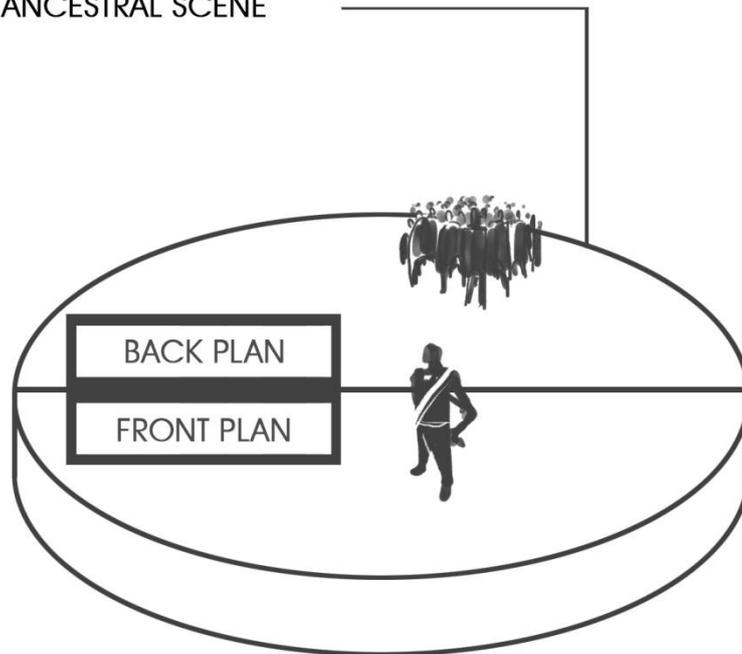
Based on the practical results obtained as a result of experimental and applied research, taking into account the representative and natural design of the sample, based on the application of fate-psychological and heuristic tools, taking into account the achievements and discoveries of G. Popov, L.Szondi, G.Gigerenzer, L.Daston, D. Kahneman, the scientist O. Maltsev with certainty defined 8 parameters on the basis of which the logical system operates in an automatic mode. This system of parameters got the title the "Logic of pre-programmed fate"; guided by the provisions of this logic, operating simultaneously on the basis of eight indicators, calculation is carried out automatically, resulting in the subsequent decision making. [18]

In the course of narration of this article, parameters that are used by people to process data are indicated, the data processing is done guided by the logic of the pre-programmed fate (or some kind of a *cognitive strategy* in the terminological language of G. Gigerenzer and his colleagues) in order to generate a judgment and automatically (unconsciously, uncontrollably and without conscious explanation) make a decision. [6]

These indicators, as confirmed by the experimental sample, are understandable to people at the level of automatic memory mechanisms triggered, from an early age. Above described parameters in 100 cases out of 100 allow a person even in conditions of total uncertainty to generate a solution in a short time. However, there remains an open question of how an individual learns to make true and error-free decisions using the logic of program fate. The solution of this problem is undoubtedly of practical interest for experts of different professional fields and determines the prospect of further research.

The system of such parameters is provided in the form of a separate illustration.

1. ROTATING ANCESTRAL SCENE



LOGIC OF THE PRE-PROGRAMMED FATE

1. FREQUENCY OF OCCASIONS
2. AUTHORITY FIGURE
3. CLICHE SUCH AS "IT HAS TO BE THIS WAY" - CONSEQUENCE OF TRAINING PROGRAM
4. THE LINE OF FIGURE'S CONTINUATION
5. THE PRINCIPLE OF CHOOSING "BETTER INSTEAD OF THE RATIONAL"
7. THE PRINCIPLE OF FORECAST "IF EVERYTHING IS FINE NOW, SOON IT WILL GET BAD"
8. AN INDIVIDUAL TENDS TO HAVE MORE BELIEVE IN AN UNCONTROLLED CONFLUENCE OF CIRCUMSTANCES THAN IN CONTROLLED LIFE SCENARIOS.

ON THE BASIS OF THESE 8 PARAMETERS THE LOGICAL SYSTEM OPERATES IN AN AUTOMATIC MODE.

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Psychological Infantilism: History and Modernity

Modern world society is extremely needs individuals who are socially active, able to make decisions on their own, and has a high level of social maturity. Considering the present-day requirements for modern youth, it is important to learn to adequately assess the situation, adequately respond, and have the will to overcome the obstacles on the way to the goal.

Creativity, initiative, communicability and teamwork skills are the qualities of a mature personality. On the one hand, the world community lack such personalities, and on the other hand, it is more difficult for them to find socialization among their infantile peers.

The purpose of this paper is a theoretical studying of the essence of mental infantilism problem, identification of the causes of its occurrence.

To achieve this purpose, the following tasks were defined: to disclose the concept of mental infantilism, to analyze the factors of its occurrence and to formulate the ways of research.

Exposition of basic material

The study of the phenomenology of infantilism is an important issue in cognitive-behavioral sciences. The review of numerous scientific works confirms the complexity of this category both at the level of general-methodological analysis and at the level of search for its empirical correlations.

The "infantilism" concept did not exist until the middle of the XIX century [2; 3]. It was united with endocrinopathies and various physical and mental abnormalities. For quite a long period of time, the problem of infantilism was mainly engaged in the medical researches. The process of distinguishing the psychological consideration of infantilism from this circle was prolonged.

In the 60s and 70s of the XIX century, the "infantilism" as a term was proposed by Ernest-Charles Lasègue, who gave a detailed description of one of the variants of infantilism, implying those people who remained children for the whole life [2; 3].

Initially, this term was used to indicate the preservation of physical and mental characteristics of childhood in adults [5]. Almost all authors of the late 19 century understood the syndrome of infantilism by the same way.

The discrepancy consisted only in the fact that some of them attributed this syndrome to intellectually full-fledged individuals, and the rest of them – to all patients who had some kind of psychophysical underdevelopment [6].

In 1871, P. Lorrain gave the following description of the signs of infantilism: the delay of the general development, a significant reduction compared with the normal size of the entire body while maintaining the proportionality of individual parts [3]. According to P. Lorraine, tuberculosis plays an important role in the development of infantilism.

After about half a century, Professor of Medicine G. Anton attempts to eliminate the discrepancies and contradictions discovered during the previous time [1, 3].

He was one of the first who applied the "infantilism" term also to "physical and psychological retardation of childhood" [5]. The scientist distinguishes physical and psychological infantilism. The bodily infantilism itself he divides into general and partial. General infantilism G. Anton understands as "developmental disorder, which causes the preservation of the child type throughout the body and prevents further development of the individual". Partial infantilism G. Anton understands as infantilism concerning certain organs or certain categories of tissues.

G. Anton made a significant contribution to the studying of infantilism. He and many of his contemporaries tried to classify infantilism, narrow the concept of "infantilism", and determine its causes.

In the future, with the development of endocrinology, the concept of "infantilism" has expanded. Due to dysfunction of various endocrine glands, a number of other forms of infantilism were identified.

In the 20 years of XX century, the desire to find the cause of infantilism in violations of hormonal activity intensified [7; 8]. It was connected to the spreading of the psychoanalysis and its interest in studying the sexual sphere. Detailed descriptions of psychosexual infantilism are handled by A. Kronfeld and U. Shtekel. They believe that the sign of human immature is that the person wants to die noble for his lifework, and a sign of maturity is that the person wants live for the sake of this lifework [9]. They also suggested the concept of "psychosexual infantilism", implying a delay in the development of sexuality at the infantile stage. To the manifestation of psychosexual infantilism A. Kronfeld attributes the presence of all age categories of fetishism, exhibitionism and other sexual anomalies, which he considers in the framework of schizophrenia and psychopathy [6]. A. Kronfeld and U. Shtekel believe that psychosexual infantilism manifests itself in the late beginning of sexual life, as well as in various violations of the sexual sphere of organic genesis.

Among psychiatrists who studied the problem of infantilism, it is necessary to identify Sigmund Freud [10]. In his writings, he proves the presence of all children's desires and aspirations in a mature person. By the opinion of S. Freud, only the appropriate conditions are necessary so that infantile formations could be manifested again.

K. Abraham, C.G. Jung, and E. Jones [7] support Freud's position and consider neurotics as infantile personalities. K. Abraham believes that a

healthy person is able to make a temporary lack of usual pleasure, to bring compensatory satisfaction through sublimation. But most neurotics are completely unable to reduce the usual pleasure, and the more strongly, the closer the level of their instinctive life to the forms of early childhood. They are very similar to "spoiled children".

Problems related to infantilism were covered in psychoanalytic lectures for parents, caregivers and doctors by the German doctor of psychiatry Helmin Gug-Helmut in the 20-30's [8]. She determines the general return to the already experienced phase of development as a regression. And in contrast, about infantilism she says that it's "when development stops at some kind of childhood stage". We see that for Dr. Guog-Helmut, regression and infantilism are two opposite things. Infantilism does not occur in people with preserved intelligence. This phenomenon extends to the mentally retarded.

E. Krepelin believes that most of the psychopathy is a manifestation of a partial delay in development, stopping at the infantile stage (partial infantilism) [11].

The scientist put forward a new idea for his time that not every subject is born psychopath when burdened heredity, and most often becomes a psychopath due to the influence of external harm in the early stages of development, even under the condition of absolutely normal heredity [11].

Manferd Bleiler says that most cases of infantilism can be observed in the same families [6]. As a cause of this kind of infantilism the scientist sees a violation of sexual glands or pituitary gland. Describing adult subjects with manifestations of sexual infantilism, M. Bleiler defines their mental state as the consolidation of the emotional and volitional sphere at the child's level of development. According to the author, these subjects lack maturity, purposefulness and autonomy inherent in an adult. Such infantiles have a rapid change in various emotions, increased suggestiveness and stubbornness, difficulties in relationships with peers, and their interests often become phantasmagoric.

Expanding the boundaries of understanding infantilism required clarity in terminology and classification. Thus, some authors suggested separating endocrine forms from the form of general infantilism.

E. Kretschmer identifies total infantilism, which covers the emotional-volitional sphere, and partial infantilism or juvenileism. This disorder is caused by a violation of the synchronous maturation of emotional, volitional and intellectual functions. Partial infantilism, according to Kretschmer, does not lead to border disorder in all cases, while the total is the background on which hysterical psychopathy may occur.

R. Corbo [17] explores and describes the clinical cases of infantilism and divides the subjects into two groups: 1) late maturing, 2) infantile individuals who remain for such a lifetime. According to the definition of the scientist, the infantile people are those who, in their adult state, remain as children. Late maturing he calls those who, although late, but reach normal mental

development. The author believes that in childhood it is difficult to distinguish these two forms. Combining them into one form he calls it "backward", that is, retardants, showing them a backlog of affective development and introducing the term "delayed affective development."

He touches also the question of the relationship between psychological infantilism and psychopathy, and believes that the separation of psychological infantilism from psychopathy is not particularly difficult. However, there are some cases especially during puberty in which weak willpower predominates, in that time it is difficult to distinguish infantilism and psychopathy.

R. Corbo states that infantile individuals, even if they are educated, have a very modest level of wishes. Such subjects are under the care of more active individuals: parents, husband or wife, etc., and often become dependent on them in their life.

For more than a hundred years, the problem of infantilism was mainly addressed by representatives of abroad medical specialties. Therefore, the description of infantilism has a specific character. If we turn to the works of scientists dealing with the problem of infantilism, it is obvious that in their works a description of the somatic features of infantiles is given: the state of the internal secretion glands, the growth delay, the state of the autonomic nervous system, and others. Characteristic of the psychological form is given very superficially. Introduction of the concept of partial infantilism, connected with the underdevelopment of some systems of human organism, contributed to the emergence of "white spots" and great difficulties in understanding the very phenomenon of infantilism and in understanding whether it can be considered as a separate form.

At the turn of the XX century, infantilism is viewed in connection with endocrinopathy, intellectual and physical inadequacy, in the context of psychopathy, neurosis and retardation of development. As already noted, some scholars (E. Laseg, 1868) understood, under infantilism, the preservation of physical and mental characteristics of childhood in adults, others (P. Lorraine, 1871) attributed to this phenomenon low height, childhood in conjunction with the immaturity of the psyche. Advocates of psychoanalysis represented infantilism as a manifestation of the unconscious and immaturity of forms of psychological protection of personality (1927), as the development of sexuality at the infantile stage. Further, infantilism was seen as the physical and mental retardation of development due to metabolic disorders of the internal secretion glands (G. Anton, 1913) as a manifestation of a partial delay in development associated with hysteria (E. Krepelin, 1920-1930), as retardation of development (G. Stutte, 1968), and as a delay in affective development (R. Corbo, 1967).

The data presented above give a more or less general idea of the category of infantilism. Researchers from Europe and the United States interpret infantilism as some physiological and psychological immaturity of a person. It

should be noted that various authors have assigned various principles that unite them.

L.Vygotsky is one of the first Soviet scholars who drew attention to the problem of infantilism [18; 19; 20]. According to L. Vygotsky, the evolution of child development is at the same time an involution of the child's development, there is a certain dependence between these processes. Thus, according to L. Vygotsky infantilism is "the irregularity" and the disorder of a child's development, that is, the disorder of the process of involution.

A. Melnikova suggests several ways to prevent and correct this phenomenon. These include, in particular, the creation of the best hygienic conditions, enhanced nutrition and all what stimulates physical development. She recommends putting the children in groups that are appropriate to their real age and to not hurry to send them to school. In addition, the child should not emphasize her age and disadvantages associated with her immaturity, it is important to have an individual approach to her. According A.Melnikova, it is necessary to take into account the features of the psychomotor sphere, to train motor skills, as well as to strengthen the sustainability of attention in the form of encouragement and develop the child's initiative. A. Melnikova's research is of both theoretical and practical interest, and is rather unusual in connection with the choice for research of this age group.

M. Kopelovich under infantilism understands the delay in the development of the organism and further proposes its classification [3]. Thus, infantilism can be congenital, associated with hereditary and constitutional features of the organism, and acquired as a result of unfavorable living conditions in the period of growth. As a preventive measure, he offers the creation of favorable hygienic conditions, high-grade nutrition, various methods that strengthen the body (physical education, staying in health camps, etc.). The need for early diagnosis of infantilism in order to correct it, which will "promote the proper physical development of children and adolescents" is emphasized. [3].

T. Simeon examines mental changes in infantilism [13]. The author gives a description of personalities with mental infantilism: the extreme instability of attention, seen and heard is usually not reproduced accurately. In such people there is no clear differentiation between the essential and the secondary. Their judgments are shallow, hasty.

As a child psychiatrist G.Sukhareva considers infantilism in the context of psychopathy. Scientist distinguishes organic, disharmonious and harmonious cases of infantilism. G. Sukhareva considered the question of the role of biological and social factors in the emergence of infantilism.

G. Sukhareva concludes that for the diagnosis of disharmonious infantilism it is necessary to take into account the somatic features of each individual, to study the social environment, the conditions of education and training, to take into account not only the statics, but also the dynamics of pathological features of the character.

E.Kelmiskayt believes that partial mental infantilism is observed with a delay of constitutional or symptomatic development and does not necessarily have to be accompanied by low physical indicators and hypogonadism [24].

In the 80's of the XX century M. Buyanov continues to reveal the problem of infantilism. In the book for teachers, he popularly describes the types of harmonious and disharmonious infantilism and believes that harmonious infantilism is basically a pedagogical problem, and disharmonious is both a pedagogical and a medical problem [6]. One of the great signs of infantilism, according to the author, is the presence of a sensory thirst. In this case, "in immature people, this manifests itself as an acquisition for the sake of acquisition" [6, p.108]. Another sign of infantilism is a romantic passion for adventure. The scientist argues that a mature person can do the same thing as an infantile, but the mature motives of the actions are well thought out and take into account the consequences.

M.Buyanov argues that infantilism is now common in all layers of society, while this phenomenon was described primarily by people from wealthy families. The scientist believes that harmonic infantilism ultimately lasts up to 20-25 years, examines and justifies corrective measures. To alleviate mental immaturity, a joint work of teachers and parents is needed. In children, it is necessary to educate the aspiration for independence, sustainability, ability to bring the begun business to the end, develop leadership qualities, and in boys – to form a male's behavior, because the presence of single-parent families' forms in them a female-like type of behavior that contributes to the development of infantilism. It is also necessary to protect children from bad companies. School needs to give more public orders and strictly control the progress of their implementation.

V. Kovalyov in his classification of border states of intellectual insufficiency as one of the forms allocates intellectual insufficiency at the states of mental infantilism: 1) with simple mental infantilism; 2) with complicated mental infantilism (with a combination of mental infantilism with a psycho-organic syndrome, with cerebrospinal syndrome, with neuropathic conditions, with a psycho-endocrine syndrome) [26].

The scientist also suggests preventive and corrective measures aimed at compensating for some pathological traits of one's character. So, for some, it is recommended to have occupational therapy and sports games. As prevention of organic psychopathy, measures are proposed to prevent the pathology of pregnancy, as well as cerebral infections and injuries in the first years of a child's life.

In 1980 the work of Y.Davydova, who considers infantilism within the sociology of counterculture of youth as a socio-psychological and sociological problem, analyzes infantilism as a type of world perception and social disease of youth [27]. He believes that the main psychological feature of the infantile is the infinite delay in the moment of self-determination. Such a person is deprived of self-identity, that is, a moral core. He defines such a "negative

type" of personality as a neurotic, which is inherent in the counterculture of youth.

The interesting social-psychological signs of an infantile personality given by the author:

1. Aspiration for alienation, impulsiveness, unmotivated behavior, confusion of thoughts.

2. Complete absence of desire, strength, ability to volitional self-affirmation and self-determination. Notion of will, volitional active principle is absent.

3. Installation on blurry, amorphous and chaotic sensuality. Unisex, chaos in sexual relationships, promiscuity, refusal to recognize the reality of sexual differences, etc. (Because of weakness of will and desire for pleasure). Inflation of sexuality.

4. The rejection of any order, the organization of life, its strict necessity, the restraint of its internal laws. The inability to purposeful volitional effort, the unwillingness to limit the sensuality that flows into chaos, makes the installation a hysterically aggressive denial of everything else.

5. Impulsive, explosive, irrational character of behavior that deliberately opposes the consistency and purposefulness, connectivity and meaningfulness of behavior. The desire to get "Paradise Immediately".

6. Mystical hedonism. The cult of sensual, physiological and bodily pleasure, the highest form of which is orgasm, and the condition and the true meaning - the release of the individual from the person-spiritual, ethical and moral dimensions and definitions. Search for "buzz", "idle fantasy" [27].

The concept of "artificial infantilization" introduced by A. Melnikova and G. Sukhareva led to the study of the socio-psychological nature of infantilism, and was reflected in the emergence of a new concept - "social infantilism". It is understood as a lagging social maturity of youth from biological maturation, which testifies to violations of the mechanism of inclusion of the younger generation in the life of adults, which involves accepting new responsibilities and obligations. We see that the term "social infantilism" is more closely attributed to the youth of the age group.

In the early 80's of the XX century the famous Soviet psychologist K. Platonov formulated his vision of infantilism. "Infantilism is a term that has two meanings, the opposite of acceleration:

1) slow development of the organism, which determines the delay of maturation of the individual, as a phenomenon of psychopathology;

2) the delay of moral and social maturation of the individual as a result of the deformation of the conditions of her life, wrong education and own passivity".

Thus, infantilism is the subject of study of pathopsychology as well as social psychology.

V. Lebedinsky [28], believes that mental disontogenesis according to the type of delayed development appears slowing down the pace of formation of

cognitive and emotional spheres with their temporary fixation at earlier age stages. "At the same time, the delay in the development of the emotional sphere is manifested in various clinical forms of infantilism (constitutional, somatogenic, psychogenic, cerebral-organic)" [28, p. 33].

As a cause of infantilism, the scientist, in addition to reasons of constitutional origin and others, distinguishes unfavorable living conditions and upbringing, that is, psychological retardation of psychogenic origin. Thus, in conditions of homelessness, the pathological development of personality with psychological retardation can be formed by the type of psychological instability. And in conditions of hyperopia, the delay of emotional development is manifested in the formation of egocentric attitudes, inability to volitional effort, and labor.

In 1996, the work of V. A. Gurieva, who believes that "... infantilism has an obvious age dynamics and often replaces the more pronounced delays in mental development" appeared. [29, p.78].

With socio-psychological causes of the formation of infantilism speak of "infantilised character" [29, p. 80]. Its basis is an overly petty upbringing by the type of idol in the family and hyperopia. The author cites Hoff's data on the phenomenon of "hospitalization," which manifests itself in adolescents in the formation of the infantile psyche under conditions of deprivation [29, p. 80]. In this case there are hypertrophied intellectual interests, which are one-sided. The most immature in this case are the social aspects of intelligence and emotions.

The author believes that the corrective work is effective in the early stages of the development of infantilism, when the adverse effects of the environment are still a little entrenched and not turned into a stable style of behavior.

We should also pay attention at the works A. Lichko dedicated to the study of infantilism [30; 41]. He considers it on the background of retardation and acceleration of development in adolescents and recognizes it as a ground for neuropsychiatric disorders, psychopathy.

By its meaning of the term "retardation" "only partially coincides with the concept of" infantilism". Retardation ... means that over time, lag can be overcome, but for most types of infantilism, certain features of it remain in adults. ... Retardation can also mean a delay in intellectual development, which does not happen under infantilism "[31, P.20]. Thus, the author divides the two concepts.

A Lichko examines child behavioral reactions in adolescence, such as: reaction of refusal, opposition, imitation, negative imitation, compensation, hypercompensation, and believes that such reactions occur more often in infantile adolescents [31]. The scientist gives data that allows us to assert that deviations of sexual behavior are common in infantiles, as well as suicidal actions as the content of the reaction of imitation. Describing the different

types of accentuations of character, the author highlights the most favorable types for the manifestation of infantilism – a labile and unstable type.

The scientist regards the non-harmonic family as a psychogenic factor in the development of psychopathies, character accentuations and infantilism, distinguishing the types of incorrect education: hypoprotection (insufficient care), dominant hyperprotection (excessive protection), hyperprotection of connivance (idol of the family), hypoprotection of indulgence, education in the cult of illness, emotional rejection, conditions out of the family.

In the 1990s a new interpretation of infantilism appears, marked by the definition of "personal infantilism". With such infantilism there is preservation in the psyche and behavior of the adult features peculiar to childhood. Such an individual is often characterized by immaturity of the emotional-volitional sphere.

In 1994, the work of P. C. Nemov, where he also addresses the problem of infantilism appeared [32]. In his understanding, infantilism is a "manifestation of childish features in the psychology and behavior of an adult" [32, p. 555].

Covering the problem of infantilism, he focuses on the problem of upbringing the character, volitional qualities of man. According to P.C. Damn, the will involves self-restraint, the restraint of some strong trains, their conscious subordination of the other, more meaningful and important goals, the ability to control the immediate desire and impulses arising in this situation. At higher levels of manifestation, freedom assumes resistance to spiritual goals and moral values, to convictions and ideals. The scientist points out that one more sign of the volitional nature of human activity, regulated by the will, is the availability of a well thought out plan for their implementation. [32, p. 359].

P. Nemov indicates that when volitional regulation of behavior is generated by actual needs, a special relationship arises between these needs and human consciousness [32, p. 363]. Rubinstein described them as follows: "The will in its own right arises when a person is capable of reflecting her inclinations, may treat them in one way or another. To do this, the individual must be able to rise above his inclinations and, distracted from them, be self-aware ... as a subject ... who ... rises above them, is able to make a choice between them "[33, p. 187].

Based on the above scientific idea, one can conclude that the formation and development of a person's reflection skills, socially acceptable values-targeted orientations, and the motivational sphere in the formation of volitional personality qualities in overcoming infantilism can be inferred from a person.

The syndrome of psychological infantilism is described in the framework of corrective pedagogy in 1997 A. Drobinskaya [34]. Infantilism is considered by the author from the point of view of school immaturity and unpreparedness of the child for schooling.

By studying the concept of infantilism, we propose to use it exclusively for medical-biological pathologies, somatic diseases, in the result of which mental disorders develop. And we suggest applying the concept of infantilism purely to the states of psycho-emotional underdevelopment of the personality, which are caused exclusively by socio-psychological factors.

Dr. G. Anton highlights various causes of infantilism. Common causes include:

1) poisoning; 2) infections; 3) trauma and pathological hereditary predisposition. G. Anton notes that the same harmful effects can cause various changes, depending on whether they began to act during the period of prenatal life, in the early childhood or during puberty. Some of the causes include diseases of the thyroid gland, the gonads, adrenal glands, pancreas.

Thus, the scientist concludes that infantilism can be the result of a metabolic disorder of various glands. Prior to this, he adds a local organic cause, which, on his part, can induce a particular type of infantilism and give it a special character.

Specialists in psychoanalysis, namely K. Abraham, studying the issue of psychosexual infantilism, sees the reason for his appearance in the underdeveloped mature psychological protection of personality (for example, sublimation). Another reason for the formation of infantilism in children is wrong sexual education. Sudden, which does not correspond to reality sexual education, based on fabrications and silence, give birth to children all kinds of guesses, fantasies that lead to neurosis and infantilism.

If at the turn of the nineteenth and twentieth centuries, infantilism was mainly considered in connection with endocrinopathy, with intellectual and corporal insufficiency, then after 20 years of XX century it began to be considered in the context of psychopathy.

Emil Kraepelin suggests that partial infantilism is the biological basis of psychopathy. Scientists point to their diverse nature; looks at psychopaths as an underdeveloped degree of true psychosis [11]. E. Kraepelin pays great attention to external harm, and infantilism considers in the context of hysteria, and also describes the concept of "partial mental infantilism" [13].

By studying and describing the clinical manifestations of mental infantilism called "sexual infantilism" [12], E. Bleuler points out that the features of infantilism are observed in dysfunctions of various endocrine glands

A.Melnikova analyzes the causes of infantilism and concludes that there are two main guiding factors that create conditions for pathological development: endogenous and exogenous [22].

M. Kopelovich, investigating the etiology of infantilism, distinguishes infectious diseases such as tuberculosis, syphilis, malaria, pneumonia, frequent tonsillitis, as well as causal trauma of the skull, brain diseases, poor hygienic living conditions, malnutrition, and vitamin diseases.

E. Kelmiskayt argues that many scholars of partial infantilism in adolescents and young people do not count as pathology, but consider the extreme version of normal maturation.

These were the somatic factors of the development of infantilism. Many authors, studying psychological infantilism, suggest social and psychological factors in its development.

M. Bouyanov highlights the causes of infantilism. One of them is too cumbersome, infantile fostering, creating "greenhouse" conditions [12]. The next reason lies in the child's biological characteristics. It is compensated more slowly.

Y. Davydov mentioned the causes of the mass phenomenon of infantilism. One of them is the development of an industrial society, in which it was not necessary to work hard to secure their lives to all the most necessary. Achievement of abundance, in the opinion of the scientist, frees people from different work, and the free time that appears as a result of this, they occupy by rest [27; 236]. This also contributes to the emergence and development of counterculture, which is the result of youth immaturity. It turns out a closed circle: industrialization, a high standard of living gives you the opportunity to participate less in labor life, which contributes to the formation of an immature individual, because it is in the work that appears responsibility and other manifestations of "adulthood". And immaturity leads young people to artificial infantilization. Therefore, infantile young people do not want to work already because of purely psychological reasons: the lack of necessary labor motivation, the prevalence of consumer values, and so on.

Y. Davydov as the next reason and consequences of the infantilism of society highlights the devaluation of family values and the increase of incomplete, problem families. If the boys were raised on the example of women's roles because of the lack of men in the family or their passive role, then this leads to the infantilisation of their sons.

O. Alexandrova (2013) describes that in contemporary society one can observe contradictory social manifestations of childhood and the attitude of the adult population towards it. Adults begin to imitate children, their behavior, manners, listen to their music. It became fashionable to shoot cartoons, movies for adult from computer games. One of today's topical issues is the return of adults to the values and tastes of children, the display of infantilism by representatives of older age groups.

A mature person can be defined as a harmoniously developed personality who has managed to preserve in the adult age the positive aspects of childhood (openness to the world, trust, independence, curiosity, ability to wonder, creative abilities, adaptability, etc.), is open self-regulation, that is, it is capable of self-removing Negative manifestations of childhood. However, the reverse side of childhood - infantilism, the desire to always be children, or again become children. A person who has not matured the rules of social behavior, gets stuck in an infantile state and inevitably becomes a parasite in

society. Such person expects something as self-evident that adults will continue to take care of him.

Modern researches prove that at the present stage of development of society, more and more people, despite the quality of education, are not able to build their life strategy. The development of a person is gradually slowed down. Man understands that being infantile is very convenient, and remains so until the end of his life. This becomes a big social problem, as the development of society depends on an educated, competent, sociable, socially mature and active personality (O. Korotkov, 2013).

Under social infantilism, young people are denied the new responsibilities and responsibilities associated with the process of maturing. At the same time, such features as non-autonomy, disorganization, lack of practical skills, initiatives, as well as insufficient social maturity and adaptability may occur.

Many scholars point to the role of poetry, literature, music on the development of infantile personality. In 2000, the "sick body" became one of the most significant metaphors of contemporary youth literature in Ukraine. Painful condition - physical pain, mental disorder with oneself, spiritual hypochondria - are inherent in the vast majority of texts. The symptom of a "sick body" is a diagnosis, which shows the closeness of society, infantilism and eccentricity, but at the same time - about the disease of growth and the emergence of new thinking (K. Nedavnya, 2013). That in the modern Ukrainian novel, infantilism is covered mentioned by other scholars (G.Chernenko, 2008). In the novels of the XIX -XX century writers, in particular Lesya Ukrainka, the infantile character of the protagonist is described (M.Kupka, 2014). The infantilism was discovered in the protagonist of the "Space Trilogy" by C. Lewis (Y. Lesik, 2014).

The music of Stravinsky inspires Adorno to interesting philosophical, psychological and sociological reflections. Adorno, in his tome on Stravinsky, makes a rough stylistic distinction between Stravinsky's early objectivist works, such as *Petrushka* and *Sacre*, his infantilistic works such as *Renard* (1916) and *L'Histoire du soldat*. Stravinsky's music is analyzed from a psychopathological framework. As a result, Adorno does not only detect a musical expression of «schizophrenic models», but also of the following psychopathologies: depersonalization, hebephrenia, catatonia (L. Van Eecke, 2014).

It should be noted that in the literature there are different points of view on infantilism and, despite the relatively long historical path of studying the problem, to date there is no generally accepted definition. It is also considered as a disorder in the process of involution of child development (S. Vygotsky, 1933), and as a form of violation of intellectual activity within the delayed pace of mental development (G.Sukhareva, 1959; A. Gurieva, 1996). Some authors, first of all, associate infantilism with a delay in mental development (V.Lebedinsky, 1985; G. Sukhareva, 1959). Other scientists consider

infantilism as dizontogenetic forms of frontier intellectual deficiency, caused by constitutional-genetic, toxic and infectious influences at the beginning of the child's life, as well as intoxication of the organism (V. Kovalev, 1979).

Some authors are presented infantilism as a feature of the physical and socio-psychological development of the adolescent (A. Lichko, 1985), where his connection with character accentuations and psychopathies is considered (G. Sukhareva, 1959; A. Lichko, 1985). Infantilism is also seen as a lagging social growth of youth from biological maturation (P. Pavlenok, 1998), and as a personality trait (A. Petrovsky, M. Yaroshevsky, 1990), and as a slowed development of the organism, and as a retardation of moral and social maturation of personality (K. Platonov, 1984). Meanwhile, infantilism is revealed mainly within the clinical and pathological description. Extremely poorly presented scientific data on the socio-psychological aspects of infantilism.

Nodzelskaya A. (2008) studied mental dysfunctions, generated by the infantilism of the subject and their influence on the formation of psychological impotence, which impedes the realization of personal potential.

Y. Formaniuk (2017), theoretically substantiated and empirically studied the features of the infantile personality radical, the establishment of its main structural components and the correlation between them. On the basis of the developed five-factor model, radicals ((autistic, absorption, anankastychnyy, infantile and neurotic)) are distinguished in the structure of individual-personality traits, the definition of which allowed the investigation of infantile components in the personality.

Conclusions

We reviewed various scientific positions on the problem of infantilism. Summarizing them, one can imagine infantilism in the following way: infantilism is a very deep concept that is difficult to constrain within the framework of a single science; it is characterized by a wide range: it refers to medicine, psychiatry, psychology, sociology, pedagogy and other scientific fields.

In our opinion, infantilism consists of three structural components. To such components we include the psychological, social and somatic components, as a consequence of the existence in the unity of the three levels of the human life system: psychological, biological and social.

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PART II
ECONOMY AND
FINANCES:
FUNDAMENTAL TOOLS
AND INNOVATIVE
TECHNIQUES

*Innovations in Science: the Challenges of
Our Time*

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Social and Economic Aspects of Socialization in the Conditions of Innovative Development

Humanitarian knowledge about the person, despite the modern biased relation, has longer history. Many fundamental methodological principles of knowledge of processes of formation of the person as the person was lost by relevance so far irrespective of their age. Correctness of a research of problems of socialization not absolutely indisputable fact that humanitarian knowledge became a basis of formation and formation of natural sciences obliges us to pay attention. And kind of many contemporaries didn't treat the ancient philosophy presented by Aristotle, Platon, Socrates, Descartes, Hegel, Kant and many others, so far, unfortunately, it is difficult to call modern the philosopher, sociologists who so accurately could formulate problems of a role of the person in a modern civilization. In our opinion, immortal are Aristotle's words that the condition of his soul acts as the beginning of original human life. In modern theoretical interpretation the concept "soul" can be used in the form of structure and forms of socialization of the person.

We understand as socialization not only a certain set of information and skills in this or that profession, but first of all conscious activity of the person. It is unlikely it is possible to call opening existence of strong dependence between what the person, but also conditions of realization of due duties is obliged to do. Hypothetically there are no basic objections between the fact that development is characterized by discrepancy, unpredictable dynamism and the increasing responsibility for consequences of the made decisions. Recognition of this statement for the fundamental value of human life is capable to change radically the principles and methods of functioning of institutes of socialization. We carry institutes of education, education, formation and maintenance of able-bodied health and also the moral values dominating in society to the last.

One of Nobel Prize laureates on economy (1998) Amartya Sen considered the most important subject of scientific researches of a role and the place of information in achievement of welfare of the person. Sources of her receiving, skills of processing and skillful use in the required conditions on opinion of the scientist form a basis of the choice of structure and welfare. At first sight, the appeal to problems of welfare and sources of his formation can seem to opponents the unimportant, not having relations to social processes in general and socialization in particular. However we consider absolutely unreasonable such attitude towards interrelation of skills of search, processing and effective use of necessary information. Especially as in recent years the decision-making mechanism on the basis of subjective, in

other words, emotional perception even more often gains distribution. The last seldom accords with moral and ethical principles of human life. The principle of long able-bodied human life is their cornerstone. Examples emotional, in the context of our small research, adoption of immoral decisions it is possible to give a huge number in all spheres of activity. However we will ask for the help heritage of scientific H1H and the 20th century of century. On the first place in the theoretical importance of problems of socialization we will put the theorist of a utilitarizm John Stuart Mill. The choice of this scientist has not casual character. He has to some extent shown considerable interest in a role of the theory of a utilitarizm in achievement of welfare. In spite of the fact that the utilitarizm, the utilitarian relation have got some negative coloring, we will address his sources and the fundamental principles. In work Utilitarizm has written the following: "... the few representatives of the human race would agree that they were turned into animals, i.e. would lower to so low level, - in exchange for a promise to completely satisfy the needs for animal pleasures, no person with high intelligence would agree to become a fool, the qualified specialist – the ignoramus, sympathetic and highly conscious – self-satisfied and low, even if he was convinced that the fool, the untalented person or the swindler is much more happy with the destiny, than they". [4, page 51]. The naive dreamer John Stuart Mill didn't assume that the policy of innovative modernization proclaimed and persistently pursued by the state, and now digitalization of economy, it is conscious or not, but the raschelovechivaniya creates conditions. A main objective of new industrial policy is commodity saturation, expansion of the various services aimed at satisfaction of physiological requirements.

Myslitelno estimated activity of the person is replaced several decades with a substitute of original professional knowledge, the human behavior is identified with skills of unconditional submission, etc. Unlike J.S. Mill, T. Veblen, Amariya Seong and many other scientists the economic theory of welfare is perceived not just simply, and very simply, her essence is identified with expansion of material consumption. The role of the person is reduced to functions of two other factors of production, i.e. the capital and the earth. In spite of the fact that T. Veblen as one of representatives of economic school of the marzhinalist in work "The theory of an idle class" is a lot of time and forces has spent for drawing attention not only scientists, but the active public to a problem of influence of a social status of the person on his production and public behavior. He has entered the concept "idle consumption" and has tried to prove malignancy of his diversification in society. "Any demonstrative consumption which has become custom doesn't remain unaddressed in any sectors of society, even the become most impoverished. Refuse the last subjects of this article of consumption unless under pressure of the most severe need. People will take out extreme poverty and inconveniences before leave the last claim for monetary decency, the last knickknack". [2, page 38]

Unfortunately, now a pursuit of production and realization modern, not always the vital and objectively necessary technical novelties, is the basis for innovative development. And possession of them serves as peculiar assessment of the social status of the person, determination of his success. Belonging to an idle class became a peculiar business card. The aspiration to wealth is in any way not a just fashionable trend of the present, but the base of cultivation of social injustice.

Many can deny that the modern economic, i.e. innovative policy has long history. In a literal sense emergence of many technical novelties at the end of HUSH of century stimulated not only emergence of the classical economic theory about the status of the person in the uniform of "Homo economicus", but also realization of economic policy, on the principles of unconditional human aspiration to possession of material wealth, his continued preservation and enhancement. As the most important purpose of the person it was considered to be such aspiration rational. History of economic development has shown that the behavior of the person is far from rationality. Desire of the person to learn itself, the world around are far from primitive commercial assessment. Today, as well as many centuries remain the sharpest of a problem of human life ago. Their edging has designated as problems of moral and ethical contents, reason and morality. According to the scientist with whom it is very difficult to argue, the reason of the person is imperfect and limited in opportunities. Respectively artificial control of determination of level of rationality involves not only restriction of real opportunities of the person on management of life, preservation of a civilization, but also creation of new risks, uncertainty and restriction of opportunities of rational behavior.

As characteristic of the modern organization of education and filling of his contents, on our deep belief, control of rational, i.e. reasonable behavior of the person acts. It is impossible even to approach a little at least assessment of an original role of the person in the modern world, without having paid attention to Kant interpretation of a role of ethics and an esthetics. Kant considered ethical and esthetic as a basis of conscious behavior and the choice, defined vital expediency in two manifestations. The external expediency was identified with a subject which the person uses for achievement of the goals. Innovative development, in our opinion, has to be estimated as a subject or the system of the objects and mechanisms used for achievement of the goals. This characteristic of innovative development demands from the person, the humanity and a civilization (it is kind of grandiloquent didn't sound) the answer to a question of original desires of the person. I.e. the person for innovations, or an innovation for the person. In the first case of people, his working capacity are characterized not only by short duration, low cost of use, but also preservation of the power of officials. Society in most of which of the population is estimated from positions of

creation of real material values enters the laws fixing domination of bureaucracy.

In the present the humanity doesn't give the answer to a question of a ratio individual and public. Innovative development not only theoretically, but practically creates conditions for increase in level of individualization of production. Already nobody is surprised to use of practice of work on the terms of remote access. Modern content of individual activity considerably differs from preceding mass equipment of production in the equipment. For a long time the manufacturing person carried out the activity under direct control of the consumer. The authority was supported or lost by generally individual producer. At a stage of wide use of institutes of industrial specialization, differentiation and cooperation of production control was exercised by labor collective. Innovative individualization of production not only alienates the producer from the consumer, but enhances responsibility of the person for results of activity. Almost full anonymity of innovative production is carried out in the conditions of preservation operating several centuries of institutes of social control. Practice of expansion of distant work is rich with examples of the irresponsible relation to professional a component, direct or latent ignoring of moral standards and principles.

Social and economic conditions as history testifies, it is characterized by tendency to domination of stereotypes. Both the certain person, and society in general, including the humanity, often don't even seek to call in question the norms, laws bringing a certain positive result several centuries and even decades ago. In the middle of the 20th century the great American economist John Galbraith has offered the research "New Industrial Society" unvalued so far. The scientist, investigating structure and the main tendencies of development of economy, I have tried to formulate the main contradictions. According to the scientist it is difficult to challenge that moment that "firms are controlled by the market". [3, page 68] But a problem that for preservation of control force of the market, the firm has to refuse the principle "maximizing has arrived". The market in classical definition never existed in economic practice. Nothing the unlimited aspiration of the producer to maximizing profit turns the market into abstract institute of the productive and economic relations. "If the firm agrees on smaller, than a pribykla maximum that is if it pursues any other aim, besides profit, then thereby she undertakes sotsikalny responsibility that doesn't enter her tasks at all". [3, page 69]

Social responsibility of the state and business is represented to us one more problem of innovative development. Respectively on the first in the plan in the conditions of diversification of remote access as questions of methodology of the price of work, the salary and material stimulation rise the most important form of manifestation of innovative development. The system of three factors now in use of production uses dependence of value of work on the realizable price of goods. The important value at the same time has a

goods rarity in the market. The last assumes the high level of the sovereignty of the producer. It is unlikely someone doubts rigid interrelations and penetrations of production of goods and services today. Everyone can give examples from personal experience of the consumer or the producer. All what uses also that surrounds the person - it is empirical demonstration of innovative development. Maintaining the traditional principles and methods of formation of the salary substantially already slows down innovative development.

As a peculiar economic axiom serves the statement that the main driving force is the benefit. About influence of personal benefit on the choice of goods, his form, technology in HUSH of century A. Smith has formulated. In work many pages I have devoted "A research about the nature and the reasons of wealth of the people" to the description of the procedure of the choice of production activity, using striking examples of economic relations of butchers, shoemakers, etc. [6] B 20th century a problem of personal benefit G. Becker investigated more in detail. In 1992 he has been conferred the Nobel Prize for studying of human behavior. In work "The economic analysis and human behavior", using various spheres of activity of the person, I claimed: "It is conventional that economic approach assumes the maximizing behavior in more obvious form and in wider range, than other approaches so the speech can go about maximizing function of usefulness or wealth all the same whom - family, firm, labor union or governmental to institutions". [1, page 25]

The question of benefit in the conditions of innovative development costs not less, and can even more sharply, than already specified. What benefit will be received by the direct producer? What to measure her in? Use of the microeconomic analysis allows to say that material costs in the conditions of revolutionary changes of production can decrease by several orders. And it involves considerable reduction of macroeconomic indicators. They define not only the level of development of economy, welfare now, but also exert decisive impact on structure of social production. The latent contradiction between material and non-material production and consumption is formed. Priorities of financing of production of goods are presented to us by the most difficult stereotypes. A bright example – residual financing of social institutes, including science, education, health care. In the last the distorted system of values works. Theoretically prevention has to be the most important direction of health care. The concept "health care" speaks about the high value of "health protection". However medical practice, i.e. elimination of consequences of various violations in a human body dominates. Strengthening of commercialization of public relations of production deprives of the person of many opportunities for maintenance of able-bodied health. In the conditions of constantly becoming complicated production, increase in personal responsibility for decision-making taking into account the remote consequences it becomes obvious that the utilitarian

economic approach based on the principles of momentary return from invested funds doesn't consider huge influence of human qualities, first of all conditions of a mental, moral and physical condition of the person. We intends have put a condition of mental health of the person on the first place. By estimates of World Health Organization of a problem of mental health of the person accrue every year. Researches in many countries of the world show that the depression as one of forms of mental disorders becomes the most widespread illness of the present. According to various researchers now about 20% of the population suffer from her. The danger consists in the following. First, its beginning is difficult diagnosed. Secondly, in society negative attitude to violations of mental health is widespread so far. Thirdly, symptoms of a mental disorder are quite often identified with morally moral state. In other words, the main visible characteristic – fatigue, apathy, are estimated as usual laziness. In too time the depression is a serious disease which sharply reduces working capacity and when it gains long character an environment suffers. The most important display of a depression it is considered to be in the sphere of cogitative activity, first of all, difficulties of concentration and focusing, decision-making, slowness of thinking. By estimates of experts of negative manifestations it is much more, they reflect instability of an emotional state, negative attitude to people around, unmotivated aggression, etc. We pay attention to these manifestations because of growth of responsibility of the person for performance of professional duties, limited opportunities of receiving timely professional consultation and need in a short time to make crucial decision.

In the context of the designated tendencies of innovative development low speeds at decision-making are followed by serious negative consequences for society in general. Influence of the person on effectiveness of production activity has got definition "a human factor". Unfortunately, empirical a component of the reasons of technogenic accidents and accidents, it is limited to establishment of personal economic or criminal liability. At the same time the original reason of low-quality performance of professional duties doesn't become clear. "Human qualities" almost ago Aurelio Peccei wrote half a century in work: "... all are so hypnotized by the current economic problems that nobody makes any attempts carefully to analyse in what the structural and philosophical reasons of these difficulties". [5, page 273]. We will continue citing the first president of the Roman club, "... that moment when possible decisions even if they appear far beyond the discussed new international economic order ... being the first and difficult, difficult and inevitable step forward, after all too no other than only the measure directed to reduction of the gap existing nowadays has now come. ... We will hope that we will be able to correct some disproportions of present economic system and we will temporarily take away threat of the sheer disorder from society ... yet unfortunately there are no such decisions which would provide to

mankind an opportunity to cope with the terrifying explosion of those problems with which it can't cope already now". [5, page 275]

The main motto of work of the Roman club for many years became "There are any more no economic, technical or social problems existing separately, independently of each other, which it would be possible to discuss within one special terminology and to solve slowly, separately, one for another. "In our artificially created world literally all has reached the unknown sizes and scales: dynamics of speed, energy, complexity... they now at the same time both psychological, and social, and economic, and technical, and in addition still political, moreover, closely intertwining and interacting, they take root and sprout in the adjacent and remote areas". [5, page 250] Is absolutely clear that preservation of the person as look, his cultures in the conditions of stimulation of innovative development of material factors, will be required not only huge material and financial resources, but also overcoming stereotypic perception and assessment of the world around.

The profitability of capital investments acquires the new contents demanding conceptual reconsideration. Slowness of the state in the sphere of definition of scientifically humanitarian priorities are systematically shown in decrease in the general and professional culture of the person. It is difficult to reduce an essence of problems of innovative development only to financing of the priority technical and technological directions, definition of sources and calculations of economic efficiency. It is necessary, at last to recognize that any technical and technological innovations naturally are followed by strengthening of material, social and economic stratification, the poverty having absolutely other contents than in H1H and the head of the 20th centuries. Hunger, malnutrition, wide circulation of unemployment, inflation, power and ecological crises, despite the constant growth of material wealth became peculiar Constanta. Technical and economic expediency of any production or state project (examples of the last it is possible to call commercialization functioning of institutes of the social sphere), as a rule ignore truly human values.

Projects are based on firmness of the abstract principle "rational behavior of the person". In 2017 the Nobel committee officially recognized importance of irrationality of human acts. Richard Taler who has got the Nobel Prize for a consecutive and system research of economic activity has written to monographs "New Behavioural Economy": "Economists get into difficulties when they make tightly specific assumption which can be true only if all actors are economically grounded. ... If to assume that all will correctly act as soon as obtain the necessary information, then there is no other option except how to advise to make results of a research open". [7, page 8] This statement of the scientist opens an essence of the relations of society and state to social institutes. In the conditions of lack of full-scale researches of a state humanitarian components, her influences on success of implementation of innovative programs, the personal responsibility for activity socialization

amplifies. Financial bubbles, speculative operations on securities markets and energy resources have won the status of high expediency. It is difficult to change opinion of people on malignancy of irrational value of the last. Use of more exact information on an essence of human behavior becomes vital for management of social development.

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Project Management Models: Determining Adequacy to the Conditions of the Implementation Environment

In modern dynamic economic conditions, the use of relevant models of project management determines the commercial success not only for business entities, but also determines the achievement of strategic priorities of state development. A qualitative transition to a new, higher level of economic development is putting forward appropriate requirements for the application of adequate project management models, in accordance with the existing conditions of the economic environment. It is the principle of adequacy that allows having a synergistic result of project management – sustainable development of the Ukrainian economy [1], which integrates in such aspects as achieving the objectives of the projects of the corresponding level, ensuring the efficiency of the process of social production, increasing the productivity potential and independence of economic systems of any level.

To propose a methodological approach for evaluating and selecting adequate models of project management, which will further ensure their effective implementation and maximize the expected result of the project, which is based on the scientific and conceptual provisions of project management.

The analytical base of the research is the theoretical basis of effective project management, set forth in the works of domestic and foreign scientists. The research used: logical-structural and comparative analysis to characterize the advantages and disadvantages of project management models; methods of scientific abstraction, dialectical methods and theoretical generalization for substantiation of the initial significance of the resource component; synthesis, induction and deduction in developing the mechanism of mutual influence of factors of the economic environment and the sequence of assessing the adequacy of project management models.

The essence of the category "project" and "project management" includes a number of characteristics that determine the environment for its implementation, depending on the level and scale. Thus, the Ukraine-2020 Sustainable Development Strategy provides for the achievement of 25 key indicators in the economic, social, cultural and other spheres, including: entering the first 30 countries in the World Bank's Doing Business rating; joining the top 40 countries of the world in the Global Competitiveness Index; growth of national GDP per capita up to USD 16,000 in purchasing power parity. [2]. According to V. Bredikhin and S. Tarasenko, a powerful means of solving large-scale tasks is the application of effective concepts of project

management, taking into account some factors of the Ukrainian economic environment as the unstable operation of the economy, the decline of investment activity, the lack of development of the financial and credit industry. This is evidenced by the experience of developed countries, besides for this purpose in Ukraine already there are appropriate prerequisites [3, p. 10]. At the same time, the resource provision of the project is the starting point for its feasibility, but it does not always become crucial in achieving its goals. The generalization of research on the efficiency of economic activity at different levels of the hierarchy shows that only about one third of the created welfare depends on the available resource provision, and 60-70% depends on the effectiveness of management and its usage. At the same time, about 2/3 of the achieved results and successes depends on the system approach to management, the effectiveness of management, and only 1/3 – from other factors [4, p. 94]. In today's economic conditions, success is not only the current efficiency, but also the stability of functioning, the ability to adapt to changes of the conditions of the economic environment, the ability to adjust the vector of development, that is, the dynamics of adaptation [5, p. 253]. Such circumstances are relevant to the specifics of Ukraine, which necessitates a detailed consideration of the adequacy of methods and models of project management.

Researchers of the problems of methodology of project management, as a rule, distinguish the following main approaches [6; 7; 8 9; 10]: PMBoK (Project Management Book of Knowledge); PRINCE 2 (PRojects In Controlled Environments), P2M (Project and Program Management for Enterprise Innovation); ICB IPMA (International Competence Baseline International Project Management Association), ISO 21500:2012 (International Standards Organization); MSP (Managing Successful Programs); APM (Guide to the Governance of Project Management); COBIT (Control Objectives for Information and Related Technologies); CPM (Critical path method); CCPM (Critical Chain Project Management) and others. However, experts highlight certain disadvantages of these methods and models that can create significant obstacles in the process of project implementation. J. Derenska, based on the results of grouping the methodologies of project management into traditional and flexible, concludes that these groups have shortcomings. In her view, traditional models require significant investment in planning, although in project management methodologies their share is dominant. In turn, the disadvantage of flexible models is the vagueness of the boundaries of the phases and processes, and the impossibility of timely planning of the works and the parameters of their implementation [6]. The team of researchers in the work [7] points to the domination of iconographic models that do not adequately reflect the overall properties of the project as a system, and therefore emphasize the use of cybernetic tools, in particular the Markov chains. To similar conclusions on the use of Markov chains to solve communication problems when building a

management system for the project, another group of authors in the work [8] comes. These specialists prove that the task of creating a stable management basis for the project must be effectively solved at the stage of its initiation. This will allow to get a synergistic effect due to the consistent consistency of the concept, the purpose and design of the project, as well as requirements to the level of specialization and competence in the formation of the project team.

The analysis of scientific and practical developments has shown that existing proposals for the improvement of methodologies and models of project management directly or indirectly relate to the primary impact of the project implementation environment itself. In particular, N. Pavlichia and Y. Marchuk point out the lack of models and approaches for comprehensive diagnostics of the development of spatial systems in the context of individual economic disciplines [11]. To manage the territory development projects, the authors propose their own two-stage management model, which should be based on social, economic, environmental and other dynamics, which will allow forecasting, planning and control in the process of project implementation. Ö Hazır also notes the negative impact of the uncertainty of the project environment, which in turn does not allow for quality monitoring and control of the achievement of project objectives [12]. The author draws attention to the need to improve traditional project management models using EVA (Earned Value Analysis), optimization tools, and to design of DSS (Decision Support Systems). It deserves attention to the study [13], where the authors conducted a stochastic analysis of the implementation of various types of projects in individual countries of the world. According to the results of the study, it was revealed that the highest significance of the correlation communication of the effectiveness of project management with the availability of adequate information about the state of the business environment in the decision-making process; the second most significant was the influence of management mechanisms throughout the life cycle of the project.

In turn, the choice of an adequate model of project management has an impact by a resource base. According to the grouping of the resources by the levels of enterprising and the levels of management (proposed by O. Poltoratska), the management levels should take into account the specificity of the scale: I group – a set of branches of the national economy (vector of macroeconomic development); group II – enterprises (vector of microeconomic development); group III - effective functioning associations of enterprises (the vector of joint macro- and microeconomic development - mesoeconomics), for which a number of aggregate tasks can be summarized [14, p. 242]. Although the allocation based on these features of the third group is debatable, nevertheless it proves the need to consolidate the economic interests of the micro and macro level - a separate entity, society, and state. O. Aparshina observes that the processes of using resources require

universal goals that are equally acceptable for the majority of contracting agents of the project environment [15, p. 63].

Thus, there is a need for the state to participate in the management of the economy due to the imperfection of market structures (the conditions of competition), the inadequate allocation of resources in the field of production of public goods; insufficient orientation of the market mechanism for the needs of future development. State economic policy on stimulating development should be directed on a qualitative component – optimization of resource consumption, rationalization of processes of social production, ensuring of safety and competitiveness at the macro level. Nevertheless, in today's conditions it is practically impossible without imposing certain restrictions, regulation of excessive needs and consumer trends, uncontrolled resource use and awareness of all the results (not only profit and welfare growth) in the short term and potential long-term effects. Accordingly, it is logical to direct the efforts to create an effective external environment in relation to the enterprise, which is precisely what depends on the actions of state authorities.

Since policy measures are implemented through appropriate socio-economic development programs, the methods and models of project management will play an important role. In the aspect of the effectiveness of management at the stages of the life cycle of resources, the greatest impact is characterized by resource efficiency at the stages of production and consumption of the resource, since these effects extend to other stages, with the results can take both direct and indirect forms. Therefore, it would be advisable to direct the assessment of the project environment to resource security on the one hand, which leads to increased control over economic activity, and on the other hand, requires support and support from the state for technical and technological development through innovation. This aspect is important because the analysis of the innovative activity of the Ukrainian economy made by I. Lyashenko showed that resource-saving industrial development and optimization of production processes are not moving through the production of their own advanced production technologies [16], which contributes both to resource conservation and growth products with a significant share of value added. I. Lyashenko's proposed systematization of the features of resource consumption and resource use in accordance with technological methods also points to the need for comprehensive support for innovation development. Therefore, the influence of project management models on the effectiveness of project implementation is carried out at the expense of specific characteristics of the relevant elements (fig. 1.) The assessment of the adequacy of models to the environment should also take into account the levers of state influence on the economy [19], where the key direction should be the restructuring of existing property relations, as one of the means of creating an effective economic system in Ukraine.

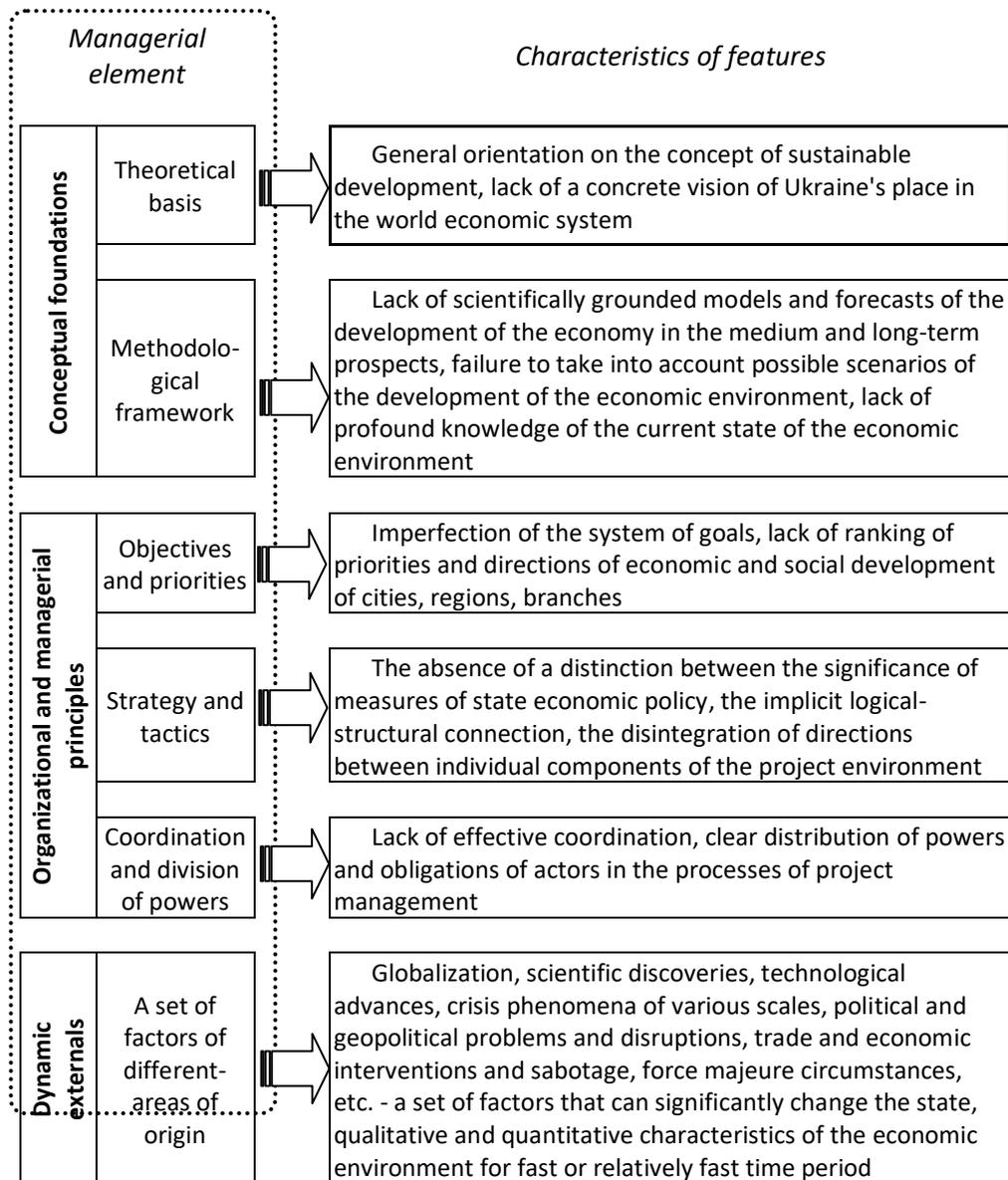


Fig. 1 - Modern features of the impact on project management (built by the author on the basis of [7; 8; 9; 10; 17; 18])

This primarily applies to the following industries: mining, metallurgical, gas, petrochemical, space, electricity, railways, roads, forestry and other industries where there is a predominantly natural monopoly. These industries require a well-grounded state interference in the application of objective economic laws for the expansion of market mechanisms for effective management. At the same time, the excessive restriction of economic rights and freedoms is unacceptable, which will ensure transparency of economic processes and the effectiveness of the selection of adequate models of project management [20; 21]:

- realization of the state economic policy through economic forecasts, plans and programs;
- formation of legal principles for the functioning of the economy;
- ensuring the realization of economic rights and freedoms of economic entities;

- control over observance of the "rules of the game" between the subjects of market relations, prevention of unlawful actions in this area, protection of competition as the main "engine" of the market mechanism;
- stabilization of the economy and sustainable development.

The proposed method for evaluating the design environment for choosing an adequate management model is based on the establishment of indicators for individual areas, among which the mechanism of interconnection has been determined (fig. 2).

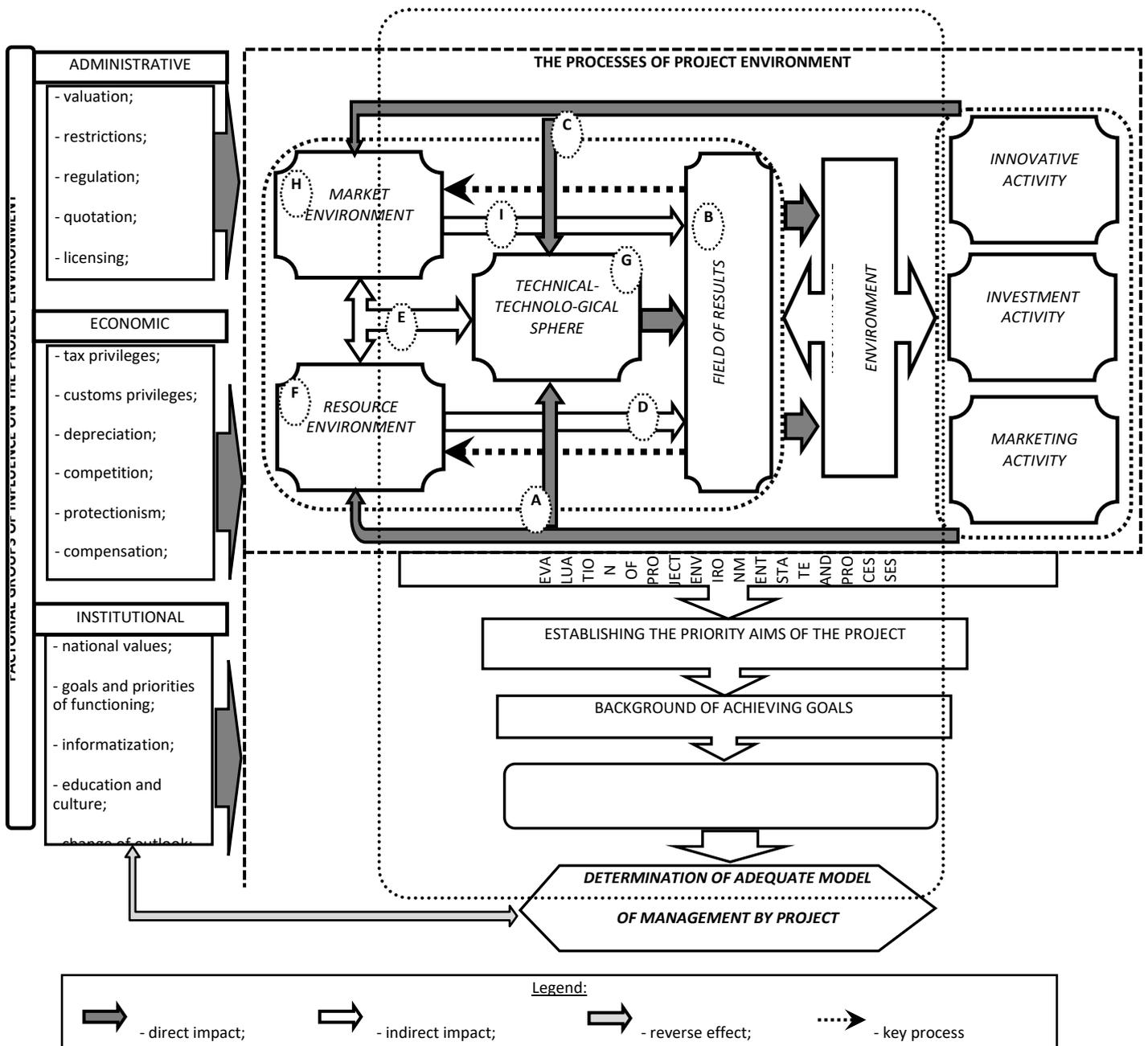


Fig. 2 – Methodological approach to the evaluation of the project environment (developed by the author)

Since the indicators can be endogenous or exogenous, that is, to be variables or set in time, the application of this technique can be presented as

an investigation of the corresponding stationary or non-stationary trajectories of the system's motion. The method reflects the causal relationship and patterns of the course of project management processes through the dual influence of motivational mechanisms:

- market environment, resource environment, technical and technological sphere, fields of results;
- innovative activity, investment activity, marketing (commercial activity).

Quantitative and qualitative characteristics and factors of the economic environment generate motivation for the development and implementation of the project, in different areas and areas of implementation. This leads to the activation of innovative research and development, their implementation through investment, dissemination and promotion of the results in the business through marketing. The last link can also have a reverse effect - identifying the needs and prospects for changing the economic environment (marketing), finding investment sources and making innovations. Nevertheless, the starting point is the state and specifics of individual environments and areas of project activity that form the dominant motivating factors. Therefore, in order to evaluate individual components of the project environment, as well as the influence of groups of factors on them, is proposed the usage of indicators:

- A – reproductive characteristic of economic development;
- B – priority of using resources from the point of view;
- C – description of the type of development and the impact on the attraction of resources;
- D – structural-resource characteristics of the effect on the result;
- E – technological characteristic of influence on functionality;
- F – characteristic of development potential formation;
- G – characteristic of progressiveness (innovation) of processes;
- H – productive and cost characteristic of functionality;
- I – description of the resource-market situation.

The implementation of the proposed methodological approach will allow a preliminary assessment of the effectiveness of project management models, the analyzing of the prospects of influencing, the implementation of the project of the environment itself, and is reasonable to determine the most effective group of factors for a particular project. The application of the technique will increase the effectiveness of project management and let achieve qualitative changes in the process of social production. The next step in the development of this methodical apparatus is to definite a mathematical tools for interpreting the indicators as components of the project environment.

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Assessment of the Efficiency of the National Pension Framework as a Priority Directive of the Socio-Economic Policy of the State

One of the main tasks of the socio-economic policy of Ukraine is to ensure the effective functioning of the pension system, which covers the interests of both able-bodied and disabled people. Currently, the welfare of about 30% of the population receiving pension benefits and 70% of the population depends directly on the effectiveness of the functioning of the pension system, which should be sure that when they reach retirement age, the level of pension payments will be sufficient to maintain a decent standard of living. The demographic situation in Ukraine is characterized by a rather low birth rate and high rates of aging of the population, which leads to a shift in the ratio of able-bodied and retired people in favor of the latter, that is, the increase in the burden of retirement age on potential contributors. On the other hand, the financial capacity of the pension system is weakened by the influence of the factors associated with the spread of adverse trends in the economic sphere. In such conditions, the priority direction of the country's socio-economic policy is to assess the effectiveness of the national pension system.

Specialists of the World Bank emphasize that the main objectives of the pension system are to provide the elderly with adequate, real, stable and reliable income in old age. The adequacy of income is measured by absolute relative characteristics, that is, the reduction of poverty and the proper replacement of the wage bill; reality - characterized by financial opportunities of taxpayers and society; Constancy means the financial sequence of the pension program in the current and future periods; Reliability is the ability to withstand the challenges posed by economic, demographic, social and political risks [1].

The national pension system has recently undergone significant changes, which are primarily related to socio-economic reforms and the development of new forms of pension provision. The key goal of reform is to build an effective financially sustainable pension system that will provide a decent standard of living for its users. However, under the current conditions of the post-crisis development of the national economy, the level of financial sustainability of the Ukrainian pension system remains low. Therefore, the development of a new scientifically based instrument for assessing the financial sustainability of the distribution pension system, taking into account traditional approaches in domestic and foreign practice, takes on special significance (Fig. 1). An assessment of the effectiveness of the pension system

is necessary to determine the results of implementing reform measures, forecasting the impact of changes on the level of pension protection, and determining the further ways of developing the national pension system.

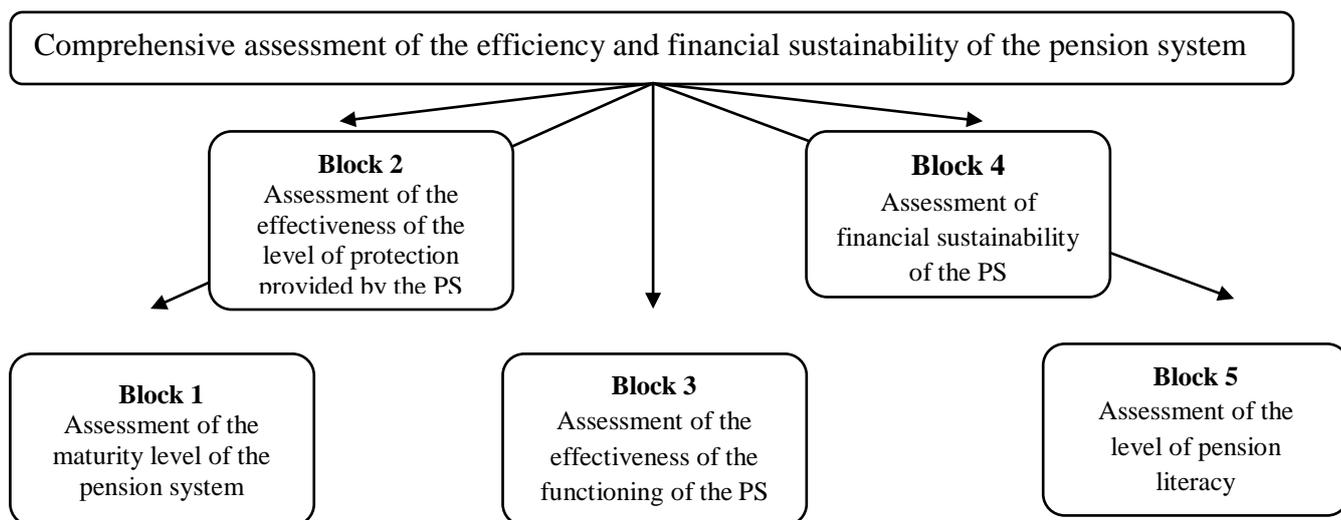


Fig.1 Components of an integrated assessment of the effectiveness and financial sustainability of the pension system

Block 1 includes indicators that characterize the level of maturity of the pension system (Table 1). If the pension system has reached maturity, then it means that they already receive the right to receive the youngest pension at the time of the formation of the system of contributors and the burden on the working population becomes larger.

Table 1

Indicators for assessing the level of maturity of the pension system

Indicator	Characteristic of the indicator	Limit values (for the period 2006-2016)
Coefficient of system load (economic dependence)	is defined as the ratio of the actual number of pensioners to the number of employees paying contributions. It shows the theoretical ratio between the number of pensioners and the number of contributors, that is, the burden on payers, and thus the dependence of the pension system. The higher the coefficient, the more mature (older) the pension system. The numerical expression of the coefficient depends on the conditions for obtaining the right to payment of pensions, as well as the length of service and age structure of the population in cases of old-age pensions	0,66-0,76
Support factor	inversely proportional to the first, it is a demographic indicator that characterizes the maturity of the pension system. The higher the indicator, the younger the pension system	1,32–1,52
The share of the average number of insured persons in the number of economically active population	the share of contributors in the number of economically active population reflects both the degree of employment of economically active population, and the degree of shadowing, which is today one of the most important reasons for under-revenue in the budget of the PFC	75%-82%

Source: Compiled and calculated by the authors according to the data [2] - [7].

In Ukraine, the ratio of pensioners to pensioners is almost 1 to 1, which is one of the lowest indicators in the world (according to PFU data, as of January 1, 2018, there were 11711.3 thousand pensioners registered in the Pension Fund of Ukraine [3], the number of insured persons, for which the SSP is paid - 12871,4 thousand people [4], of which regularly pay contributions - 10 159,5 thousand people). Over the past few years, the number of pensioners has declined significantly, which is due to the annexation of the Crimea and the temporary loss of control over certain regions of Donetsk and Luhansk oblasts, while the number of SSP payers has also decreased. According to World Bank forecasts, the current indicator of 1.09 in the next 20 years will decrease to 0.67, that is, the number of retirees will exceed the number of employed people by one third.

We believe that the low load factor of the domestic pension system is linked to the high level of wage shadow wage development in Ukraine. Thus, according to the State Statistics Service, 25% of the employed population in Ukraine do not pay the SSP [2]. Consequently, in the nearest future such trends may lead to an increase in the imbalance of the demographic burden on the able-bodied population, as well as further increase of pressure on the budget of the Pension Fund of Ukraine.

Block 2 includes indicators of the level of pension payments. This allows an assessment of the effectiveness of the level of protection provided by the pension system from the point of view of the adequacy of retirement benefits to ensure a decent standard of living for pensioners (Table 2).

Table 2

Indicators for assessing the effectiveness of the level of protection provided by the pension system

Indicator	Characteristic of the indicator	Numerical value	
		2016	2017 (after the reform 01.10.2017)
Coverage factor	Shows the proportion of insured persons in the compulsory state pension insurance system	94%	95%
Replacement rate	Shows the degree of replacement of a lost-earnings pension in the system of compulsory state security.	34,5%	28,23%
Ratio of pensioners' living standards	Shows the ratio of the average level of pensions and living wage for an able-bodied person in the country. The higher the indicator, the more effective the pension system and the higher the standard of living of pensioners	114,3%	145,4%
	Shows the ratio of the average level of pensions and living wage for people who have lost their ability to work. The higher the indicator, the more effective the pension system and the higher the standard of living of pensioners	146,6%	186,6%

Source: compiled and calculated by the authors according to the data of the State Statistics Service of Ukraine [2] and the Pension Fund of Ukraine [3], [4].

A key indicator for measuring the effective level of protection provided by the pension system is the coverage factor. Changing the level of coverage will have a negative impact on the total amount of insured income. ILO data show a high rate of coverage of pension payments in Ukraine (95%), compared with other countries (Greece - 77.4%, Spain - 68.2%, Croatia - 57.6%) [8].

The replacement rate in the system of compulsory retirement provision is central to the analysis of the welfare of pensioners and is defined as the ratio of average pensions and wages, describes the standard of living of retirees on the average living standard of the employed person and, accordingly, is a measure of intergenerational social health of the society. Therefore, it is considered as a target benchmark in the process of reforming the pension system. The minimum size of the replacement rate, recommended by the International Labor Organization, is 40%. The decrease of this indicator to 20% is considered a violation of citizens' pension rights. During the years of reforming the pension system in Ukraine, this coefficient peaked in 2009 (49%), after which there was a decrease in the indicator with slight fluctuations, and in 2017 its size was 28.23%, which shows the low level of income of pensioners and the decline in their welfare in recent years of crisis. In the context of inflationary surges, the value of the replacement rate to a large extent depends on the ratio of pensions and wage indexation. It should be noted that the calculation of the replacement rate is based on statistical data that takes into account only the official salary. Given the high level of employment shadowing, it can be argued that the real value of the indicator is much lower. This situation exacerbates the problem of filling the budget of the PFU, increasing the burden on the state budget and complicating the implementation of tasks related to raising the pension payments to the population.

The main indicator of the adequacy of retirement benefits from the point of view of the objectives of social protection is the ratio of their size to the subsistence minimum and the prevalence of poverty among pensioners. The size of the pension in Ukraine today is about 60-70 dollars a month, which is not much higher than the international poverty line, which is \$ 1.9 per day. The size of the subsistence minimum is very much lower than the current level of prices. The Ministry of Social Policy reports that the official size of the subsistence minimum is reduced by one person per person on average by 1426 UAH or 87.81% compared to the actual subsistence level [9]. Consequently, if the absolute poverty criterion for pensioners is to take the actual living wage for those who have lost their ability to work, it can be stated that 80% of pensioners are below the poverty line. Since nominal wage rates grew much faster than pensions, pensioners became poorer both in relation to the actual cost of living and in comparison with the incomes of employees.

Block 3 includes relative cost indicators of the efficiency of the functioning of the pension system (Table 3), which allow to estimate the share

of redistribution of gross domestic product produced in the country between pensioners and employees.

Table 3

Indicators for assessing the effectiveness of the functioning of the PS

Indicator	Characteristic of the indicator	Numerical value (2017)
System-wide cost of the pension system	It is a general indicator of the relative pension system and shows the share of social expenditures directed at persons of retirement age	64-65%
National value of the pension system	Characterizes the value of the pension system and shows what portion of GDP is sent to retirement.	10,2% GDP

Source: compiled and calculated by the authors according to the data of the State Statistics Service of Ukraine and the Pension Fund of Ukraine [2] - [4], [11]

The level of spending on state pension provision in Ukraine remains one of the highest in Europe, despite a decline to 10% of GDP in 2017 (see Table 3), compared with the highest level of 18% of GDP (2010). The reasons for such a decrease are 2014 inflation and indirect reduction of payments, higher prices and incomplete indexation of pension payments. Reductions in retirement spending (along with a decline in retirement income) were also facilitated by 2015 measures, namely, the taxation of pensions and the introduction of military fees, the waiving of retirement benefits for pensioners who work in the civil service and the maintenance of 15% of pension for other working pensioners [10]. At the same time, in 2017, pension expenditures amounted to about 25% of the total consolidated budget expenditures, which is also one of the highest European indicators [11].

Block 4 includes indicators of the financial stability of the pension system (Table 4), which allows assessing the state of financial resources of state and non-state PS institutions, whose main objective is to guarantee a stable level of pension benefits and their increase in the short and long term.

Table 4

Indicators for assessing the financial sustainability of the PS

Indicator	Characteristic of the indicator
The coefficient of financial stability of the Pension Fund of Ukraine	Shows how much the state pension fund has funds to repay its obligations
Integral indicator of financial stability of the multi-level pension system	Indicates how the PS is equipped with means for repayment of obligations to pensioners in the conditions of the distribution-accumulative method of financing. An increase (decrease) in the indicator indicates an increase (decrease) in the solvency of the PS
Absolute indicator of financial sustainability of the distribution and accumulation pension system (deficit / surplus indicator)	The negative value of the indicator points to the existing need for a pension system in state budget subsidies to secure accepted public pension obligations. The positive value of the indicator means that the PS is provided with the necessary financial resources

The main problem of the Ukrainian pension system, which is drawn attention by both national experts and representatives of international organizations, is the non-increase of total expenditures of the Pension Fund, and its (PFU) deficit. Even before reducing the size of the single social contribution (January 2016), the Pension Fund had a significant deficit, which over the years increased. According to the Accounting Chamber, the real size of the budget deficit of the pension fund, taking into account the amounts of unspent loans in previous years, grew from UAH 82.2 billion in 2017 (of which UAH 31.8 billion - deficit in 2015) to 133 , 7 billion UAH (of which 85.6 billion UAH is the deficit in 2016). The deficit of the Pension Fund of Ukraine in 2017 amounted to 141.3 billion UAH. [3].

The dynamics of the budget financing of the Pension Fund indicates an increase in the budget burden on the financing of pension payments, while the level of revenues to the PFU, as compared with its expenditures for providing retirement benefits, is reduced.

During 2014-2016, in the structure of revenues of the PFU budget, the share of state budget funds increased from 31.3% to 56.1% [3]. In 2016, transfers from the budget by transferring to the Pension Fund the second half of the funds required for payment of pensions amounted to UAH 143 billion, or 6% of GDP. In 2017, the state budget subsidy to the Pension Fund is UAH 156 billion. The deficit of the joint-stock system amounted to 82.3 billion UAH, the rest is money that the state must transfer in any order regardless of the situation in the insurance system [10].

Thus, the analysis of the main financial indicators of the Pension Fund of Ukraine reflects the deepening of the problem of its imbalance and the inability of the government to solve it in recent years, since the financial situation of the PFU is characterized by its dependence on subsidies from the state budget of Ukraine. In our opinion, one of the main reasons for the growing deficit of the Pension Fund is the presence in the structure of the Ukrainian economy of a significant amount of the shadow sector. Thus, in 2016 more than 4 million people, or every 4 workers in Ukraine, worked without registration of employment relationships (the indicator of informal employment is 24.6%). The largest number of such workers in agriculture (41.1%), trade (21.1%), construction (14.9%), industry (6.0%) and transport (3.6%). As a result of informal employment, the loss of the Pension Fund for the year amounts to more than UAH 30 billion [11]. Consequently, we believe that the problem of shadowing of wages and legalization of employment should become one of the priority directions of ensuring the successful functioning of both the pension system of Ukraine and the budget system as a whole. To this end, the government must develop and implement new mechanisms for balancing the Pension Fund budget not only by changing certain parameters of the pension system, but also by legalizing the labor market.

Another component of a comprehensive assessment of the effectiveness and financial sustainability of the pension system is **Block 5**, which includes the indicator of the level of pension literacy of the country's population.

One of the problems of the slow implementation of the national pension reform is low credibility of citizens to financial institutions and low level of financial (pension) literacy of the population. Financial education and financial literacy are among the most important factors of Ukraine's economic growth and increase of incomes. The society achieves the greatest economic success, when citizens of the country have developed skills in making responsible and conscious decisions in the financial sphere.

The increase of financial, including pension, literacy in Ukraine today is sporadic and involves holding seminars of appropriate content aimed at managing their own finances. By contrast, virtually all programs to raise financial literacy in different countries of the world focus on young people, especially students, since it is clear that it is students who are already economically active, or will become so after 2-5 years. And it depends on the level of financial literacy of this stratum of society that depends on the future welfare of the country, and it is on them that pension reform is calculated, and not on the current pensioners [13]. Therefore, the most important groups are students, students and teachers. Only within the framework of secondary and higher education can reach the maximum coverage of different segments of the population.

It is worth pointing out that behavioral manifestations within a pension relationship depend on many factors. Among the main ones, one can include, in particular, the mentality, as well as the personal perception and assessment of citizens of certain elements of these relationships. One can agree with Yu. Kovalenko's statement that economic mentality is categorized as determining the economic sphere of human life, while combining both conscious behavioral models and algorithms that operate automatically on a subconscious level [2]. We emphasize that the source of the main behavioral responses in modern pension issues are the stereotypes of previous relationships (social assistance and provision), where the main responsibility for the material support of the elderly lay in the state. Due to the introduction of the insurance pension mechanism, it was possible to transfer the indicated accents to the sphere of personal responsibility for the formation of own pension assets, to which the vast majority of the population is not ready and not inclined. This circumstance causes stress, dissatisfaction and distrust in pension innovations [15]. For the development and consolidation of positive psychological manifestations in relation to new elements of the pension system, their transformation into established norms of behavior is necessary for a long period of time and certain preconditions, which determine the need for the formation of a mentality adapted to the new pension mechanism, the features presented in Table. 5

Table 5

The main features of the character necessary for the formation of a mentality suitable for the conscious adoption of a three-tier pension system

Features of the character	Reflection within the limits of pension relations
Rationality	The ability of a weighted approach in assessing risks and rewards when analyzing and evaluating alternative retirement insurance options.
Responsibility	Ability to take responsibility for making decisions on the use of diversified sources of pension assets, control over the effectiveness of the implementation of the pension plan and the impact on it
Foresight	Ability to evaluate information and plan activities for the formation of retirement assets in the long run
Accuracy	Ability to co-ordinate and evaluate opportunities for obtaining profit with potential risks
Interest	Ability to master and apply in practice the necessary financial knowledge in the organization of their own pension insurance
Farsightedness	The ability to combine long-term planning of personal life and personal pension insurance

Source: [15]

People need to understand the proposed changes, recognize their need and adapt to them. Therefore, it is the experience of other countries regarding the implementation of measures for the formation or increase of the level of pension consciousness of the population deserves special attention. In Chile, which at the time of the pension reform was not a democratic country, a number of political and socio-economic measures were used to support the government's actions. One example of consensus-seeking efforts is the creation of special public pension reform committees (Denmark, France, Germany, Ireland, Norway, United Kingdom, USA) [1]. Hungarian scientist J. Kornai at one time proposed such an algorithm of social reforms. "It is advisable," he writes, it would begin with the publication of a thorough and well-considered study, presenting a wide and diverse picture of foreign experience, an objective analysis of the main alternative solutions, their advantages and disadvantages to the parties concerned and the public. After all this, it would be possible to publish its own proposals to the Government, provided with arguments in favor of their adoption. After the publication of the study and government proposals, there should be a public discussion of alternatives. " As a result, J. Kornai states, "we would have a solid foundation and public support" [16].

Ukraine, like many other countries, is looking for means of improving the pensions of its citizens. The next stage of such a reform took place in October 2017, the main purpose of which is to equalize the expenditures and income parts of the Pension Fund of Ukraine. At present, the deficit of PFC is more than 140 billion USD. The lack of sufficient funds to finance pensions and the requirements of the IMF contributed to the development of a new draft law on pensions (No. 6614). At the same time, the reform envisages increasing the well-being of pensioners, increasing public confidence in the government, and encouraging those who work to earn a pension in different pension systems. The main changes are the binding to the insurance record, not age; annual

indexation and increase of minimum pension. The law does not envisage raising the retirement age, but introduces requirements for the insurance period. The rules of the law are introduced from 2018. To retire at 60, you need to have 25 years of insurance. (If you are 15 to 25 years old, you can retire at 63, and you will be 65 when you are under 15 years of age). All norms of the minimum insurance period will increase for one year every 12 months until 2028, that is, from 2028 for retirement at 60 years the insurance period should be 35 years. If you do not have enough seniority, you can buy it, but not more than five years. One year of seniority costs 16 896 UAH. Those who have worked for 40 years can retire at any time. But this norm will be introduced only in ten years. Ukrainian citizens who do not have an insurance record will be able to claim social assistance for reaching 63 years, which will be determined based on the level of income of the pensioner's family. The average salary for the calculation of pensions was increased to UAH 3764.6, which is almost three times higher than before the reform (UAH 1197), and the coefficient of insurance period for calculating pensions is reduced from 1.35 to 1. The minimum pension is set at 1452 UAH on 140 UAH more than before the reform (in Ukraine, the minimum pension is 8 million pensioners). From 2019, for the protection against inflation, an automatic rate of annual pension reform will be introduced: taking into account the financial capabilities of the joint-stock system, but not less than 50% increase in average monthly wages for three years and 50% of the consumer price index.

Thus, a comprehensive assessment of the effectiveness of the pension system of Ukraine based on 5 groups of indicators expanded the traditional approaches to assessing the financial sustainability of the pension system and allowed:

- assess the degree of maturity;
- provide a comprehensive assessment of the effectiveness of the level of protection provided by the pension system from the point of view of the adequacy of pension benefits to ensure a decent standard of living for pensioners;
 - to determine the cost indicators of the efficiency of its functioning and financial stability;
 - assess the impact of changes on the level of pension protection;
 - establish a causal relationship between the main units of the integrated assessment indicators.

According to current trends, the pension model of Ukraine remains financially unstable. The absolute majority of Ukrainian pensioners are below the poverty line, one of the reasons for this situation is considered to be a constantly growing deficit of the Pension Fund of Ukraine. Although inflation in 2014 and indirect reduction of payments, their partial indexation allowed to reduce the specific share of the Pension Fund's expenditures in GDP, however, the level of expenditures for state pension provision remains high.

At present, revenues of PFU cover only about 2/5 of its total expenditures, which results in a significant structural deficiency of its deficit. The low rate of a single social contribution, a small number of payers and a significant understatement of wages are key causes of insufficient financial resources of the PFU. The imbalance within the income and expenditure part of the budget of the PFU is determined both by negative demographic factors and the low ratio of the number of pension recipients to the number of contributors, as well as the high rate of reduction of the number of insured persons and insured persons. For the preservation of current policies, it is projected to further decrease the average replacement rate, which is already below international standards. The pension system has become extremely burdensome for the state budget and does not provide acceptable protection for pensioners. However, the next stage of its reform, outlined by the bills No. 6614 and No. 6677, contains many risks and compromises [14].

The global trend today is to deviate from the concept of a paternalistic social state, according to which the main burden of social protection lies with the state and is treated as the material provision of all the people in distress, without exception, in the form of direct payments from the state budget. Today, Ukraine can observe the birth of the state, in which the social function is carried out through wider application and expansion of methods of implementing social policies aimed at preventing social risks. Future recipients of social protection should be aware of the fact that the availability and size of social benefits depend on their active employment and participation in social insurance. The basis of a new approach to the development of a social state should be primarily the principle of both personal responsibility of citizens and corporate social responsibility [17]. Everyone must do everything possible to maintain his standard of living both now and in the future. It is precisely the introduction of labor and social security legislation to the principle of personal responsibility for their material support in old age and in case of disability will be decisive in shaping the new paradigm of the country's social welfare. The state in such conditions turns from providing social protection to its guarantor, regulator and organizer of the effective functioning of social protection of citizens. The pension fund will also get rid of "non-social functions of social support". Thus, the amount of money available to finance a solidarity pension will be more clearly defined for those who have paid regular long-term pension contributions during their working lives.

In our view, the modernization of the pension system should be based on such key pillars as:

- fairness characterized by the fairness of the procedure for calculating pensions;
- Transparency - transparent and understandable legislative framework of the pension system,

– Balance and effectiveness, which will be characterized by the lack of appropriateness of the Pension Fund and the decent provision of pensioners.

All this will allow to intensify the process of development of a three-tiered pension system, increase the activity of participants in pension relations, provide an increase in the level of social protection of the population and further development of pension insurance in the context of socio-economic development of the country. Therefore, the constant assessment of the effectiveness of the national pension system is a priority area of the state's socio-economic policy.

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Previous Conditions and History of Establishing Diplomatic Relations Between the Democratic Republic of Georgia and Kemalist Turkey

From December 11, 1918, when Germany became officially recognized in the World War I, the policy of the member states of the entente entered a new phase of activity in Transcaucasia and its neighboring state.

Temporal truce was made among the states of entente and the Ottoman Empire. Articles 11 and 15 were directly related to Transcaucasia. Under Article 11, the Ottomans were transporting the Ottomans from Dagestan, Azerbaijan, Armenia and Georgia, and their place was occupied by England, and Article 15 of the Transcaucasian large cities, including Batumi and Baku, were the prerogative of the English (5: 279).

After the World War I, many issues were accumulated. To find out the principles of arrangement of newly arranged principles, the winner states discussed it in a different way. In the political circles of England there were two positions: First, dividing spheres of influence with Russia, which would be deemed to be Transcaucasia, and secondly to establish the Protectorate of England in this region. There was also a line of Americans who made the bet on mostly Armenians (2: 65).

The Allies' intention was to create different big and small states on the ruins of the Turkish Empire. Great Armenian project was created with the support of the Americans; The influence of the English was subjected to the oil rich rural area; They underwent control over the Samsun and Trabzon, the territory of which was intended to create the Pontus State; The Italians were Anatolia, and the French occupied Adana district and adjacent areas. It can be said that the Ottoman State was not subject to the issue. (6: 133-134; / 5; 280)

Prior to May 1919, Turkey's major trade centers and large industrial towns were under the control of the occupation forces. The abovementioned events have enabled the activation of national-liberation struggle in the Ottoman Empire, which was headed by Young General Mustafa Kemal Pasha, headed by May 1919. In April 1920, he was elected as the chairman of the big national assembly and government of Turkey. Kemal Ataturk's government took the course to Soviet Russia in the pre-war struggle of the peninsula. In a letter to V. Lenin on 26 April 1920, "Turkey is obliged to fight with Soviet Russia against imperialist states and aims to establish friendly relations with Soviet Russia" (3: 48).

What was the situation in Russia? What subjective or objective factors were the reason for the rapprochement of these states. The study of the

problem in Georgian historiography has significantly improved. As it is known during this period, Soviet Russia defeated the warriors of white warring armies with the support of the states of entente. There was no doubt that Civil war, would end up for their favor. It is necessary to understand that the establishment of the Soviet power in Russia was only one event that was the only part of the world socialist revolution that would have wiped out the Bolshevik's deep faith in the near future with great victories in other countries. Bolshevik's revolutionary radical wing thought that the idea of permanent revolution was the main goal of further activities.

However, when the Russian experiment in Europe was not justified and in some countries the proletarian revolutions faced the fiasco, it became evident, that "the chronology and geography of the world revolution no longer coincided with the author's idea." (3: 47). The possibility of resuscitation of the idea provided the Ottoman Empire with the attitude of the victorious states of to the Ottoman Empire. The support of Ottomans in terms of the international proletarian revolution meant strengthening Russian positions in a highly favorable region. That's why the Soviet government took a closer look at the above request and actively began implementing the plan. In a short time, Ottoman Embassy sent a large party of arms, accompanied by financial and moral support (9: 675). Turkey's largest national council reaffirmed a warm and friendly attitude to the Socialist Russia (10: 117) once again in the appeal to the People's Commissar of the RSFSR (10: 117).

Russia's interest in strengthening strategic partnership relations with the Government of Angora was so great that they rejected the desire of beginning a promising negotiation between Soviet Russia and Great Britain, that the terms of the text of the treaty had to enter the preamble on Russia's suspension of assistance to Turkey. The Russian side did not consider this issue worth considering (10: 119).

In our opinion, the friendly relationship based on the Kemal Ataturk government by the Russian government was not based on the ideas of the Utopian World Socialist Revolution. The new foreign policy course was primarily focused on resolving the Russian-Caucasian issues, namely, to join the Transcaucasian states with Russia (2: 119). There was also the prospect of exporting socialist ideas under the auspices of the world proletarian in the Middle East.

On April 28, 1920 in Azerbaijan, and on December 2, 1920, Armenia's sovereignty, the issue of occupation of Georgia was also raised (4: 92). Only the Turkish position on the issue was just uncertain. It is worth mentioning the 18th of December 1920, when the Commander-in-Chief of the 11th Army of the Russian Army Hecker announced to the Commander-in-Chief of the Military-Revolutionary Council: "If the military council of the eleventh Army will receive genuine guarantees on the friendly attitude of the Kyazim-Karabekiri troops, then the issue of occupation of Georgia and Tbilisi will be created more real" (4: 93).

Angora's government was well aware of the toughness of the situation, and in this connection the Commissar of the 15th Corps commander Kyazim-Karabekiri said: Commander of the Third Corps, who had a frank conversation with the local representative of England, should be able to show solidarity with our eastern border and Batumi issue (8: 19). It means the withdrawal of English occupation troops from the Batumi district. The abovementioned information has been adopted by the Ministry of Foreign Affairs, which expressed the government's position. It says that the residents of Ottoman after the occupation of the English must not be motivated by the Kars, Ardagan and Batumi occupation (see: 18). At this time Azerbaijan is soviet part. Russian positions are gradually transparent towards the Transcaucasian region, and it seems that the Government tried to act in such circumstances. In this respect, Mustafa Kemal Pasha has sent a message to Kyazim Karabekiri: "Cooperation with the Bolsheviks is considered dangerous until the terms of our union are more or less exposed, its main lines ... Although the Red Army came to the borders of Armenia and Georgia, they haven't asked us for help yet, but it is likely that they would have the opportunity to do so "(3: 51).

The category of preoccupation disinformation included Russia's stir in the autumn of 1920 with the support of the Government of Georgia on the threat of re-occupation of the Batumi District by the British (9: 330).

The main purpose of Russian propaganda was to be properly understood by the Government of Georgia. "... these words have no basis and they do not fit in reality ..." It was mentioned in the Georgian side's reply (6:: 142) but in a note sent to the British Minister of Foreign Affairs, Lord Karzon George Chicherin, it is mentioned as the information in Purpose of propaganda. The Englishman, on the contrary, demanded the Soviet Russia not to intend the occupation of the Batumi District (9: 346).

Under such circumstances, the occupation of Georgia by the Russian in autumn of 1920 was considered inappropriate. On the contrary, the Russian Foreign Ministry tried to show his good neighborly attitude towards Georgia. Of course, Georgian scholar Viktor Nozadze is unambiguously agreeing to think that "on one hand, if Moscow should prepare to make a friendly approach to the occupation of Georgia in a hidden way, on the other hand, Moscow openly convinced the world that it will not touch Georgia and will respect its independence (4:93).

The note of the December 19th 1920 of Soviet Russia's Foreign Minister Giorgi Chicherini indicates that the Soviet government was considering the interests of Turkey and Russia based on a peace agreement between Georgia and Turkey on the basis of the Georgia-Russia Treaty (meaning Georgia-Russia 1920 to May 7, 2006 treaty, N.Z) (9: 393).

By the end of 1920 and early 1921 relations between Russia and Kemal's government entered into a new phase of activation. At this stage, the territorial issues of Georgia on the part of Turkey were considered as

inappropriate. The necessity of establishing diplomatic relations between the two states is in the agenda itself.

On 13 November 1920, the official representative of Ankara government Col. Kyazim Bay arrived in Georgia (6: 144). At the meeting with the representatives of the Georgian press he said that "one of the main interests of the Government of Angora is to see Georgia independent and strong. Attitudes between Georgia and the Government of Angora are mainly determined by these main interests "(11.). He said that both countries Turkey and Georgia have common interests and all issues should be resolved through peaceful negotiations ... "Moreover, there is no frontier between Georgia and us that can create misunderstanding and hatred. Georgia has earned a lot of sympathy from us ... "(at). The Georgian society is experiencing an optimistic feeling from the Turkish side initiative, but it does not discourage the realistic reasoning of the situation. In this regard, Konstantine Sabakhtarashvili addressed the Parliament of Georgia. He pointed out that although the representative of the Angora government in his speeches underscores the good wishes of the neighboring country towards Georgia, we still have no guarantee that the Turks after their relationship with the Armenians (ie the Armenian-Turkish war conflict which is heavily influenced by the Aleksandropol Ended with the roll), they will not border to Georgia. Consequently, he believes that the basis of bilateral negotiations should have been the recognition of Georgia's independence in the boundaries of which was recognized by Russia-Georgia Treaty on May 7, 1920 (12). Finally, the general opinion of the Georgian society of that time was the following: "We believe in Angora's promises. The friendly hand-drawn by Mustafa Kemal Pasha will not be hung in the air ... "(13)

It is true that the Government's Peace Initiative and the first step towards establishing diplomatic relations with the neighboring country was a hope, but it seemed to be the second key to this relationship with the northern neighbors.

The Soviet Embassy was opened in Ankara on 7 November 1920. The famous Ambassador Shalva Eliava, appointed as the first ambassador, could not travel to Turkey due to illness, so the task of the diplomatic mission was assigned to Budu Mdivani. Maybe we did not even pay attention to this alternation of the rare fact in diplomatic relations in the history of Georgia - his brother Svimon Mdivani (7: 71) was sent to the Government of Angora as the Ambassador of the Democratic Republic of Georgia. The Georgian delegation was quite representative (1; 383: 43).

On January 31, 1921, the Georgian delegation arrived in Ankara. At the same time, the General Consul of Turkey visited Tbilisi. Georgian Ambassador officially met with Mustafa Kemal Ataturk on February 8. The meeting, which lasted for a half an hour was very interesting. It was attended by the entire staff of the Georgian representation. There was some awkwardness that the Georgian delegation did not have an interpreter. The

First Ambassador of Georgia to the Government of Angor Svimon Mdivani informed Tbilisi "... immediately send someone who knows write and reading in the Ottoman language; If this person does not come on time, my work is unthinkable and I will resurrect all responsibility (1: 386: 37).

January 8, 1921 is the date of recognition by Mustafa Kemal Ataturk Government as Georgia's nonrecognised.

How would the Turkish Republic imagine the future relationship with the neighboring country? The most obvious at that day was the head of the Government of Angora, in his speech he said: "... we are not only sympathetic to Georgia, but also the unity of the goals. We have a strong enemy in the west and we need a strong east, we need Georgia strong and independent ..." (7: 56). From this it seems that the Turkish government was attentive to the problems of Georgia, particularly the attitude of the Minister of Foreign Affairs of the Government Bekir Samy towards Georgia (1; 386: 14).

The next days of negotiations were loaded and meaningful. It clearly saw the decay of the current political situation. Bolshevik provocation by Russia in the Lore region, was the beginning of Georgia's annexation by Russia. Accordingly, this circumstance created a peculiar background in the Georgian-Turkish relationship. The first complaints about the territorial concessions were made by the Turkish side on 18 February 1921. They demanded to draw their troops in Artvin and Ardagan. In this regard, the Svimon Mdivani said in a note: "Your intentions to enter Ardagni and Artvin districts are unacceptable to us, it is a recurring historic error that old Ottoman forces forced the old Georgia to bring its ominous and devastating enemy Russia to the Ottoman's' (1; 386: 65; compare/ 4: 95). Georgia could not really fight two fronts. It was obviously a prerequisite to fight against Bolshevik Russia, so on February 20, 1921, the Commander of the Georgian Armed Forces ordered the withdrawal of his troops from Artvin and Ardagani (4: 96). Unfortunately, the Turkish side's demands are not over.

It is well known that Research Methods for History encourages those researching the past to think creatively about the wide range of methods currently in use, to understand how these methods are used and what historical insights they can provide.

The present work updated new edition has been expanded to cover not only sources and methods that are well-established in History, such as archival research, but also those that have developed recently, such as the impact of digital history research. The themes of the different question have been selected to reflect new trends in the subject, including landscape studies, material culture and ethics. Each of the reviewed issues presents new insights and perspectives and will open researchers' minds to the expanding possibilities of historical research. We have used the following core principles of the famous historical methods called 'Source Criticism':

Human sources may be relics such as a fingerprint; or narratives such as a statement or a letter. Relics are more credible sources than narratives.

Any given source may be forged or corrupted. Strong indications of the originality of the source increase its reliability.

The closer a source is to the event which it purports to describe, the more one can trust it to give an accurate historical description of what actually happened.

If a number of independent sources contain the same message, the credibility of the message is strongly increased.

The tendency of a source is its motivation for providing some kind of bias. Tendencies should be minimized or supplemented with opposite motivations. If it can be demonstrated that the witness or source has no direct interest in creating bias then the credibility of the message is increased.

The four generic methods applied in historical research outlined here - source criticism, time series analysis, the use of comparative methods and counterfactual analysis - are all vital in constructing a proper process.

The present paper discusses some issues with conducting historical research, rooted in her own experiences. The work focuses on four main points: minimizing one's own biases, choosing a suitable research question, evaluating the quality of the sources and providing a balanced interpretation of events. The work argues that using a historical approach to understand an educational phenomenon is both a fact-finding process and an opportunity to revisit one's own values, and is an important way to confirm or reinterpret what we know about current educational practices.

The relations between Georgia and Turkey is an interesting topic to study in itself, as it provides quite original example of relations between the prominent European state on one hand and the country struggling for independence on the other. This topic is also quite original, as the studies and researches in this direction have not been the common case. Although the relations between these countries have been going during nearly Five centuries, the history of political relations between them started later with the initiative of Georgian Independence Committee in Berlin and Istanbul in 1914. The declaration of independence on 26 May 1918 and restoration of independence on 9 April 1991 had been the basic points of Georgian history in the previous century. These two points happened to be crucial in the history of Georgia-Turkey relations as well, while the relations between the countries had been determined by these facts in both of the cases. Therefore we have chosen them as the two basic points in the relations.

The research has provided the case-study of both of the basic points in the beginning clarifying the main aspects of the relations followed by the theoretical explanations of these cases and clarified basic aspects, according to the inductive reasoning. The theory of political realism and the basic concepts of this theory have been used during the explanation of the abovementioned cases. The application of political realism theory to the cases of Georgian- Turkey relations led to the interesting theoretical explanations. In particular, the concept of national interests, which is the basic concept of

the political realism theory, and its changeable character, together with its priority over the commonly shared principles and values, as well as the concept of rationality, have been most helpful during the theoretical explanations of the abovementioned cases.

The relations between Georgia and Turkey is the currently ongoing process with its progressive developments during the last couple of decades. Accordingly, the examination of the basic points in the relations should be worth of interest, in order to get familiar with the basic aspects, characters and developments of these relations. The experiences earned during the past developments have their significance for the actual relations as well. Therefore the clarification and relevant theoretical explanation of the abovementioned aspects, developments and characters should be interesting from nowadays perspective and helpful for the future as well.

We can conclude, that there was a defining factor in the foreign policy of Kemal Atatürk's government that was contradicting between Russia and Entente. The wrong political course towards Turkey, programs which were worked out after the end of the first world war, which considered the separation of the Turkish state, helped not only the fight for the independence by the leadership of great son of Turkey, Mustafa Kemal Ataturk, but engaged the close relationship between Russia and Turkey. It was followed by the activity Russia in the Trans Caucasus. The 11 army of Soviet Russia gave Turkey the opportunity to advance and request Artvin and Ardagan districts, holding a plebiscite in the District of Batumi The diplomatic negotiations of Georgia-Turkey of 1921 February-March marked a difficult international situation, which played an important role in the violation of Georgia's sovereignty.

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Reengineering of Business Processes in the Formation of the Financial Security Insurance Company

The safety of any system, including the insurance company, is due to a set of certain actions and their results. They depend on the nature, method of execution, participants and resources used. G. V. Ivashchenko [1] considers the essence of "security" on the basis of system-dialogo approach. From its position, "security" is a system that has a basis, a source of origin, development and functioning and a form of manifestation.

A number of scientists, analyzing the problem of security companies, determine its essence through the concept of "security". In Particular, A. V. Kanaev [3] understands security as protection from external and internal threats, which allows to reliably maintain and effectively use financial, material and human potential. Yu Would. Krakos, N. I. Serik [4] note the definition of security as the security of financial and economic activities from adverse changes on the part of both external and internal factors.

But, it should be noted that in the scientific literature of definitions of the concept "financial security of the insurance company" is quite small. Also, such scientists as A. I. Baranovsky and Y. are engaged in this problem. W. Punk. Thus, according to doctor of economic Sciences A. I. Baranovsky, under the financial security of the insurance company as a whole and a particular insurer should be understood as a level of security of insurance companies with financial resources that would allow them, if necessary, to compensate for the losses of their customers stipulated in the insurance contracts and ensure the effective functioning of the company [5, p.559].

For Yu. V. Pankov, financial security is a state of the insurance company's finances, according to which the indicators characterizing it do not exceed the permissible limits, providing not only normative, but also effective and expedient functioning of the insurer [6]. However, these definitions require some additions. Namely, the financial security of the insurance company - is a financial condition, which is characterized by the ability to protect the financial interests of all subjects of the national economy in the insurance sector, subject to the stability of the financial performance and ensure timely payment of obligations.

The concept of "financial security of the insurance company" is closely intertwined with the concept of "financial stability", "liquidity", "solvency", "financial reliability". Financial security of the insurance company is a long-term characteristic of the financial condition of the insurance company. Most scientists note that the financial security of the insurance company - is the

ability to fulfill the obligations under the insurance contracts, provided the balance of the financial performance.

Financial security management is carried out on the basis of the financial security mechanism of the insurance company.

A mechanism is a system of elements (goals, functions, methods, organizational structure and entities) and objects of management. It is a purposeful transformation of the impact of controls in the desired state or the reaction of the control objects that the incoming parcels and the resulting reaction [7].

The mechanism of financial security of the insurance company – a set of methods, levers and tools that are used by the subjects of the financial security system of the insurance company to improve the characteristics of financial security, as well as its financial, organizational and information and analytical support [8].

The effectiveness of the financial security system of the insurance company depends on the information support, which is a process of continuous and purposeful selection of relevant information indicators necessary for the analysis, planning and preparation of effective management decisions related to its financial security [8].

The main indicators of the level of financial security of the insurance company include: capital adequacy, insurance risks, liquidity, solvency, financial stability and reliability, as well as profitability.

But it should be noted that the domestic insurance market over the past three years has been characterized by mixed trends. Thus, in the context of the financial crisis, the insurance market reacted by reducing the main indicators, in particular insurance premiums and payments, reducing the number of insurers. In the market conditions of management, the insurance market reacts, on the contrary, by the desire of potential insurers to increase the number of insurance contracts concluded. And, accordingly, the growth of the level of insurance premiums, that is, is an adequate desire of customers to protect themselves in the conditions of crisis. Unfortunately, the insurance market in Ukraine remains poorly developed, and its role in the formation of financial security is very weak [9, c.86].

That is why, given the instability of the insurance market in Ukraine, the priority for each individual insurer is to achieve stability and financial security in the long term. However, the implementation of this task is impossible without the active implementation and use of innovations. And due to the fact that management innovations are more accessible than technological ones [10, p. 148], the reengineering of business processes of the insurance company is worthy of attention among such innovations.

To determine the value of reengineering business processes of the insurance company in the formation of its financial security, it is necessary to consider the content and types of business processes.

In a broad sense, the business process is understood as a structured sequence of actions to perform the relevant activity at all stages of the life cycle of the subject of activity [11].

A business process is a set of different activities that "use one or more resources at the input, and as a result of this activity" creates a product at the output that has value for the consumer [12].

Some authors consider the business process as a set of internal steps (types) of activities to create products necessary for the client, the cost, durability, service and quality that satisfies the consumer.

Business processes in the organization are heterogeneous. In fact, organizational activity is a set of interrelated business processes that reflect the implementation of individual functions of the organization. Business processes have the following important features:

- have internal and external users;
- operate within and between units as well as between different organizations;
- based on the method of execution of works inherent in a particular organization.

There are several basic classifications of business processes. One of the most common in business practice distinguishes [13]:

- the main business processes that form the added value of the product (service); create a product (service) of value to the client; form a result, such consumer qualities for which the client is willing to pay money, focused on making a profit;
- supporting business processes that are aimed at providing the necessary internal products, internal services for business areas; ensure the functioning of the company's infrastructure;
- business development processes aimed at making profit in the long term; provide not the organization of current activities, but the development or improvement of the company's activities in the long term;
- the management processes aim to manage all three of the previous groups.

Business process reengineering (BPR) is the most radical of all approaches to improving business processes. The success of BPR is mainly based on innovation and creativity of the management team. This approach provides a new perspective on the objectives of the process and completely ignores the existing process and structure of the organization. Reengineering of business processes allows to reduce costs and cycle time of production and implementation by 60-90% and the level of errors on the 40-70%. The approach takes advantage of the opportunities offered by the available process tools, including innovative advances in mechanization, automation and information technology [13].

So, reengineering is a scientific and practical approach to the implementation of fundamental changes in the company's business processes

in order to improve its competitiveness. The specificity of reengineering is that the existing narrow specialization and the resulting multiple transfer of responsibility reintegrate into end-to-end business processes, responsibility for which from the beginning to the end take on professionals capable of performing a wide range of works [14].

One of the key concepts that is the basis of reengineering is business processes. M. Hammer and D. Champi define a business process as "a collection of different activities in which one or more types of resources are used" at the entrance "and as a result of this activity a product of value to the consumer is created at the" exit"» [12].

The experience of practical activity shows that the most effective and rational method of management of an insurance company is reengineering of business processes. That is, the systematic improvement of the business processes of the insurance company is essential for the sake of improving indicators such as: income, the level of customer service and efficiency.

Approaches that are used in practice regarding the construction of a new business model of the insurance company are reduced to three main:

1. Development of a business model of the company "from scratch". In fact, this approach is the construction of an ideal image of the company. This is the expectation of the persons carrying out the reengineering project, as well as the insurance company management.

2. Building a business model of the company on the basis of modeling the system of management decisions, followed by its improvement and construction of new business processes based on an optimized decision-making system.

3. Detailed reflection of the existing situation and the subsequent construction of a business process model. In essence, this approach is a detailed description and comprehensive analysis of key aspects of the insurance company and building processes based on the analysis.

During the implementation of business process reengineering in the insurance company, it is important to determine the main criteria for the success of reengineering. Such criteria are customer-oriented, maximum satisfaction of the customer's needs in insurance protection, ensuring competitive advantages, technological effectiveness of business processes (fig.1). Customer focus means that any actions that occur in the insurance company should be aimed at achieving a single goal, in the center of which the client and the maximum satisfaction of his needs.

The second criterion of reengineering is the construction of an organizational structure of the insurer, which would allow to effectively implement all existing business processes in order to maximize customer satisfaction in the insurance protection.

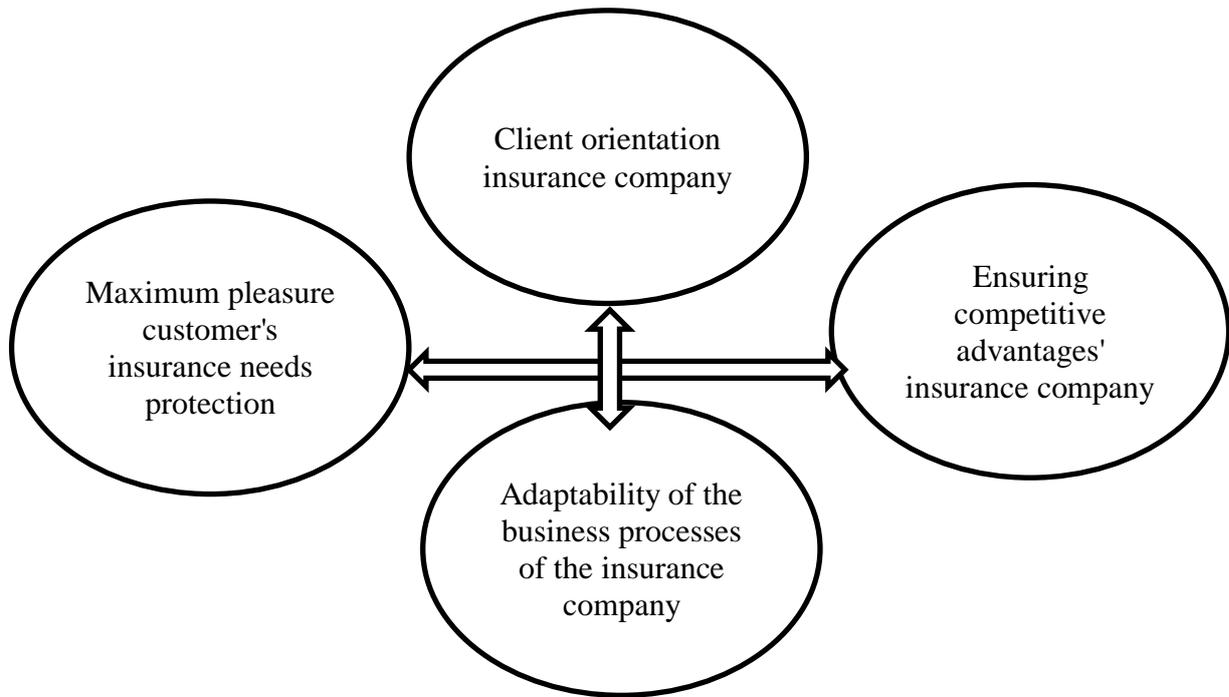


Figure 1 - The main criteria for the success of reengineering in the insurance company

In this context, it is important for farmers, thanks to the insurance mechanism, not just to compensate for the losses caused by the action of a certain risk, but to ensure the stabilization of income over time. That is, the positive effect of insurance mechanisms is to form the stability of the entire production.

The third criterion of reengineering is the creation of competitive advantages of the insurer in the process of insurance activities. The existing competition in the insurance market requires insurers to take effective measures to form mutually beneficial conditions of cooperation with farmers on a long-term basis. Under the competitive advantages of the insurance business should be understood the development and implementation of such insurance products that would be in terms of coverage and price consistent with economic interests, as well as were attractive to insurers in terms of ensuring their profitability and profitability of insurance operations.

The fourth criterion of reengineering is the technological effectiveness of business processes. The modern insurance market requires a new quality of relations between the subjects of insurance. It is stated that it is necessary to form an information field in which all participants of the insurance process would receive comprehensive information on the conclusion and maintenance of insurance contracts.

Therefore, the main purpose of the use of RBP in insurance companies is to abandon the management of functional structural units in favor of business process management by creating stable horizontal links between units, the

introduction of modern information technology, strengthening the role of the human factor and thereby improving the quality of the insurance product.

Until recently, the majority of Ukrainian insurance companies had a linear-functional management structure that did not allow flexible, efficient and fully meet the needs and demands of both sellers and customers, because in such a system operated mainly vertical connections. Linear-functional management restrained the development of economic and innovative potential of the insurer. At the present stage, a clear distribution of functions within insurance companies is gradually taking place and the relevant specialized units are formed: marketing, underwriting, loss settlement, back office, etc. On the basis of the distribution of functions, it is possible to form a fundamentally new organizational structure of the company (fig. 2).

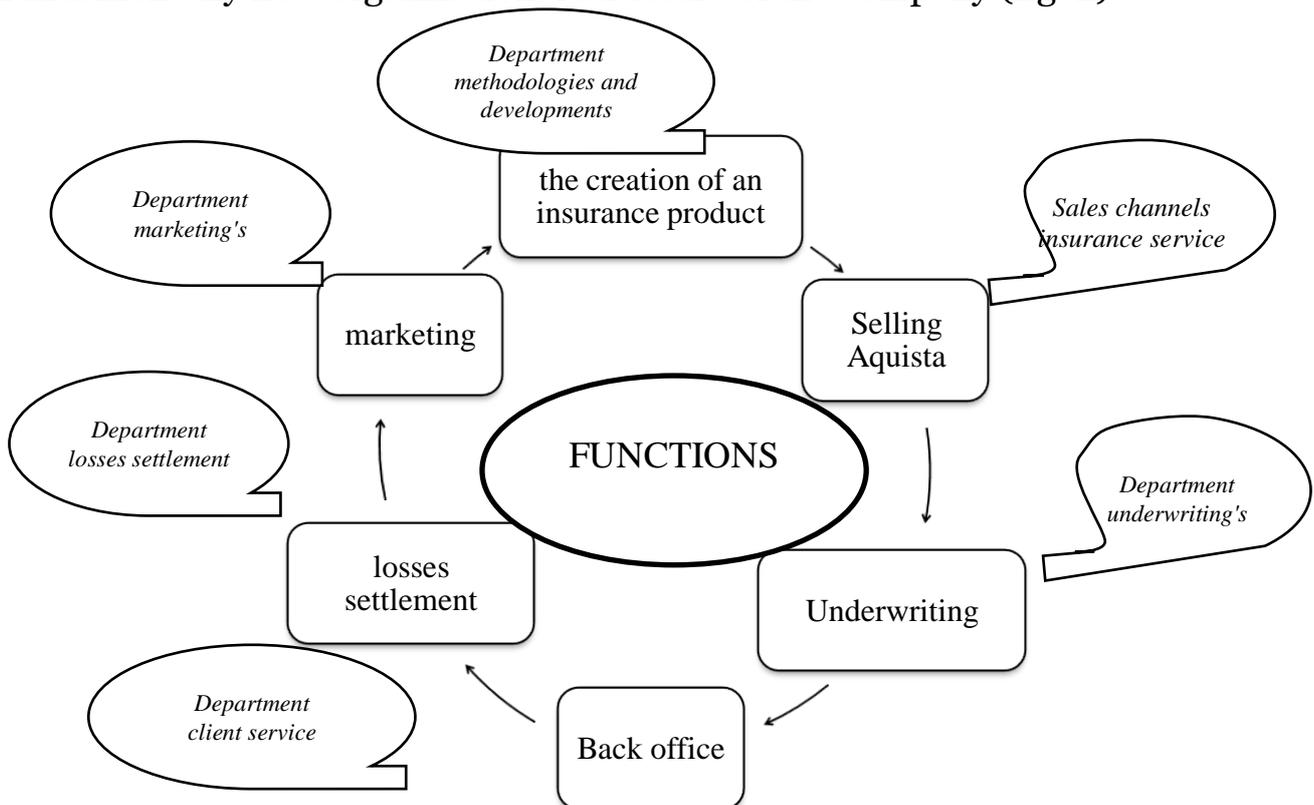


Figure 2 - The organizational model of the insurance company after the implementation of BPR

Reniera structure has the following advantages over traditional:

1. Specialized staff and a higher level of professionalism.
2. Use of employees in accordance with their psychological characteristics.
3. Dismissal of insurance salesmen from performing inappropriate functions.
4. The establishment of strong technological ties between business units, delegation of authority. The main task of the business process Manager is to

coordinate the activities of individual technological units and the business process as a whole.

5. The latest information technology allows you to quickly and efficiently serve a large number of customers.

Thus, as a result of reengineering of business processes, a fundamentally new structure of the insurance company is formed. It has clear horizontal technological links on the main business processes, which are headed by process managers. General Manager (President of the company) coordinates the work of all business process managers.

As the center of the model is the process of selling insurance services, so all business processes are focused on meeting the needs of the insurance market.

But economic instability, increased competition and the need to create a sustainable demand for insurance services are the main obstacles. All this leads to the need to use modern methods and technologies of management in the activities of insurance companies. Implementation of business process reengineering using modern information technologies will allow to form an effective organizational model of the company. Це забезпечить оптимальну взаємодію між фінансово – економічними, організаційно – технічними та інтелектуальними ресурсами. All this, in turn, will create conditions for the insurer to enter a new level of customer-oriented activities and guarantee its financial security. Thus, reengineering, as an effective management tool, ensures the transition of the insurance company from one state to another, the emergence of new properties, functions, relationships. Thus, the implementation of reengineering should be considered as a continuous process of changes in order to bring the organization to a new, qualitatively higher level, improving the efficiency of its activities and the approval of competitive positions in the market.

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Commercial Banks - the Only Way of Economical Development in Georgia

One of the best indicators to assess the development of the banking sector is the tendency of changing bank assets. We have gained information about banking assets since 2004. In the last 14 years, there has been a great progress, which in some way was conditioned by the fact that the sum total of bank assets in 2004 was 1,7 billion Gel. According to the data of July 2017, it is 26.7 billion Gel, it means 15.7 times increased. With the increase in assets, the banks' share capital has also increased. In 2004, it amounted to 400 million Gel, and in July 2017 it was 3.8 billion Gel. This means that despite the decrease in the number of banks, the Georgian banking sector is growing and plays a greater role in the economy of the country.

The necessary condition for bank development is to increase deposits. In this regard, significant progress has been observed in the last 20 years. In 1996, the deposit in all banks was 56 million Gel (1.5% of GDP) and in July 2017, it exceeded 16 billion Gel (51% of GDP). However, the population prefers to make savings in foreign currency rather than in Gel. In banks, there are deposits in foreign currencies up to 70% of the 16 billion. In recent years, the rate of deposits in Gel were increased by the devaluation of Gel rate. There are less rate of deposit growth in USD.

It is logical that growth of deposits is accompanied by a rise in loans issued by banks. In 2003, a loan of 746 million GEL (8,7% of GDP) was issued, and by July 2017 it was 22 times more than 16.8 billion Gel (52% of GDP). Due to the fact that banks have most of the deposits in foreign currency, most of the loans are issued in foreign currency. According to the latest data, 65% of the loans are issued in foreign currencies.

The interest rate on loans decreased with the rise of banking assets, deposits and loans. In 1996, the average annual interest rate on commercial banks was 61%, and in June of 2010, it was 13.1%. The interest rate was particularly fast decreasing before 2006. In 2007, it was hampered by high inflation, and in 2008-2009 - by the global financial crisis. From 2012, the rates have again returned to the decreasing tendency, which was suspended by the high risk of financial instability caused by notable Gel devaluation since 2015. Monetary policy has been toughened since 2015, which will be directly reflected on the interest rates on loans (in some cases) in Gel. Because today banks have credit resource (especially long-term resources) in foreign currencies and foreign currency is stronger, the interest rate is almost 2 times higher than loans issued in Gel than loans issued in foreign currencies. In addition, if it is a large amount and long term- loan of up to five years and more, banks prefer to give it in foreign currency (mostly in dollars).

The Financial Stability Committee of the National Bank of Georgia approved the methodology for calculation and protection of Liquidity Covering Ratio (LCR) in commercial banks on May 17, 2017. Basel III's LCR is an internationally-widespread, modern and effective approach to short-term (up to 30 days) liquidity management and provides more comprehensive identification, evaluation, monitoring and control of these types of risks. Its implementation was also recommended in the framework of the 2014 International Monetary Fund's "Financial Sector Assessment Program (FSAP)".

At today's demand, the Liquidity Coverage Ratio envisages different types of "outflow" and "inflow", according to different types of liabilities and assets. It also considers the characteristic specifics of the Georgian banking system, such as the concentration of liabilities, non-resident deposits and high share of current interest accounts.

According to the amendment, the total ratio of all currency liquidity should not be less than 100 percent in the total period. As a result, the Bank must have enough liquid assets to deal with expected outflows during financial stress. It also envisages a high dollarization of the obligation that creates an additional threat during stress, as it is restricted to the liquidity emergency plan, other measures of mitigation or the use of support instruments by the National Bank. Considering this factor, the minimal level of demand of total and separate LCR of foreign currency was defined by 100% and Gel- by 75%. At the same time, 75% of the minimum mandatory reserves of foreign currency placed by the Commercial Bank into the National Bank are considered liquid but in Gel - 100%. It is noteworthy that the amount of supervisory capital increases from 12 million to 50 million. Namely, for the current commercial banks eventual growth has been defined: by 30 December 2017 it is 18 million, by 31 December - 30 million, by 30 June 2018 - 40 million and by 31 December - 50 million GEL.

The protection of 100 percent of LCR for commercial banks is mandatory since 1 September 2017. It is noteworthy that its introduction in the Georgian banking system started since 2012 and had previously been used to monitor liquidity risk in the supervisory process. In parallel, calibration of assumptions on individual indicators of the ratio (specification of parameters) was carried out. Totally, nowadays the system has enough liquidity to meet the new demand, which will further simplify the implementation of the LCR.

The introduction of the LCR will significantly improve the prudential supervision. Besides, for the purpose of regulating long-term liquidity, it is planned to develop a net stable funding ratio (NSFR) from next year. After the introduction of its liquidity, existing demand (30 percent of short-term liabilities) will be abolished and will only be used for monitoring purposes. As a result, the liquidity risk supervisory framework will be in full compliance with the Basel Bank Supervision Committee's standards, even though all of

the above will inevitably accelerate the accumulation of commercial banks and their number will be reduced.

On the one hand, the reduction of the number of banks and on the other hand, the growth of deposits and loans, and most importantly, the reduction of interest rates shows that the banking sector is not the number of banks that are crucial to competition but the development level of existing banks. Naturally, the more commercial banks are in Georgia, the better it is, but the big achievement that in Georgia banks don't go bankrupt, must be maintained. There were cases when some banks were sold, some joined larger banks, some of them were liquidated, but these processes went so far that the depositors were not affected. This is important for maintaining confidence in the banking sector and further development.

As we mentioned, one of the factors determining economic activity in the country is the amount of loans issued by commercial banks. Over the first quarter of 2014, banks have issued more than 10 billion Gel (10,486,000,000) loan across the whole country (this data has been summarized since 2002 and it also includes loan repayment data, which is deducted from the amount of the loan taken).

In order to determine the economic activity in various regions of Georgia, NGO "Society and Banks" reviewed the amount of loans issued by commercial banks (consumer, mortgage, auto, business loans, etc.) in the regional context. Diagram: It is clear from the diagram that commercial banks issue the largest number of loans (73.6% after Tbilisi) to the Adjara region, which accounts for 6.6% of the loans issued by the entire banking industry.

Imereti region is the second place after Adjara with 5.6%; Following Samegrelo-Zemo Svaneti, Kakheti and Kvemo Kartli (3.3%) Samtskhe-Javakheti has a 1.0% share in the total credit portfolio; Guria region - 0.4%; The lowest economic activity is observed in Racha-Lechkhumi, Kvemo Svaneti and Mtskheta-Mtianeti (0.1%); In the occupied Abkhazia region the loan is not issued at all. From this data it is clear that from 10 (10,486,000,000) loan portfolio of commercial banks 7 (7,718,000,000) come to Tbilisi, while to the rest of regions - about 3 billion (2,768,000,000). These are very low indicators of economic activity in the regions and indicate their very small role in the Georgian economy, which is a negative fact for the country (there is no full use of the country's potential and resources are not efficiently spent).

Consequently, it is also reflected in the country's level of development (Georgia belongs to the low-average income group of countries where according to preliminary estimate in 2013, GNI is estimated to be 3,532.8 \$ per capita). "Society and Banks" think that it is essential to develop a state policy that will contribute to economic activity in the regions. One of such policies can be the government's new initiative, the program "Produce in Georgia", which is mainly oriented on the production and processing of agricultural products. If this program is successfully realized, then it will

improve the economic situation in the regions as well as in the country a little. After Tbilisi, Ajara is economically the most active region in terms of lending by commercial banks. It is noteworthy that based on the data of 31 December 2016, 14 commercial banks (14 branches / 70 service centers) were operating in the Autonomous Republic of Adjara.

The loans issued by the commercial banks operating in the region in 2016 totally amounted to 1 450 181 thousand Gel, including 76.6% of the long-term loans. As of 31 December 2016, commercial banks attracted 1 035 825 thousand Gel deposits, which amounted to 63.5% of the deposits denominated in foreign currency. Money transfers from foreign countries amounted to 172 307 thousand Gel and transfers - 78 232 thousand Gel.

Loans (flows), deposits (balances) and money orders (Ajara A.R.)

Loans (flows)	739 074.2	711 668.8	1 002 774.0	1 161 098.0	1 450 181.3
Short-term loan	263 237.2	222 027.1	304 892.1	339 978.2	338 541.5
National currency	111 825.1	145 962.2	212 371.2	249 544.6	251 914.3
Foreign currency	151 412.1	76 064.9	92 520.9	90 433.6	86 627.2
Long-term loan	422 824.1	481 760.1	697 766.6	821 119.8	1 111 639.8
National currency	147 177.0	226 144.2	253 370.3	263 375.4	339 682.4
Foreign currency	275 647.1	255 615.9	444 396.3	557 744.4	771 957.4
Deposits (balances)	739 729.7	326 921.0	609 545.7	779 716.4	1 035 824.9
Individual deposits	234 704.5	214 205.1	303 638.9	426 010.5	569 538.3
National currency	80 220.0	55 725.2	84 003.8	89 294.4	130 408.9
Foreign currency	154 484.5	158 479.9	219 635.1	336 716.1	439 129.4
Legal Entity Deposits	505 025.1	112 715.9	305 906.8	353 705.9	466 286.6
National currency	326 916.9	76 971.8	200 864.1	196 320.9	248 071.7
Foreign currency	178 108.2	35 744.1	105 042.7	157 385.0	218 214.9
Money transfer					
Payment	-	-	161 606.2	163 079.8	172 307.4
Transfer	-	-	58 412.6	73 399.4	78 232.7
Payment (thousand USD)			91 514.9	71 835.0	72 804.9
Transfer (thousand USD)			33 078.1	32 331.7	33 055.6

Source: Indicators are based on the data provided by the National Bank of Georgia and Commercial Banks operating in the Adjara region

The loans issued by the commercial banks in the region to economic sector in 2017 amounted to 443 919 thousand Gel. Trading has the highest share (50.3%) in sector lending. Loans to households amounted to 1 006 262 thousand Gel, with the largest share of consumer loans (46.1%). It is noteworthy that loans issued to sectors amounted to 30.6% of total loans and loans issued to households - 69.4%.

Loans given to sectors and households (flows) (Ajara A.R.)
thousand Gel

	2012	2013	2014	2015	2016
Loans	739 074.2	711 668.8	1 002 774.0	1 161 098.0	1 450 181.3
Loans on sectors	447 829.5	271 197.3	364 955.7	414 869.2	443 919.2
Agriculture	37 794.9	8 598.3	13 459.5	7 089.8	4 228.7
Industry	7 707.0	15 017.9	27 999.0	21 906.1	34 475.9
Construction	118 438.6	26 993.9	32 227.4	32 304.8	58 325.8
Trade	94 675.3	104 224.0	127 527.5	232 957.2	223 531.9
Tourism	50 486.7	14 883.4	30 963.8	22 271.7	21 686.4
Transport and communication	4 860.5	4 184.3	2 007.4	653.5	3 420.7
Financial intermediation	2 701.5	3 221.7	61 330.9	32 274.7	31 546.3
Education	1 965.7	3 393.9	275.4	786.9	1 385.6
Health Care	39 247.0	18 038.5	12 400.2	7 981.5	8 636.8
Other sector loans	89 952.5	72 641.4	56 764.6	56 643.0	56 681.1
Loans on households	291 240.1	440,501.7	637 292.8	746 228.8	1006 262.1
Consumer loan	147 783.1	208,400.8	299 258.6	334 476.1	464 455.6
Mortgage loan	51 139.1	81,333.7	103 938.8	109 827.4	227 898.4
Other loans on households	92 317.9	150,767.1	234 095.4	301 925.3	313 908.1

Source: Indicators are based on the data provided by the National Bank of Georgia and Commercial Banks operating in the Adjara region.

The loans issued by commercial banks in 2017 amounted to 4 303 Gel per capita. Loans given in Adjara region (according to the balances) account for 8.5% of the total loan portfolio of the country's banking sector. At the same time, the rate of dollarization of loans issued by commercial banks operating at the regional level amounted to 59.2% and the dollarization rate of deposits - 63.5%.

According to the above mentioned, we can conclude that without commercial banks in Adjara households would die because their activity was 70% linked to the credit of commercial banks.

As for sectoral loans, only 30% of all loans are available, which can be explained by the following: first - small business opacity. It does not exactly comply with tax legislation, and does not always have the knowledge of business planning and banking. And of course, no bank gives money blindly if it is not aware of the client's business and credit repayment sources.

The second problem lies in the absence of credible bail. They do not have the property to pay the bail and the business itself is weak.

The third and most important factor is the bank's distrust towards a small business. Smaller enterprises, as a rule, tend to be smaller in comparison with large enterprises in the market, and most of them have failed to overcome the latest crisis. Therefore, there are few small enterprises that have sustainable and successful, good credit history on the market. Even if the bank has appropriate programs for small businesses, the loans issued by these programs are not often available for entrepreneurs due to their high prices.

Some indicators of Banking Sector (Ajara A. R.)

	2012	2013	2014	2015	2016
The amount of loans (flows) per capita of the region (Gel)	1 877	1 805	2 528	3 473	4 303
According to balances/the share of issued loans in the banking sector loan portfolio (%)	6.8	5.7	7.2	7.9	8.5
Loan (flows) dollarization (%)	63.5	46.8	53.6	55.8	59.2
Deposit (balances)dollarization (%)	44.9	59.4	53.3	63.4	63.5
Loan (flows) ratio to the total VAT of the (%)	44.1	39.6	49.2	52.9	-
Deposit (balances) ratio to the total VAT					

Source: Indicators are based on the data provided by the commercial banks operating in Georgia's statistics, NBG and Adjara regions

Accordingly, without the decisive action of the state, the small business situation will still remain silent as it is today.

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Budget Decentralization as a Necessary Condition of the Regional Development

The chapter considers the problems of budgetary decentralization in Ukraine as a necessary condition of the regional development. Based on the study of this problem, the author concludes that if one considers budget decentralization as a process of filling local budgets through the redistribution of tax payments, such an approach will not lead to real changes in the regional economy and will not enable to really improve the living standards of the regions. The article substantiates that today the question is not only about filling the local budget, but also about the quality of financial management, which reveals the true meaning of the decentralization, namely: giving the regions greater freedom to use funds collected in the form of local taxes in order to improve living standards of the population, develop the regional economy on the basis of effective use of the local budget resources.

Actuality of the topic is seen due to a real increase in the decentralization of public administration in Ukraine and the emergence of a functioning local self-government institution, improvement of the mechanisms of interaction between different levels budgets within a single budget system of the country, development of incentives for effective and responsible activity of territorial authorities in the fiscal area.

There is a need to study the problems of fiscal decentralization, creation of the practical recommendations for the development of municipal finance in terms of decentralization policy held in Ukraine.

This study is based on the provisions about the need of the budget decentralization, which should be based on the expansion of financial freedom in decision-making and on raising the level of responsibility of local self-government bodies in the budgetary sphere. That is formulated in the works of J. Wallisom, V. Outsom, T. Zang, H. Zou, as well as in works of domestic researchers O.O. Moldovan, T. Salo, I.O. Lunina and others.

In the works of these authors is raised the issue of the public administration decentralization, especially in terms of the need to increase economic efficiency. On the basis of the theory of the public sector and public finances are being developed the variants of development of regional economies, their financial support, including through the use of budgetary decentralization mechanisms.

Of particular importance is the issue of fiscal decentralization in the context of the reform of intergovernmental fiscal relations, which is being conducted in Ukraine, which defines the purpose of the article - to consider budget decentralization as a necessary condition for regional development.

Decentralization of the public administration and finance sector today is one of the key factors of the budget system high efficiency. This process takes

place not only in federative countries and countries with historically influential positions of local authorities, but also in countries with a unitary system, such as Ukraine. According to O. Moldovan, budgetary decentralization is not a consequence of the political or historical processes, but to a greater extent it is deliberately used as a mechanism for increasing the efficiency of distribution and use of budget funds [8].

It should be noted that the resolving of the problem of fiscal decentralization in Ukraine is a part of a more general problem of ensuring the effective functioning of the multi-level budgetary system, the main purpose of which is to create conditions for the effective and responsible execution of authorities at all levels of their functional powers within the resources of the respective budgets. This means that, in the process of the budget decentralization, conditions must be created for:

- Providing public goods in accordance with the needs and benefits of the local population ("self-government is created to ensure local interests");
- Increasing the responsibility of local authorities for fulfilling their functions, and hence for the efficiency of spending of local budgets;
- Increasing of expenditures of local budgets depending on the own incomes growth and development of economy of the corresponding territories [7].

It should be noted that in terms of theory, the significant contribution to the development of modern scientific ideas about the content of fiscal decentralization belongs to the English economist V. Outs, who proposed its definition: "decentralization is the right of independent decision-making by decentralized units" [13].

The meaning of the decentralization lies in the fact that regional and local authorities have the opportunity to make decisions on financial matters and territorial management issues on their own. Even at the very beginning of the development of this theory, thirty years ago, J. Wallis and V. Outs put forward the provisions on the correlation of centralization and decentralization in public administration. According to these researchers, the wider the is, the less centralized, on other equal terms, should be state governance (the factor of territory); the larger the population of the country is, the less centralized should be state governance (population factor); the higher the proportion of population concentrated in cities is, the less centralized should be state and regional governance (the factor of social infrastructure); the higher the level of income per capita is, the more centralized should be the public administration and its participation in programs related to the redistribution of income (the factor of the state's investment dependence on the economy); the more diverse is the demand for public services is (which results from the uneven distribution of revenues across regions), the less centralized and otherwise equal conditions should be the control of the state and regions (the factor of social dependence of the state on the economy) [15].

Analysis of works [7; 10] shows that the researchers do not question the fact that decentralization in the budgetary sphere has the benefits that manifest itself when comparing public spending and benefits.

It should be kept in mind that if decentralization does not affect the level of expenditure, then decentralized management or more efficiently centralized, or at least does not yield to it in terms of efficiency. Decentralization is effective if cost increase overlap.

The budget decentralization aims to solve two main tasks: firstly, to increase the allocation and productive efficiency of the functioning of the budget system. Due to decentralization, public services can be organized and provided in such a way that they are most in keeping with the wishes of local residents, that is, to ensure that allocational efficiency is increased or the quality of distribution of available resources between the directions of their use. Along with this, decentralization is accompanied by an increase in the efficiency of the budget system functioning, ensuring the accountability of local authorities to its population and reducing the number of instances in which it is necessary to coordinate the decision, as more powers are given to local authorities, who are better informed about the local specifics and the local needs. So, decentralization, in its broadest sense, involves the transfer of more significant powers to local authorities so that they can make decisions on incomes, expenditures and regulatory regulation on their own. Local government is closer to the population, it knows better its needs and therefore can better meet its needs than the central government. The proximity of local government to the population also contributes to the strengthening of civic activity, increased transparency of power and increased its being controlled by the population.

Secondly, an important argument in favor of decentralization is the fact that different public goods have different coverage. So, national security services are used by citizens of the country, and the benefit of inland waterways or the availability of forests is available only to residents of specific regions. Public utilities - such as garbage collection, street lighting, etc., are addressed to residents of specific settlements, and their needs will be uneven in different regions. Since the central government can not take into account such a diversity of benefits in each region or locality, the production of various public goods must rely on different levels of government. This means that at the lower level of government are fixed all taxes (profit), expenses and regulatory powers, with the exception of those powers that can be convincingly shown that their consolidation at the lowest level of government is ineffective. Providing public goods only through the institutions subordinate to the central government is associated with significant costs: with the same approach to all territories in some territories will be overproduction of public goods, on the other - their underproduction.

An important advantage of the decentralization is that the administrative autonomy creates the precondition for learning, finding new approaches, and

improving the overall quality of management. Decentralized systems can provide greater stability, as local autonomies limit the ability of the center to pursue the fiscal or monetary policies at its discretion. Real decentralization, which involves tightening budgetary constraints and selectivity of local authorities leads to a reduction in the budget deficit.

Finally, a decentralized decision-making process can evaluate different decision options, stimulating the dissemination of best practices. It is very important that the powers are being transferred to the level that is really capable to carry out those or other necessary measures and is interested in their results [14; 16].

At the same time, the clear structuring of delegated and self-governing bodies of local self-government should be accompanied by a gradual transition from budget support to budget regulation aimed at increasing the autonomy of local authorities in the area of tax and credit policy [11].

It should be also noted that the intentions of the fiscal decentralization in Ukraine were announced in 1998, but it was not comprehensive and was not accompanied by an administrative-territorial reform.

The problem of decentralization became extremely urgent after 2014, when the issues of the reform were included in the agenda of the parliament and government, when the non-viability of the principle of democratic centralism in the organization of public administration was confirmed [5].

In 2014, the Concept of the local self-governance and the territorial governance in Ukraine was approved. That was supposed to ensure the creation of an appropriate material, financial and organizational conditions and staffing to ensure that local self-government bodies had their own and delegated powers [4].

In the same year, the Law of Ukraine "On Amendments to the Budget Code of Ukraine on the Reform of Intergovernmental Fiscal Relations" was adopted, which substantially changed the financial flows between the state and local budgets in favor of the latter [9].

Different levels budgets received an additional resource by changing the rules for paying income tax, deducting administrative service fees for local budgets; appearance of 5% of retail sales; changes in the proportion of deductions for environmental taxes - 20% to the state budget, 80% - to budgets of other levels; property tax reform (expansion of the tax base); deductions to regional budgets 10% of income tax, which previously fully came to the state budget.

In addition, local budgets received a number of additional bonuses - the right to choose banks to store and maintain their own funds at their own discretion, to approve their estimates independently, without binding to the state budget [1].

According to the Cabinet of Ministers of Ukraine, as a result of the decentralization of power reform, the system of financing has been changed and were found funding instruments for regional and local development that

allow local authorities to effectively solve and prevent local problems. As a result, the number of subsidies to local budgets reduced on 25% [2].

Significantly increased revenues of the local budgets. Thus, for the first half of 2017, the revenue of the general fund of local budgets of Ukraine increased by 34% compared to the same period last year and amounted 87 billion UAH, which is 22 billion more than in 2016. In the first half of 2017, the revenues of local budgets of the territorial communities increased almost twofold, amounting to UAH 3.9 billion (+1.9 billion). Income per capita has also increased almost twice from 640 to 1256 UAH (growth rate - 196.2%) [3].

Undoubtedly, the strengthening of the financial base of the regions should be evaluated positively and these results are a significant achievement made by the Ukrainian government.

However, despite the fact that communities receive the full range of powers and financial resources that form the conditions for their rapid development, there are no significant, fundamental changes in the life of the regions. This is due to the lack of readiness of local authorities to manage finances at a new level of responsibility, so that this reform did not fully address the problems of the development of Ukrainian regions on the basis of budget decentralization [5; 7].

It should be noticed that the empirical studies, in which the relationship between the economic growth and the intergovernmental relations is studied, are mainly focused on such an aspect of these relations as the degree of the fiscal decentralization. In the study [12], the growth model was supplemented by a public spending by governments of different levels and empirically verified on a sample of developed and developing countries. At the same time, the authors put forward the hypothesis that fiscal decentralization positively influences national economic growth, has not found confirmation. It is hypothesized that such an outcome could be caused by inefficient financial management, low return on investment, which the local authorities are investing in the development of a regional economy.

It can be concluded that the further work aimed at improving the mechanism of the fiscal decentralization as an important condition for the regional development in terms of improving the quality of financial resources that are now available to the regions. In this context, we can formulate the following provisions on which to build a system of local taxation.

1. Tax revenues should mainly cover the needs of the local budget. At the same time, the system of the local taxation should not be the only source of the local financial budget. There are many other ways to address the problems of regional development through the use of the progressive methods of organizing a regional economy (regional scientific and production clusters), cooperation between local authorities and business in solving regional development problems, issuing municipal securities, etc.

2. In the regions it is necessary to actively implement methods of program-target budget planning, which will enable to increase the efficiency of budget expenditures.

3. Ensuring the growth of incomes and, accordingly, meeting its growing needs is impossible without establishing an appropriate control over the use of the local budget funds by the community. Researchers point out that the taxpayers themselves have to control the spending of local government budgets. Western researchers pay much attention to issues of the public control, which provides a fairly wide range of tools and is built, first of all, on the principles of the municipal government transparency and the participation of society in its formation. This control is also ensured through the adoption by the state of special regulations on disclosure of information, public hearings, voting, petition, expertise, journalistic investigations. As a result, officials are constantly paying attention to their activities on the part of society, which increases the responsibility for the decisions taken, and the efficiency of the use of funds available at the disposal of local authorities increases.

Obviously, such directions do not exhaust the whole variety of possible ways to increase the efficiency of budget decentralization. However, these directions, in our opinion, are capable of improving the quality of this process in the near future, and actually contribute to solving the problems associated with the use of decentralization in the system of public administration of the economy and social development.

Summing up, we will once again point out the need for fiscal decentralization as a necessary condition for the regional development. At the same time, let us draw attention to the fact that if we consider budget decentralization solely as a process of filling local budgets through redistribution of tax payments, then such an approach will not lead to real changes in the regional economy, will not allow to really improve the living standards of the regions.

Nowdays it is not just about filling the local budget, but also about the quality of financial management, which reveals the true content of decentralization, namely: giving regions greater freedom to use funds collected in the form of local taxes in order to improve the living standards of the population, development regional economy based on the effective usage of local budget resources.

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Solvency of Insurance Company and Financial Sustainability Analysis in Georgian Insurance Companies

Development of insurance in Georgia covers 28 years. Since 1990, based on one insurance company (Aldagi) establishment and by functioning 14 insurance companies in the modern period, insurance market still cannot be considered as developed. Out of 18 insurance products offered to customer only 4-5 create the basis for financial sustainability. Many factors influence the development of insurance sector: specific nature of insurance product, insurance culture, socio-economic condition of the country, qualification level of employees in insurance companies.

On the initiative of the National Bank and Insurance Supervision Service, before insurance companies has been imposed requirement in 2015: only for establishing as a joint stock company. This requirement on the one hand gets closer the Georgian insurance market with European legislation and on the other hand makes the insurance activity more transparent. Based on the specificity of the activity, the financial stability of the insurance company, is not only the desire of the company but it is the obligation of the Insurance Supervision Service by current rules and legal regulations ensure financial sustainability of the insurance market of the country, as a guarantor, in public or business activities, despite the incurred losses, with the possibility of reproduction.

The financial stability of the insurance organization implies the possibility of fulfilling liabilities by using all existing assets. Financial stability is ensured by authorized capital with the obligations undertaken by adequate insurance reserves. Therefore, it is very important for insurance company being in constant payment mode. Solvency and liquidity in the economic literature in some cases are considered as same concepts, and in some case they are separate concepts. The insurance activity which by income and expenses structure differs from other production structure, above mentioned financial sustainability assessment criteria should be considered separately.

Quick liquidity coefficient of the company by quick realization of assets evaluates the possibility of covering short-term liabilities. The high rate of this coefficient is not considered to be enviable, as high liquidity in commercial bank implies on the current account cash outlets excessive placement, that indicates the wrong management of financial resources. High rate of quick liquidity in case of insurance companies is justified. Since the insurance company should be able to use reserves free any time to fulfill the existing liabilities. What is more important assessment indicator for insurance company?

Great part of the insurance contracts is concluded for a term of one-year, that's why the company's willingness to pay a liability should be considered in short-term period. Assessment of financial sustainability by such approach is justified by fast liquidity indicator. Solvency is a broader concept and includes not only ability to cover liabilities in short term, at any period of time, in the insurance by risk realization, the insurance company itself detected in a risky condition, to maintain its financial stability.

Thus, the part of insurance reserves, which the company receives as an insurance bonus for each insurance contract concluded, should be assessed by quick liquidity coefficient and in the force majeure situation decisive role should be given to the solvency.

The process of regulation of insurance activities starts from 1946. Gradually has been improved solvency calculation method, which is in relevance with the requirements of the insurance market of developed countries. One of the essential elements of solvency calculation is the solvency margin, the concept first emerged in Great Britain in 1946. According to the concept the companies, which are specialized on insurance services, except life insurance, General assets should exceed common obligations, 10% of the amount of insurance premium. According to Sigma data, in insurance sector except life insurance, from 1978 until 1994, throughout world 648 insurance and reinsurance companies became insolvent and has been observed strengthening this tendency. (J. François Outreville....). Only in 1992, has been registered more than 80 cases of bankruptcy. The risk of solvency risk is higher when the market is weakly regulated. The countries with strict rules like as Sweden, there is not any case of insolvency of insurers detected.

In 1980s first in Finland and then in Great Britain has been established „Finnish Solvency Working Party” and „British Solvency Working Party” which aimed to study the solvency of insurance companies. The task of these groups was to create models of insurance processes and study of the methods of modeling. The modern European legislation was created on the basis of these directives, New standards for statistical data collection were developed on the basis of „Finnish Solvency Working Party “, „British Solvency Working Party “. In the 70s of the twentieth century, within the boundaries of European Union was acting concept, according to which before the beginning of insurance activities:

- The paid part of the authorized capital should not be less than the value of the guaranteed fund;
- Minimum guarantee fund should be 1/3 of the solvency reserve.

According to the requirements solvency entered, which entered into force in 2004. Minimum warranty fund, increased marginal value of statutory margin calculation in insurance (except life insurance). The liquidity capital structure has been changed. Enhanced control over the insurers, Since the necessity of fulfilling the demand for solvency has been established at every moment of time (and not just at the moment of making financial statements).

The rights of supervisory bodies were expanded, in terms of interference with the insurer's activities. Solvency obliges the insurers to use solvency normative margin and minimum guarantee fund.

In 2016 has been developed solvency-2, the program of solvency evaluation of companies, according to which from January 1, 2016 was conducted the monitoring in 28 European countries. Including Great Britain. The meaning of program is not only Capital Adequacy Requirements, but also has been expanded the control of boundaries. In particular, according to the directives of solvency-2, the insurers will be required besides solvency and management of reserves, follow up amortization, corporate management, supervision reporting, publicity of information, risk assessment and management principles. The present requirements have been established in the form of Pillar I-II-III. We will discuss demand of Pillar 1, for the analysis of the problems in the thesis:

1. Solvency Capital Requirement (SCR);
2. Minimum Capital Requirement (MCR).

SCR is calculated by using a standard formula or according to the internal model of regulatory bodies; MCR is calculated as linear function of defined variables: It should not be less than 25% and it should not exceed 45% Solvency capital of the insurer.

It is important for Georgia to associate with Europe. That's why it is important to get closer to Solvency II directives. This requires first of all to create a basis for calculation margin of solvency.

Under the Directive of European Legislation, the Insurance Surveillance Service made the most significant changes in the insurance sector during 2016. In 2016 has been approved, the rule for calculation of the margin of solvency, which was the basis for financial solidity and calculation of own capital required for solvency. The calculation of margin is regulated by order N15 of September 1, 2016 of head of the state insurance service of Georgia about "Approval of the rule of calculation of the margin of solvency by the insurer in carrying out insurance activities" according to the following rules:

Solvency I today includes calculation of solvency margin according to the following base: for non-life insurance 18% below 50 million Euro bonuses and 16% - for bonuses over 35 million Euro or 26%- for losses below 35 million Euro or 23%-for losses above 35 million Euro. New directive Solvency II provides growth of minimum capital requirements, as well as risk management and supervision in the accounting and economic context. By order of 2015 the minimum capital requirements of the Georgian market have been replaced for registered insurer and increased up to 2-2.2 million GEL.

Solvency margin amount during the reporting period (SCR) defined by relying method of bonuses and losses between largest index and will be calculated by following formula:

$$SCR = \text{Max} \{SR_P, SR_C\}, \quad (1)$$

where: SR_P – payment indicator calculated on the basis of bonuses;

SR_C – the solvency indicator rate calculated on the bases of the losses.

Insurer, which performs insurance activities for less than three (three) full calendar years, the cost of the solvency margin calculates by using the method based on the premiums.

The insurers mentioned in the thesis carry out their activities for more than three calendar years. Therefore is applied the rule based on the calculation of the solvency margin and is estimated the condition of Georgian insurance market.

Based on loss method, the solvency margin size will be calculated by average amount of corrected Gross losses and calculated by the following formula:

$$L = \frac{GIC_1 + GIC_2 + GIC_3}{3}, \quad (2)$$

where: L - For purposes of calculation of the margin of solvency, amended Average Annual Reports value;

GIC_1, GIC_2, GIC_3 – the amount of Net losses we have received for i given year.

The average amount of Net losses (L) divided into two parts and summed up by the formula:

$$B = L_1 \times 0.26 + L_2 \times 0.23 \quad (3)$$

where, L_1 – is amended average annual loss, which is equal to or less than 70,000,000 (seventy million) GEL

L_2 – is amended average annual loss, which is more than 70,000,000 (seventy million) GEL.

To calculate the solvency rate using the relaying method of losses, the amount (B) received by formula 3 multiplied to the containment coefficient, which calculated by the ratio of the sum of net losses to the past three years by following formula:

$$SR_C = B \times \text{max} \left\{ \frac{NIC_1 + NIC_2 + NIC_3}{GIC_1 + GIC_2 + GIC_3}, 0.5 \right\}, \quad (4)$$

where the concepts and indications used have the following meaning:

NIC_1, NIC_2, NIC_3 – The amount of net losses given for i given year;

GIC_1, GIC_2, GIC_3 – the amount of gross losses for i given year, so:

a) The amount of the existing gross losses for each calendar year is the amount of reimbursement claims and the sum of changes of loss reserves;

b) The amount of net losses equals of gross losses minus amount of reimbursement losses by the reinsurer and declared but in the reserve of unregulated claims difference between the final and initial balance of the reinsurer's share;

Solvency margin calculated by current method is evaluated according to the volume of supervisory capital, in particular in accordance with the Order No. 16 of September 16, 2016 of the Head of the Insurance Supervision Service of Georgia „The amount of insurer's supervisory capital should exceed 75% of the margin of solvency obtained by calculating".

By the methods used in Georgia, namely using the method of calculation based on the calculation of the solvency indicator (SRp) is calculated insurance company “GPI Holding” Solvency margin.

Table №1: “GPI Holding” losses statistics 2015-2017

Year	Gross incurred losses (changes in revised losses reserve)	Incurring NET Loss
2015	52521554	33193000
2016	46842564	42589000
2017	62158002	60988000

Source: Individual financial reporting data (audit conclusions), insurance.gov.ge

Let's calculate the corrected average annual losses;

$$L = \frac{GIC_1 + GIC_2 + GIC_3}{3} = \frac{52521554 + 46842564 + 62158002}{3} = 53840707 \text{ GEL.}$$

Let's calculate according to Formula 3, to achieve the accuracy of the solvency margin.

$$B = L_1 \times 0.26 + L_2 \times 0.23$$

PS. since incurred Gross losses size according to the specific years and also losses average value is less than 70 000 000, we receive:

$$B = L_1 \times 0.26 = 53840707 \times 0,26 = 13\,998\,583,8$$

To calculate the margin of solvency, let's calculate the containment coefficient:

$$\text{Containment coefficient} = \frac{NIC_1 + NIC_2 + NIC_3}{GIC_1 + GIC_2 + GIC_3} = \frac{33193000 + 42589000 + 60988000}{52521554 + 46842564 + 62158002} = \frac{136770000}{161522120} = 0.85$$

Based on the received data, let's calculate the solvency margin:

$$SR_C = B \times \max \{ 0.85 \} = 13\,998\,583,8 \times 0.85 = 11\,853\,400 \text{ GEL.}$$

Accordingly, supervisory capital of the insurer shall not be less than the total amount of margin of solvency received by calculation (Order No 16 of 16 September 2016). We should consider here, that the company is partially subsidiary of the Vienna Insurance Group, so the surveillance capital is

calculated by the rules developed by the Georgian Insurance Supervision Service.

Company Supervisory Capital bases on data of 31 December 2017 (individual financial statements of JSC GPI Holding's 2017, audit report) is 14 950 000 GEL.

Therefore, $14\,950\,000 > (SR_c)11\,853\,400$; I.E. The company preserves the solvency and supervisory capital ratio, indicating its financial sustainability

Table №2: The share of insurance products in the the portfolio of the company

GPI Holding	Medical Insurance	Life Insurance (not accumulative)	Property Insurance	Other 12 Insurance Products
2017 წელი	47,48%	15,68%	15,0%	21,845

Source: *insurance.gov.ge-Insurance Supervision Service, Statistical Information*

The financial stability of the insurance company has more loading compared to another type of enterprise. Other types of enterprises are known for the amount of liabilities and repayment periods. In different types of enterprises there are known in advance amount of liabilities and repayment periods. The risky nature of the insurance activities poses financial risk and the financial sustainability index at the beginning of the reporting period does not mean that the balance will be maintained at the end of the reporting year.

Financial sustainability should be derived from the possibility of reimbursement of insurance claims and not by liquidity indicators or profitability indicators. These indicators evaluate the financial position of the company as a business entity, and the financial sustainability of the principal operation of the ratio of attracted bonuses and compensated losses. Therefore, we consider that by using mathematical statistics rules and methods, financial risk to be assessed and determined the risk of its change. For this reason, let's use "GPI Holding" financial statements for the past 10 years.

Stages of calculation:

I stage - Calculate financial sustainability based on the attracted bonuses and reimbursement losses for each year;

II stage - Calculation of the mathematical average of financial sustainability indicators;

III stage - Calculation of average standard deviation;

IV stage - Risk Quality Assessment.

Due to the fact that the finances determining financial sustainability is stochastic, at the same time it is difficult to unite the expected losses on different portfolios, considering using a simplified method of risk assessment.

$$FS = TI / TE,$$

Where, FS—financial sustainability, TI – Total Income, TE - Total expenses.

Table №3: Indicators of Financial sustainability 2010-2017

	2010	2011	2012	2013	2014	2015	2016	2017
Earned premium, net	55348	56067	60085	73570	64627	50597	63217	80,225
Commission and Investment income	6959	3 472	7475	4977	7348	9470	9321	9 014
Total income	61389	49446	67542	78547	71975	61067	73538	89 239
Insurance losses, net	36480	37743	47266	57991	49931	33193	42589	60988
Other expenses	12271	12398	14295	13774	15333	7259	23829	21557
Total expenses	48751	50151	61 561	71765	65264	53808	66418	82545
Indicator of Financial sustainability (%)	79,4	-101,42	91.14	91,36	90,67	88,11	90,31	92,5
PS.	The higher the financial sustainability rate, the financial condition of the company is weaker.							

Source: Insurance supervision service, audit report of insurance company^გs 2011-2017, insurance.gov.ge

Results

The information in the table shows that the financial sustainability of the company is stable since 2012, which is mainly generated by premium and reinsurance. Reinsurance will only reflect sustainability maintenance on company activities. Income from investment activities is generally represented by a small share of Georgian insurance companies. The reason for this is the lack of accumulative and recoverable life insurance underdevelopment. Solvency Margin Ratio with Supervisory Capital and Financial Sustainability Indicator by 2017 certifies financial stability of the company.

II stage

$$M(FS) = \frac{79,4 + (-1.42) + 91.14 + 91.36 + 90.67 + 88.11 + 90.31 + 92.5}{8} = 77.75$$

III stage

$$\sigma(FS) = \sqrt{\frac{\sum_{i=1}^8 [Xi - M(FS)]^2}{8}} = \sqrt{\frac{\sum_{i=1}^8 [Xi - M(FS)]^2}{8}} = 4.43$$

Type the equation here.

IV stage

$$\text{Var} = \frac{\sigma(FS)}{M(FS)} = \frac{4.43}{77.75} = 5.70\%$$

Increased risks in market economy conditions change the data that cannot be predicted with high accuracy. According to the given calculation is established, that financial sustainability index change risk is around 6%. The given quantity certainly is not alarming for other types of companies, but means the growth of index in the table in 6%, that the company "GPI Holding" will turn out in a crisis situation. Aforementioned confirms the share of the insurance products. In particular, 47,48% holds medical insurance, which decrease in terms of improving the general insurance conditions in the country. This is another reason for reducing financial sustainability in the future.

The research identified financial sustainability problems of the insurance company:

- Lack of insurance products offered on the market;
- Non-development of Life accumulative Insurance;
- Low level of investment opportunities;
- Reinsurance share does not exceed 20% according to the total reporting but on tradable products about 75-80% attracted premiums are transferred to reinsurance, which in turn affects financial sustainability;
- Low level of insurance culture in population, due to low income;
- Huge number of insurance incidents that reduce the company's reliability.

Financial sustainability is an important indicator of determining the life insurance capability of the insurance company. Its calculation method is discussed in different scientific papers, where authors propose a different approach. The algorithm presented by us is simple, depending on the given point, the possibility of covering insurance liabilities is a factor in determining sustainability. Above listed problem- expansion of insurance products - requires the increase of acquisition costs, but as the financial statements of the company reveal that acquisition costs are presented in other expenses at the highest level, consequently, the conclusion is that along with the financial problems of the population, the agent's level of professionalism is low.

Increasing number of insurance policies as a cohesive coefficient of financial sustainability, as well as the algorithm given in the thesis, is also important data. In terms of dependence on insurance for its growth, we consider that property, responsibility (both civil and professional), means of transportation, freight, fulfillment of liabilities, introduction of mandatory life insurance form. Together with these measures, it is necessary to reduce the

number of insurance suits, the deadline for determining the lawfulness of claims and payments terms.

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The Competitive Advantages and Disadvantages of Slovakia in Achieving Global Competitiveness

The term competitiveness of the economy began to be used from the end of the 1970s, became more widespread in the 1990s, when international economic organizations began to conduct regular assessments of the competitiveness of countries and regions. The most cited Global Competitiveness Rating is presented annually at the World Economic Forum in Global Competitiveness Report. The Global Competitiveness Rating is based on the global competitiveness index GCI (Global Competitiveness Index), which since 2006 is the main indicator for a comparative assessment of competitiveness on a global scale. Each country is evaluated on the basis of an analysis of a wide range of individual hard (quantitative) and soft (qualitative) indicators that characterize the competitiveness of national economies. The Global Competitiveness Index is calculated on the basis of a multi-criteria evaluation of 12 key indicators (pillars), which determine the three main factors (sub-indices) of competitiveness. According to the methodology developed by the World Economic Forum, a standard seven-point scale is used to assess the benchmarks for the global competitiveness index GCI to ensure compatibility in the expression of quantitative (hard) and qualitative (soft) values of indicators. The best rating is represented by 7 points. The higher the score, including in the rating of values, the better is the final result of the analysed economies.

At present, competitiveness ratings are becoming a common source of multilateral information about countries and their place in the global economy with increasing influence on the formation of economic policies of individual countries and international integration groups. In particular, as a result of discussions on ways to achieve leadership in the global market in the EU, two 10-year strategies have been developed since 2000 aimed at increasing overall competitiveness in the EU and overcoming differences in competitiveness between EU member states.

Authors of publications from different countries use WEF as the primary source of data in their analyses and recommendations [Šikula, M. (2006), Staničková, M., Melecký, L. (2013), Malý, J. (2014), Spertsyan, AM (2016), Varcholová, T., Dubovická, L. (2018)].

The most recent 2016-2017 edition of Global Competitiveness Report assesses 138 economies. The Global Competitiveness Report 2016–2017 has benefited from the dedication and collaboration of 160 Partner Institutes worldwide. The GCI combines 114 indicators that capture concepts that matter for productivity and long-term prosperity. Two thirds of indicators come from the Executive Opinion Survey representing the sample of business

leaders (quality indicators), and one third comes from publicly available sources such as the United Nations (quantity indicators). The variables are organized into 12 pillars with the most important including: institutions, infrastructure, macroeconomic framework, health and primary education, higher education and training, business sophistication and innovation. The GCI score varies between 1 and 7 scale, higher average score means higher degree of competitiveness.

1 Competitiveness analysis of Slovakia according to the WEF methodology

Using the WEF methodology, we demonstrate the competitiveness analysis of the Slovak republic (SR). Table 1 shows the positions of Slovakia in the global competitiveness ratings selected from the WEF reports over the last 13 years. The best estimates for Slovakia refer to the period of years 2006-2007 (37th place). Based on the above global competitiveness assessments, it should be noted that Slovakia significantly reduced its rating from 43rd place in 2004, when it was admitted to the Eurozone, to today's 65th place, which represents a significant economic problem.

Table 1

Slovak republic in the Global Competitiveness Reports

Period assessments	The number of states in the report	GCI rankings / score of Slovak republic
2004-2005	104	43 / 4.43
2005-2006	117	41 / 4.31
2006-2007	125	37 / 4.55
2007-2008	131	41 / 4.45
2008-2009	134	46 / 4.40
2009-2010	133	47 / 4.31
2010-2011	139	60 / 4.25
2011-2012	142	69 / 4.19
2012-2013	142	71 / 4.10
2013-2014	144	78 / 4.10
2014-2015	144	75 / 4.10
2015-2016	140	67 / 4.20
2016-2017	138	65 / 4.28

Source: *The Global Competitiveness Index, Scores 2004–2017*

Table 2 presents the Slovakia rankings of the GCI 2016-2017 and scores according to the sub-indices and key indicators (pillars). It should be noted that within the three competitive sub-indices Slovakia has achieved the best results for Sub-index B: *Efficiency enhancers* (47th place, 4.38 points out of

7). The lowest result is presented by the factor of 7th pillar: *Labour market efficiency* (93rd place, 3.98 points out of 7). Unspent results for Slovakia are noted in the Sub-index C: *Innovation and sophistication factors* (57th place; 3.71 points out of 7). The lowest results are for the 12th pillar: *Innovation* (68th place, 3.32 points out of 7), which is now considered the key to success in the global competitiveness of each country. An unsatisfactory situation is characterized by assessments of the competitiveness of Slovakia and the first Sub-index A: *Basic requirements* (54th place, 4.74 points out of 7). The most critical is the 1st pillar: *Institutions* (102nd place; 3.48 points out of 7).

Table 2

GCI 2016-2017 rankings of Slovakia

Global Competitiveness Index, Subindexes, Pillars	Rank out of 138	Score (1-7)
Global Competitiveness Index	65	4.28
Subindex A: Basic requirements	54	4.74
Pillars:		
1 – Institutions	102	3.48
2 – Infrastructure	61	4.24
3 – Macroeconomic environment	37	5.28
4 – Health and primary education	55	5.96
Subindex B: Efficiency enhancers	47	4.38
Pillars:		
5 – Higher education and training	61	4.54
6 – Goods market efficiency	53	4.45
7 – Labor market efficiency	93	3.98
8 – Financial market development	33	4.56
9 – Technological readiness	44	4.79
10 – Market size	61	3.99
Subindex C: Innovation and sophistication factors	57	3.71
Pillars:		
11 – Business sophistication	55	4.10
12 – Innovation	68	3.32

Source: *The Global Competitiveness Report 2016-2017*

All these facts indicate that Slovakia should take adequate measures to improve its position in the global competitiveness ranking. A prerequisite for their implementation is a more detailed analysis of estimates for all the factors listed, with the predetermination of competitive advantages and disadvantages.

2 Competitive advantages and disadvantages of Slovakia by WEF evaluation

Further we will focus on the analysis of competitive factors with the identification of a positive and negative impact on the position of the national economy in the global ranking. All the factors of competitiveness assessed in the reports of the WEF will be divided into two groups: the first group of factors will express advantages, and the second - the shortcomings existing in the managing of the economy. The advantages will be presented by factors with a better rating than the average position of the Slovak Republic (65th place, 4.28 points out of 7) in the global competitiveness ranking, disadvantages as factors that are lower than the overall average assessment of the global competitiveness index of Slovakia.

Sub-index A: Basic requirements

The position of Slovakia, according to the evaluation of the 1st Sub-index A: *Basic requirements* (54th place), is better than the final position of Slovakia (65th place) in GCI 2016-2017 rankings. Disadvantages are associated with a key factor of the 1st pillar: *Institutions' quality* (102nd place). For this factor, a total of 21 indicators / variables were evaluated, 16 of them rated below the final position of Slovakia. The most serious problems are in the functioning of institutions in public administration represented by following indicators: *Favouritism in decisions of government officials* (136th place), *Wastefulness of government spending* (118th place), *Burden of government regulation* (131st place), *Efficiency of legal framework in challenging disputes regs* (133rd place). Regarding factors of 2nd pillar: *Infrastructure* (61st place), Slovakia is lagging behind in the development of aviation and shipping. The other key factors of 3rd pillar: *Macroeconomic environment* (37th place) and 4th pillar: *Health and primary education* (55th place) took the better position in comparison with the final position of Slovakia in this rating.

Sub-index B: Efficiency enhancers

Position of Slovakia in Sub-index B: *Efficiency enhancers* (47th place) is better than the final position of Slovakia (65th place) in the Global Competitiveness Rating 2016-2017. As for individual factors, the critical situation is mainly related to the quality of the education system within 5th pillar: *Higher education and training* (61st place). Competitive advantage is only *Internet access in schools* (32nd place). Disadvantages represent these indicators: *Quality of the education system* (117th place), *Quality of management schools* (104th place), *Local availability of specialized training services* (87th place).

According to our experience, one of the reasons for the low-quality of universities is the fact that in order to meet the Europe 2020 target of achieving a 40% share of young people aged 30-34 with university education, especially eastern EU countries have set up new universities at the expense of their quality. According to Eurostat, the share of young people aged 30-34

with university education averaged over the EU has risen from 31.1% in 2008 to 39.1% in 2016, which is clearly an approximation to the target set. For example, in Slovakia in 1989 there were 13 universities, in 2000 their number increased to 23, currently in Slovakia there are 35 universities. This situation also exacerbates the permanent departure of talented scientists abroad.

According to the 6th pillar: *Goods market efficiency* (53rd place), the lowest score was received by the *Total tax rate % of profit* (112th place) and the *Buyer sophistication* (108th place) instruments of economic policy (out of 16 indicators, the position of 9 indicators is better than the final position of Slovakia). The situation is bad in terms of the indicators in the group of factors of the 7th pillar - *Labour market efficiency* (93rd place), where seven out of ten indicators are below the level of Slovakia's final position, the biggest problems are related to *Effect of taxation* (136th place) and *Country capacity to attract talent* (132nd place) with high taxation of workers and employees, as well as the lower ability to attract and retain talents.

For a group of factors of 8th pillar: *Financial market development* (33rd place) and 9th pillar: *Technological readiness* (44th place) only one from eight, and accordingly, one of seven indicators are below the final position of Slovakia (65th place). Of the indicators for the group of factors of 10th pillar: *Market size* (61st place), two indicators ranked above the final position of Slovakia, and the other two are below Slovakia's overall ranking in the global competitiveness rating.

Sub-index C: Innovation and sophistication factors

The position of Slovakia in the latest sub-index C - *The factors of innovation and experience* (57th place) is better than the final position of Slovakia (65th place) in the rating of global competitiveness. This sub-index includes two groups of factors: 11th pillar: *Business sophistication* (55th place) and 12th pillar: *Innovation* (68th place) Problems within 11th pillar factors are noted in 5 indicators: *Local supplier quantity* (87th place), *Nature of competitive advantage* (75th place), *Control of international distribution* (74th place), *Extent of marketing* (74th place), *Willingness to delegate authority* (92nd place). The following four indicators: *Local supplier quality* (36th place), *State of cluster development* (51st place), *Value chain breadth* (53rd place), *Production process sophistication* (30th place) are estimated above the final place of Slovakia in the ranking of global competitiveness.

Out of the seven indicators of the 12th pillar: *Innovation*, four are above and three below the level of the final position of Slovakia. First of all, it is necessary to pay attention to solving problems concerning following indicators: *University-industry collaboration in R & D* (82nd place), *Gov't procurement of advanced tech. products* (76th place), *Availability of scientists and engineers* (98th place). The other four indicators: *Capacity for innovation* (61st place), *Quality of scientific research institutions* (62nd place), *Company spending on R & D* (64th place), *PCT patent applications / million*

pop. (37th place) ranked higher than Slovakia's overall ranking in the global competitiveness ranking.

Factors of these groups characterize the ability of national economy to ensure competitiveness through the introduction of scientific developments in high-tech production processes and services. Therefore, for the future of sustainable development in Slovakia, it is necessary to make structural changes that contribute to improving the efficiency of the economy on the basis of innovative growth.

The creation of a competitive economy is a challenge for governments of countries that want to achieve success in a global competition and thus provide employment for the population and raise living standards. Summarizing the assessment of the competitiveness of economies on the global competitiveness index GCI for 2016-2017, it should be noted that Slovakia among the 138 countries of the world took 65th place, and among the EU-28 member states 24th, worse than Slovakia are only the positions of the four other states of the European Union: Hungary, Croatia, Cyprus and Greece. Particularly worrying problem about the unfavourable trend of the development of the Slovak economy in the ranking of global competitiveness, where Slovakia, starting from 2006 is lowering its position from the 37th place to today's 65th place. It is seriously necessary to reflect on the fact that Slovakia lags behind not only the economically highly developed countries, but also the EU member states that have also embarked on the path of economic transformation. Based on the results of the GCI score assessment, it is recognized that Slovakia is significantly weaker in terms of competitiveness than with its comparative economies, therefore it is necessary to take measures to improve the efficiency of the economy. As an inspirational guide, there may be assessments of the advantages and disadvantages of the WEF version given in this article.

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Japanese Model of Management

No other management model has attracted so much attention as Japanese. Almost none of the countries in the world is not so widely brought in international comparison studies in management issues as Japan.

Japanese companies are working successfully in many countries. They invest investments in foreign countries, the latest technology and introduce new types of management systems which are popular in Japan. Japan as the country with scarce natural resources used effectively their human resources and able to be scientifically meaningful, proper management of the Second World War and the disastrous legacy of the country in a short period of unprecedented prosperity.

Japanese management has become valuable in the world and many foreign companies have started their management system and the introduction of transmission. Japanese innovative management imports supported the local governments, because in this way they were interested to perfect the local production, create new markets through the introduction of competitive products and contribute to the country's economic strength. These processes are carried out intensively in different countries.

In the process of globalization it is impossible without usage of innovative, existence of competitive enterprises and development of modern innovative management. The development of economic is depended on about how perfect and proven management systems implemented and managed business in Georgia. In this sense, the Japanese and the transfer of the management to adapt to Georgia significantly contribute to the development of business and economic improvement. The theme is not new to the world, but it is actual for Georgia. It's not long time as there is a variety of enterprises started to innovative management methods. They need to be further refined, and the continued introducing of new methods in order to establish itself the global economic system.

A lot of works were devoted to Japanese management issues in western scientific literature and over the years the debate over whether the Japanese management methodology borne in other countries.

The interest with Japanese management was particularly actual in the early nineties in Georgia. This was a time when Georgia had to choose their own model of development and its natural, that the interest in the management of the world's experience was high. This period was marked by high economic growth in Japan. Economies of many western researchers proved argumentatively that the such a high growth rate economic development was due to the special features of Japanese management. This situation was not left unattended by Georgian researchers' works.

Georgian economic idea and interest of the Japanese management researchers went into two directions: On the one hand, Georgian scientists studied managing of the State's management and observation on the effects of other countries. On the other hand, a special focus of the management of the human phenomenon of Japanese management. HR particularly noteworthy aspect of the professors found. I.Meskhia, G.Kupunia, M.Gugeshashvili, I. Masurashvili and others works, and the state and national level, it was studied by G.Jolia, E. Baratashvili, I. Bulia, I. Iashvili and others.

The researchers of Japanese Management pay a great attention of Japanese successful transfer to the organization and the organizational culture to transforming. In this regard, the Georgian researchers have interesting observations as well, particularly N. Paresashvili and K.Chitaladze point out that the globalization of the world economy and the instability of the managers working on the impact on both the internal and external factors. These are the main causes of changes in the organization. The changes are inevitable due to technological development and often act as the driving force behind its laws and regulations. The Georgian authors of the amendments to the methods of implementation divide into three categories: structure changes, technological changes and personnel changes. Also it is mentioned that the structure of change include any modification of the power hierarchy, coordination mechanism, the level of centralization, rights, obligations or other structural parameters. Technological change is the fulfillment of the work methods or devices used for modification. The staff changes include changes in staff relations and behavior.

Overall, it should be highlighted that the study of Japanese management in Georgia had fragmented nature and limited to the specific details of the census system. Japanese management was taken as a model but, not as that system, which would be applicable to the economic environment. However, the researchers feel that culture should have been the main axis, the base of which it would be possible to adapt the management of Georgia, the Japanese / checkout / use. Their work shows that the difference between the cultures of the Japanese management made the transfer possible barriers. They realized that a clear impact on the Japanese management to neighboring countries, which have had a kind of cultural proximity to Japan. General cultural phenomenon of great interest to Georgian researchers studying the subject as the main basis for the future management of the Japanese rely on the receptor country.

Reviewing of innovative management founding aspects

The last decades of the world's leading governments, major business leaders, scientist, politicians are observing with great interest, introduced and learn business development reforms in Japan. It has established itself in the world, "The interest of Japanese phenomenon economic miracle, which is still

not diminished. Japan is still successfully maintains absolute leadership in many high-tech fields. The country carried out a reasonable imitation of micro and macro-economic transformation has brought a rise in such countries as Singapore, Thailand, Taiwan, South Korea, Malaysia, New Zealand, Hong Kong and China. Recently, more and more European and American governments are trying to encourage local firms and their leaders to learn about the peculiarities of the Japanese management and local circumstances have been relocated to the grounds of his time-tested methods of modern management.

The world economic and scientific circles no longer believe that the Japanese economic success is due to the historical accident, or their hard work and fanaticism, ethnic merits if the old traditions, etc.

The Japanese people's significant economic success and the achievements were explained by religious sentiments and ethnic traditions that it was justified that the Japanese of fanatic zeal be the main cause of high labor productivity. We believe that such views lack of information is the main cause.

One of the goals of the work is to scatter such beliefs, because such kind approaches is barrier of development of innovative manufacturing management in Georgia. Priori, biased, subjective approach, which is often the economy of certain circles rumors, prevent the enterprises management and prevents young managers deeper and study the Japanese production management have been well established, evidence-based management methods, its strategy and tactics, which in today's business reality production efficiency, raising labor productivity and increase the export potential.

The well-known scientist B. Milner believes that modern Japanese management system is the most flexible and efficient mechanism, which was formed after World War II the development of large enterprises in the conditions¹. It points out that scientific and technological progress is accelerating and rising competition on the world market in terms of American and European business leaders to cross the methodological crisis management, which are revealed in the 70s and 80s. In this regard, the most important place in the Japanese production management experience, which is more fully utilized "human factor", is open to the creative possibilities. Because of advances in scientific analysis and management of modern Japanese life with the introduction of European and American firms are on the agenda, so that they can sustain a successful work of the internal and external markets.

In one of the USA Congress reports was made an analysis of the Japanese management, where it was mentioned: "Many aspects of the management of the Japanese system can be transferred to the USA, despite

¹ Milner B.Z. Japanese paradox, Moscow, "Thought" Publishing House, 1985.

the different social conditions. Especially this applies to staff management methods, which is used to maximize the potential² of the people. "

During the Second World War and the atomic bombing destroyed the country's government, was put forward by a small business to recover. Japan has since then unheard of, unprecedented success. In this country, the government and businesses close relationship stands out, which produces a significant economic impact on the kind of reforms and laws, which leads to the development of enterprises in the normal mode, a small business in overcoming the problem.

Japan is a country with little natural resources; it only survives their living in the country's export of high-quality products. According to data of 2014 Japan has the third largest national economy in the world after the US and China³. It is the world's fourth largest exporter and importer in the country at the same time. Japan's remarkable achievements in economic development are based on a unified management strategy, which is aimed at guaranteeing the development of the Japanese economy in its objectives in all areas. A famous Japanese researcher K. Ohmae notes: "Japanese management system is not a result of the Japanese tradition, but also a pragmatic mechanism that exists in just 35 years⁴.

The great victory of Japan was the industrialization of the country's population policy implementation relatively full employment. They have selected the fields, where they could gain the initiative. By concentrating their forces and not dispersed to other areas. In this strategy, the tactical steps have been taken. Japanese imports were equipment and technology, after years of studying, observing, improving advanced technologies imported from other countries. They were not originally known as innovators, but also as a simulator. The best engineering talent employed in factories, where all efforts were mobilized more product durability, reliability and quality to achieve, rather than to improve its design. The Japanese were able to be competitive in price and quality correlation gained a significant advantage in world markets. Japan has shown the world that the efficient production and quality control of advanced methods covered by the transportation and customs tariffs (constraints) in the costs of overseas markets. They have demonstrated that cultural barriers to be solved and successful enterprises are transferable abroad. Japan today is regarded as a symbol of quality in the world. If the Western European and American firms defects permissible limit values of the standards to measure: How many hundreds of defective products must be issued for every thousand pieces of the product, the leading Japanese firms for defective products must not exceed the number of units to 3.4 million in the finished product⁵.

² Japanese and American and Economic Policies and US Productivity. 1987.

³ World's largest economies. <http://money.cnn.com>

⁴ Ohmae K., *The Art of Japanese Business*, McGraw-Hill, 1982.

⁵ Anthony Inman... 2011: <http://www.referenceforbusiness.com>.

The current discussion on the topic in scientific society whether the Japanese management methodology borne in other countries should be remarked in the business world. Japanese researcher, Morishita said that the Japanese have created a unique, characteristic only for the management system⁶. According to Choudharis, only a few items of Japanese management can be considered a cultural-specific, while others can be regarded as universal categories, which are used by Japanese companies in various forms in many foreign countries⁷. Choudhari has said that the cultural-specific control elements cannot be moved to another country.

As a result of analysis of management systems in Japanese and American firms, Japanese researcher O.Askvini concludes that a significant share of the Japanese management methods has been moved to other countries⁸. From some works we find out cultural school followers argumentative critic, according to which long-term employment practices, workplace intensive training, horizontal management system frequent staff rotation and firm inside of the gradual promotion is not a tradition of cultural specifics on the planet, but has been developed by Japanese companies to rational experience and practice (Beechler S . 1994). For example, Beechler and Young remark that the Japanese management of transfer depends on changes of receptor country's economic environment and organizational characteristics. Important factors identified by local laws and regulations, local staff professionalism and other socio-economic factors.

Existing scientific studies major in terms of both disagrees: researchers of the group develops the idea that because the general staff management methodology and practice of human relations system that the economic environment is going on and it's a business relationship with the world is the same everywhere, or very similar, based on the Japanese management Move can easily be made in other countries. They note that if Japan in their own country from the US management of many items copied and subsequently the adaptation and development (for example, the quality of the band's first American enterprises have been developed, and after the second world war the Japanese companies have been developed, which makes Japanese management is one of the strengths of the) , then why should it be a problem, other countries from Japan to the management of the respective elements. The second group of researchers in the opposite position (Hoque K., 1981). They argue that the Japanese management is part of the Japanese culture and because each country's unique culture, so it's difficult to move to a different culture and countries.

It is also taken into account all conditions to compromise decisions between these two extreme positions that it is totally impossible to transfer Japanese management in a given receptor country's economic development

⁶ Morishita Yoici 2001:<http://unpan1.un.org>.

⁷ Choudhury 2000: <http://www.insead.edu>

⁸ Ouchi W.G., 1981: Ch. VIII

levels, political situation, regulatory standards, country's traditions and other differences, however the Japanese management elements can be successfully moved to another country and this success is even provided, which is closer to the cultural traditions of the country receptor Japanese culture.

Transferring Japanese management in Georgia creates methodological basics of cultural characteristics, which are determined by both the management culture. Hofstede describes a method for enabling (Hofstede Geert, 1994: 46). Geert Hofstede describes in his famous book "Culture and organizations: the sense of the mind", the management culture has divided several categories: 1) individual-collective culture; 2) power over the distribution of culture (power distance culture); 3) uncertainty avoidance cultures (uncertainty avoidance culture); 4) individual-collective culture, 5. Management masculine culture (masculinity culture); 6) management of feminine culture (femininity culture). By using them, he explored a variety of basic management systems, whether these systems it was possible to move to another country. He speculated that the leadership, motivation and decision-making principles of the universality of a foreign management elsewhere to be used, however, the transfer of their success or failure is due to the fact, if the managers of the cultural environment of the work place and how will they adapt to a given situation. Hofstede describes cultural dimensions, Georgia and Japan, and the similarities and differences in the management of the traditional experience of the comparison are necessary to identify each of the country's cultural properties.

All of the above discussion we can clearly see that as in Japan as in Georgia is characterized hierarchy of sharply higher premium rate for society by the distribution of power.

In Japanese organizations are not oppressed individual self-expression and the needs. On the contrary, it is deeply respected Confessional traditions, according to which, honesty, selflessness, respect loyalty and obedience to the head are fundamental values of (Hiromi Muto..1995). Collective community, kinship, family ties and the Japanese industrial layers as well for the support, which is characteristic of a clan society. W. Ouchis studies, Japanese companies with employees in the management structures of the clan systems are derived from the company's work for the newly selected employees are well-socialized and because of the company's visions and approaches to respond to assimilate. New employees have to work in a familiar environment. For them it is not strange to recognize clan relationship between company leadership and commitment. The company does not need to control and supervision of a staff of daily effort is necessary, as they are doing what may be advantageous for the company to maximize the benefit. The company plays an important role in the survival in a competitive company for the benefit of dedicated service. Often such commitment goes scarifying service staff by refusing to return his personal aspirations.

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Environmental Culture: a Fundamental Principle of the “Green” Economy

The peculiarity of modern society development is spreading of globalization processes in all spheres of human activity. Within last fifty years humanity has achieved a considerable scientific and technical progress which led to an increase in its material welfare. A rapid growth under conditions of industrialization and urbanization gradually increases an anthropogenic load, water and air pollution come about, and the level of natural resources exhaustion also grows. It should be noted that such model of development can lead to exhaustion and degradation of nature capital, cause huge environmental risks in the future and make sustainable development impossible. Recent numerous crises are a symptomatic evidence of this model [1]. Environmental problems gave an impulse to a search of new ways of development, which would enable the renovation of natural resources and at the same time would be aimed at the preservation of social welfare by means of an efficient use of the environmental constituents. Therefore a new paradigm of sustainable development – a “green” economy – emerged, took shape and is currently developing actively. A new system of constructive views upon rational and efficient use of nature capital is the basis of human existence. A global environmental crisis can be prevented by forming environmental consciousness and culture in future generations. A timely understanding and resolution of global environmental problems depends on the level of quality environmental and economical culture of the population, therefore a thoughtful treatment of nature by people reveals itself not only in the ability to use its fruit. A very important fact is that the awareness of the nature and natural resources significance became an inner achievement of the personality.

The objective of the research is the analysis of the essence and preconditions of the emergence and peculiarities of the formation of the environmental culture as the fundamental principle of the “green” economy in modern conditions of the sustainable development of the society.

The research was conducted by means of studying monographic works, empirical analysis, use of historical analogy methods, induction and deduction, analysis and synthesis, systemic and comparative methods, interpretation and systematization of facts.

A “green economy” – is a trend in the economy, within the framework of which it is considered that economy is a dependent constituent of the natural environment, within which it exists, and is a part of it; it is aimed at the preservation of social welfare by means of rational use of natural resources, and also the return of final products back into the production cycle [4].

United Nations specialists in environmental protection (UNEP) regard the “green” economy as an economic activity, “which increases the welfare of people and ensures social justice and at the same time decreases the environmental risks significantly and reduces environmental deficits” [5].

The term a “green economy” was first used by a group of leading scientists: D. Pearce, A. Markandya, E. Barbier in the report “Blueprint for a Green Economy” issued by the British Government in 1989 [7].

Danish scientists define a “green economy” as a process of transformation which levels the disproportions and dysfunctions of the modern economy and results in human welfare and fair access to resources for each member of the society under conditions of the environmental and economic unity [10].

In the studies of the international UNEP organization it is mentioned that the concept of a “green economy” “... can resolve current tasks and facilitate the development of the global economic development strategy” [8].

A “green” economy focusses on the satisfaction of human needs taking into account the interaction with the environment, and the welfare of future generations is the top priority. In other words, a “green” economy is a system of kinds of economic activity, connected with production, distribution, exchange and consumption of goods and services, which result in the increase in human welfare in a long-term perspective; at the same time future generations are not subjected to considerable environmental risks or environmental deficit.

A “green” economy theory is based upon three postulates:

- ✓ impossibility of unlimited extension of the sphere of influence in a limited space;
- ✓ impossibility of satisfaction of ever growing needs in conditions of limited resources;
- ✓ everything is interconnected on the planet [6].

In the classical concept characteristics of the “green” economy comprise the following aspects: economic, social and environmental.

The essence of the economic aspect consists in the following tendencies: the introduction of renewable energy sources; improvement of the system of waste management; improvement of the system of water resources management; organic farming; development of “clean” transport; application of energy efficient technologies in housing; reduction in the volume of waste due to the implementation of waste-free production cycles.

The social aspect of the “green” economy provides for the following: the achievement of social justice; a decrease in social inequality; the achievement of an adequate standard of living and welfare; social balance and stability; gender equality; social development.

The environmental aspect features an interconnection between the economic and social development: adherence to environmental safety; reduction in environmental risks, deficit; decrease and rational consumption

of various goods; protection, conservation, renewal of natural resources; prevention of irrevocable loss of ecosystem services; conservation and renewal of forest, land and water resources; reduction of environmental pollution caused by carbon dioxide emissions.

A “green” economy is formed and develops in accordance with a certain system of principles, which are defined by various researchers, international organizations and national documents [3].

In 2011 the European Environment Agency in its report “A „green” economy: a review of the European environment estimates” [12] outlined the following main principles of the “green” economy:

- ✓ orientation towards ensuring sustainable development;
- ✓ equality and justice both within one generation and between generations;
- ✓ caution concerning potential influences upon the society and environment;
- ✓ an adequate accounting of natural and social capital (e.g. by means of inclusion of external social and environmental effects, a “green” accounting, an accounting of losses throughout the whole life cycle of products);
- ✓ sustainable and efficient use of resources;
- ✓ a contribution in the achievement of the available macroeconomic objectives by means of creating “green” working places, eradication of poverty, increase of competitiveness and enabling growth in the main spheres of economy [3].

The given list of principles characterizes the ways of interaction between the society and natural, historical and social environments.

A modern model of the “green” economy emerged under the influence of continually growing environmental problems, risks of anthropogenic catastrophes, destructive processes became more intensive than the renewing ones, i.e., humanity became aware of the fact that it stands before the choice of new ways of development, a new paradigm of existence. Actually the “green” economy should be regarded as a co-evolutional strategy – a strategy of the sustainable development of the society, culture and consciousness of the humanity, which will make the achievement of sustainability of the “correct” economy possible.

If we take into account the above-mentioned issues and combine them with the trends in the modern global socio-economic relations development, then it is expedient to single out one more principle of the “green” economy – the principle of environmental culture of the population, the formation of environmental values and knowledge in the process of distribution, exchange and consumption.

It is impossible to ensure the prevention and resolution of environmental problems using the efforts of environmentalists, entrepreneurs, engineers, lawyers, as well as state authorities, international and public organizations alone. In order to achieve the set goals, preserve the

environment and improve the environmental safety, the population should be involved actively, regardless of their social and cultural status. The culture of population's involvement in solving complex environmental problems is traditionally high in Denmark, Switzerland and other countries, and controversial issues are considered at national referendums [10].

At the conference in Tbilisi [13], which was held in 1977 on the initiative of UNESCO and UNEP recommendations for the members of the international community concerning the environmental education development were harmonized and accepted and they were set forth in the document – Tbilisi Declaration. It states that education is given the main role in the environmental problems awareness (the principle of continuity of environmental education).

Three main goals of environmental education are formulated in the declaration [13]:

1. Development of a quality understanding and sense of responsibility, thoughtfulness as regards economic, social and environmental interdependence in urban and rural regions;

2. Providing each person with equal possibilities for gaining knowledge, realization of values, demonstration of attitudes, an ability to take responsibility upon themselves, and obtaining necessary skills for protection and conservation of the environment;

3. Formation and creation of new types of behavior of a person, a group and society in general as regards the environment.

It should be noted that Tbilisi Declaration defined the main trends in the environmental education development, initiated the systems of training of the population, corresponding to a modern concept of the sustainable development of humanity. The Declaration contains methodological recommendations for the states as regards the development and implementation of the environmental education [13]:

- ✓ to conduct the training of managers in the environmental sphere;
- ✓ to develop the school curricula corresponding to the environmental needs on the local, regional and international levels;

- ✓ to issue textbooks and special scientific literature for carrying out the curricula;

- ✓ to define the methods and means of education, to apply modern methods of presenting visual material, required for popularization of educational environmental programs.

According to the Law of Ukraine “On the Fundamental Principles (Strategy) of Ukraine’s State Environmental Policy for the Period until 2020” a continuous environmental education for sustainable development has to be directed at the realization of the following goals:

- ✓ an increase in the level of social environmental awareness, responsibility;

- ✓ the improvement of the quality, level of the environmental culture in the society, safety and comfort of the living environment by means of environmental education;
- ✓ provision of a systemic environmentalization of the spheres of economy, fields of life activity of the society by integrating environmental policies, education, ethics into programs of state, sectoral, regional and local development;
- ✓ conservation of biological and landscape diversity by means of environmental upbringing and enlightenment of the young people, formation of respect to nature as a source of vital force;
- ✓ enabling the implementation of innovative programs ensuring environmentally balanced use of nature, in particular by means of environmental education for sustainable development;
- ✓ development of the partnership “society-education-administrative power-business”; educational support of the improvement of regional environmental policy, harmonization of local plans of actions concerning the environmental protection and educational programs [2].

The main content of the environmental education has been forming and structuring gradually and collaterally in different countries under the influence of a rapid development of technological sphere and huge volumes of environmental pollution connected with it. Environmentalization of education is an important trend in the formation and development of the “green” economy. In the light of modern understanding the following sections should be included in the environmental education: general ecology, studying the main regularities of the environmental systems existence; engineering, transport, agricultural, medical ecology; social ecology; urban ecology; landscape ecology, etc.

It should be mentioned, though, that environmental education is not limited to scientific and technical aspects, but also reviews various humanitarian issues: human rights, responsibility to future generations, the behavior of economic agents, environmental consciousness, the system of values. All the acquired knowledge, beliefs, aspirations, needs have to enable the growth of the environmental consciousness, namely, they should be reflected in the practical activity of the people. Therefore all forms of distribution of the information about nature protection and ecology should be applied in an attempt to enlighten the population and facilitate the formation of environmental values.

Environmental education is a continuous system of learning, accumulation of the experience of previous generations, self-development of attitudes aimed at the formation of personal values, standards and rules of behavior in the process of obtaining special knowledge about the environment, natural phenomena, biosphere, which people apply in their socio-economic activity.

At the same time, environmental education provides an absolutely necessary theoretical knowledge concerning an efficient and rational use of nature, environmentalization of production and that is why it is important to apply the acquired knowledge in the environmental education, facilitate the formation of moral attitude and conduct the environmental enlightenment.

Environmental education is a practical application of the acquired environmental knowledge by people, the formation of awareness regarding the unity and wholeness of nature, understanding of a person as an integral link in the environment.

Environmental enlightenment lies in the distribution of the environmental knowledge and experience that facilitates the formation and development of the environmental culture. The environmental enlightenment is aimed at all social groups, it should be reliable, of high quality and exciting as the ideas of rational use of nature are advocated with its help.

A combination of the environmental education, environmental enlightenment and environmental upbringing enable the formation and development of the environmental culture.

As O. Untilova points out, the term “environmental culture” was introduced by a culture expert L. Kogan in 1973. Nowadays a number of the environmental culture definitions are offered which brings about a diversity of approaches to its studying. Further O. Untilova explains that the environmental culture is a relatively independent system of the spiritual and practical sphere, the main constituents of which comprise environmental consciousness, environmental and cultural values, environmental behavior which provides for their interdependence on various hierarchic levels: of the society in general, social groups and individuals [14].

Proving that a high level of the environmental culture is the basis of the society development S. Glazachev, Ye. Kogai suggest the following definition – the environmental culture is people’s treatment of their natural place of residence, their social surroundings, their treatment of themselves as parts of nature. Accordingly, the environmental culture characterizes the ways of society interaction with nature, historical and social environment [15].

V. Kryshchenko notes that the environmental culture connects two worlds: the one of the natural environment and the inner world of a person. By its objectives the environmental culture is directed at the creation of harmony in nature and the upbringing of vital values in the life of a human [16].

Proceeding from the above mentioned characteristics, it is important to mention that the environmental culture is a combination of the historical experience of person’s vital activity in cooperation with the environment, which facilitates a healthy lifestyle, sustainable development of the society, prevents the emergence of the preconditions of technological and environmental problems, forms the conditions favorable for the “green economy”.

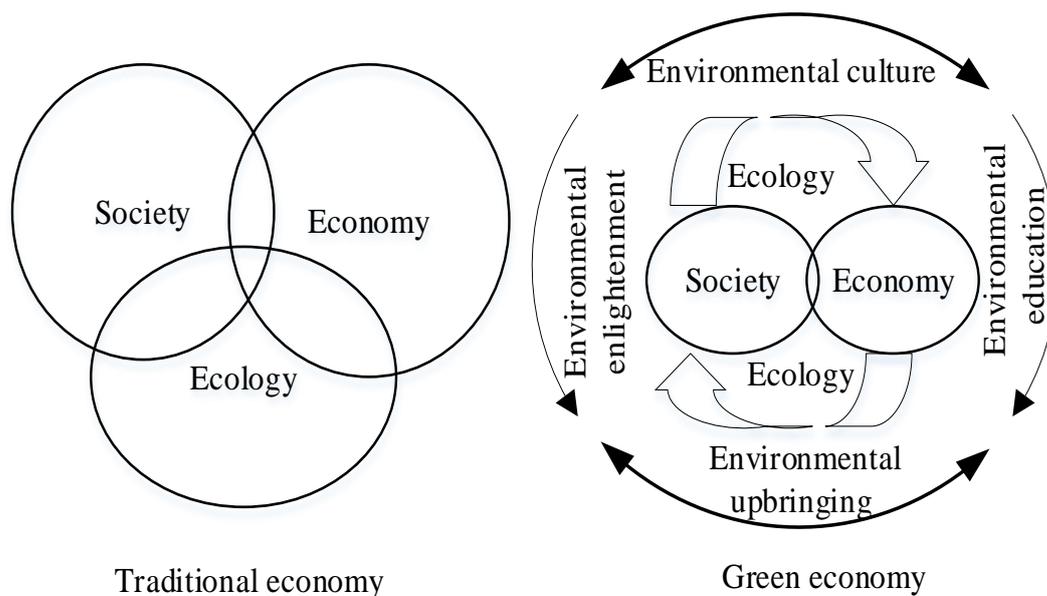


Figure 1 – Comparison of the “three circles” model

Source: [11].

The model of the “three circles” related to the concept of the green economy affirms that ecology is a link between the society and the product of its activity – the economic environment.

It should be noted that socio-economic relations are revealed in the light of economic values, therefore the activity of the modern society is in the first place connected with huge consumption of material goods and comfortable existence, as Hans Jonas points out [17]: “... technology is applied not for the sake of salvation of the already existent or the avoidance of the unbearable but for a continuous improvement of the already achieved, namely for the sake of the progress which with all the vanity is aimed at the achievement of an earthly paradise. It and its fruit result rather from depravity than the necessity”. But although humanity understands that by its actions it affects the environment, it proceeds with the satisfaction of its boundless economic interests, taking no account of the critical environmental situation.

Thus, the environmental culture as a main principle of the “green” economy depends on the environmental education and upbringing. The environmental education has to be continuous, i.e., the education should be life long as the knowledge and skills are updated. Environmental culture regulates the relations of people and the environment on the basis of the system of environmental competencies, value orientations and attitudes. It is quite understandable that the resolution of environmental problems is in the

first instance connected with the acknowledgement of the importance of ensuring environmental safety, protection of the environment, change of the lifestyle in accordance with a rapidly developing scientific and technological advance by the population.

As the level of the environmental culture and consciousness is determined by the state of the environmental education, enlightenment and upbringing for the environmentally harmonious development of the society, it is natural that the role of education in the prevention of the environmental crises is extremely high.

The level of environmental culture determines the state of the environmental safety of the society to a considerable degree.

The environmental culture manifests itself in people's ability of conscious practical application of their environmental knowledge and skills, provides for the formation of spiritual and moral qualities in the personality, an ability to treat nature and people with dignity [2].

Only environmental culture is capable of creating preconditions for the formation, establishment and transition towards the "green" economy and ensure a sustainable development with the improvement of the living conditions of the population within a limited natural environment and stimulation of the environmentalization of production.

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The Relationship between Management and Marketing Strategies as Necessary Condition for Business Production

Rapid economic growth of any country is heavily dependent on public economic entities by scientifically sound long-term economic strategy, policy development and awareness of the country's companies from the strategic mission, vision, goals and management and development of the concept perfectly, As well as the correct assessment of business risks and insurance. Especially in the conditions of globalization and internationalization of the modern world economy, when the economy of a single country is openly integrated with the partner countries' economies, global business processes are dynamic and unsustainable. Such an unstable market environment, often changing the institutional system and the high risk factors of the companies to develop enterprise factors of supply, production and marketing of a comprehensive plan, which, in turn, should include the strategic management of all structural elements: logistics - warehousing, enterprise, financial, marketing, (marketing, advertising, distribution), and other strategies. One of the key reasons for the development of companies operating under such a stable market conjuncture is the unconventional development of each of the above strategies [3. P-255]. This problem is not only urgent for highly developed countries, but also developing (and including Georgia).

Depending on the reality of Georgia, this kind of incompatibility is especially noticeable between management and marketing strategies operating in our country. None of the Georgian companies will be able to establish a sustainable business if its manager does not undergo a rational study of each of these structural elements in a long-term strategy of development and in the overall corporate strategy. Under the market economy, the entire cycle of company management is completed by managers. Planning is a necessary component of company management. Decisions are made for management of a specific enterprise. The management of firms in the market relations system shall be governed by the laws of our country. Managers will independently conduct an enterprise management process and they are fully responsible for the decisions and results of the work.

Strategy of the company is a combination of competition methods and business organization that should focus on customer satisfaction and organizational goals. Formation and realization of management strategies in Georgia will be the priority task of their managers, so in our country there is always a demand for managers who are able to actively form the future of Georgian companies. Managers working in Georgian companies should develop the right strategy and choose the most suitable business model for their company.

High level management should coordinate all functioningonal subdivision (supply, manufacturing, financial, marketing, personnel, scientific research, innovations) of the company. Each of them has a special role in forming a management strategy. Strategic choice in Georgian companies means bringing company business decisions and competitive actions into unity. The latter will be the determining strategy of the company management. It is through management strategy that managers of existing companies in Georgia will be able to change the existing strategies and possible ways of renewal. The future vision of companies operating in Georgia is possible through the management's well thought-out strategy. It should be determined the direction of development in the shortest possible time and to determine the possibility of holding the competitive position of the company [1. p.37].

Development of long-term strategies of companies operating in our country is one of the main tasks of their managers. Among the goals of management is to develop effective management strategies, competition and business management, and management strategies in order to achieve goals set by firms. Improvement of organization of companies operating in Georgia - this is the perfect strategy to be implemented perfectly. Successful Management Strategy and its Reasonable Implementation is a sample of perfect management that we really trust. First of all, it is necessary to create a first strategy, and then adequate realization is necessary. This is the main task of forming and realizing management strategy and the best test of its capabilities. Excellent implementation of the best management strategy of companies operating in Georgia - the best criterion of management quality and the most reliable recipe for success of these companies.

We have a serious basis to draw parallels between successful management and strategies implemented by the manager. Some managers have a very solid strategy, but they cannot afford to practice. On the contrary - sometimes the strategies developed by the manager are quite weak, but it is successful in realization. In both cases there is a possibility to improve the company's development. In order for companies operating in Georgia to be able to get their maximum potential, their managers are able to succeed in their successful development and implementation of strategies. The more well-designed strategy and the better it is, the more companies have a strong position on the market. Successful implementation of successful strategy is not only a business success but it is the best examination of the company's perfect management.

Obviously, developing a good strategy by the managers of companies in the reality of Georgia and its success is not a guarantee, that the company will avoid problems and failures, but sometimes it is necessary to define the time interval to ensure that the correctly drawn management strategy will bring some results. Even companies that have a well-organized management system have to deal with indefinite and disadvantageous

circumstances, but the manager's attempt to justify the failure of the manager for the unfavorable business environment can not lead the company from crisis. In such a situation, the manager is responsible for preparing the company's savvy strategy for indefinite and strict conditions to overcome the problems that arise through the development of the right strategic vision and business approaches. The basis of management's successful strategy is to capture firm positions in the market and create an organization that will be able to function in an undeveloped environment, under strict competition and internal problems. The quality of the company's management is determined by the developed management strategy and its realization quality.

The main task of creation and implementation of business development management strategy in Georgia shall consist of five interconnected parts: 1. Formulate strategic vision and mission of the company. In order to determine the strategic direction of development it is necessary to define the goals and long-term development prospects; 2. Set goals. Converting the Strategic Vision into a specific working direction; 3. Making strategies; 4. Formation and realization of strategies; 5. Assessment of the activities carried out, adjusting strategic vision, global goals, strategy and its realization by taking into consideration the experience, variable business environment, new ideas and opportunities. These five components define management strategy of Georgian companies. [5. p.56].

Therefore, the management strategy of companies operating in Georgia should include timely adjustment of violations arising out of realization of strategic vision, objectives, strategies, realization of strategies, realization of companies' vision, goals and strategies, timely adjustment of the violations arising during the realization of strategies. Managers operating in Georgia should be well aware of the current situation of their company and future prospects, as well as their advance needs to determine the needs of the company for the next 5-10 years. In determining the mission, managers operating in Georgian companies should evaluate the scope of the company's activity and the type of service offered by the firm to its customers. The manager should strategically understand the scope of the company's activities, in parallel, to develop a long-term development concept of the company. That's how the manager sees the company on marketplace, is a strategic vision. After the discovery and development of the firm's mission and strategic vision, the manager must arrange public hearings; This gives employees the opportunity to understand the essence of the goal and find out the competing future development directions.

Developing management strategy and control of its implementation are more or less in companies employed in large business, but their attitude towards marketing strategy is inadequate. Often they do not appreciate the challenges in the field of marketing. In the administrative structure of the company they have only one marketer or small division of marketing,

which is engaged only in reviewing the complaints and study of the market. The marketing recommendations proposed by him and the company manager will only take into consideration a small corporate strategy.

We face even more difficult situation in small and medium businesses. The organizational structure of small and medium sized companies does not provide a marketing position for the marketing and even more - the marketing department. The manager of the firm has a managerial and marketing manager. The tendencies of the market market development, the consumer opinion, the scales of the products produced by the company in the previous years, and etc. He/she doesn't think necessary company have marketer.

At the modern stage, a functioning company in Georgia will only be successful if it makes recommendations by marketers to the main focus of its business development business strategy. Marketers should examine the claims made by consumers about the quality of their products, domestic and foreign markets, product quality, price and consumer qualities. After studying these remarks, marketers, along with innovative managers, should develop a new product sample with orientation towards customer tastes. Based on such a marketing research as a result of the proposed recommendations should take into account the long-term development of Georgian companies, managers of firms in their management strategies in time, thus they will be able to bring their brand of consumer features, design, and physical and economic options for customers' tastes, introduce new standards of production, advanced technology, the company in order to gain a leading position in the field. All this requires the continuous communication and consultations of Georgian managers with the marketers. Any company operating in Georgia is obliged to consider strategies proposed by the marketers of the market, based on which, and, obviously, should carry out their activities in accordance with market requirements. The marketing strategy is based on five concepts, from which Georgian enterprises can choose one, although this does not mean neglect of the rest of the approaches. Firms in our country can use the following marketing strategies:

1. **Orientation on production.** In accordance with this Concept, the user prefers easily accessible and cheap commodities. Therefore, the main task of followers of this concept is the expansion and improvement of production and the efficiency of the key system. There are two situations for choosing the concept of production: 1. When the demand for the product exceeds the supply. The manager should look for ways to increase production. 2. When the cost of the product is high and the increase in production is necessary to minimize it.

2. **Orientation on the product** - By this concept, users prefer the goods that have better consumer benefits. Therefore, the followers of this concept care about the perfection of goods, which are based on the

customer's requirements, although sometimes new goods are created outside of the viewers' perceptions. This type of concept can lead to the marketing blindness;

3. Orientation on sales - In terms of the supporters of this concept, the customer will not buy all the goods required by them, so it is necessary to take an active impact on his/her psychology. This strategy is very risky. It draws attention to the creation of a selling deal rather than a buyer with long-term relationships. The concept suggests that if the buyers persuaded them to buy a proposal, they would be happy with the purchased product. Or, if they do not like the product, they will forget the frustration and buy it again later. Usually, this is an incorrect assumption. Many scientific works show that the unhappy buyer does not buy the same product for the second time. Moreover, if the satisfied buyer shares a good impression with 4-5 people, the dissatisfied buyer delivers twice as many impressions as bad impressions. This concept is widely used in sphere of nonprofit activities;

4. Orientation on the market - The key point of this concept is clearly expressed by Americans by the following phrases: "Do what you can sell instead of trying to sell what you can produce", "Love customers and not Goods", "customer is always right". The marketing concept is used when the supply is quite demanding. In order to sell goods in the market, it is necessary to study the market and take into account the requirements of the customer. Selling and market-oriented concepts often interfere with each other, which is wrong. The first of them is the focus of the cargo that needs to be strained; In the interest of another, the target consumer is the customer who must be entitled in the business activity. The introduction of a marketing concept means more than simply relying on buyers' wishes and needs.

5. Customer orientation. This strategy explores existing buyers, their wishes, gathers new ideas on products (services) and checks the improved options offered. Often buyers do not know what they want or what they can want. For example, 20 years ago, how many consumers would have been willing to call a mobile phone, fax machine, xerox, 24-hour internet, satellite system or wireless staff? Such situations lead to user oriented marketing - better understanding of the needs of buyers and creation of a product and service that will satisfy their existing needs now and in the future. (<https://istudent.ge/uploads/2016>).

The marketing strategy should include the supply of a new product to the society and not the question of what products they want. The society does not know what is possible, but the marketer should know that. The purpose of marketing strategy should be lead the buyers to their wishes before they find out what is their desire. Finally, the marketing strategy of the company must be formulated with the five concepts above discussed, as: According to the production-oriented conception, the user prefers the

goods which price is more reasonable; The concept of product-oriented perfection implies that the user prefers a high quality, productive product; According to the sales-oriented concept, the consumer does not buy enough quantity of products until the organization does not support activities; The market-oriented concept implies that it is necessary to properly determine customer wishes and more efficient satisfaction; Consumer-oriented concept means that marketing decisions are based on the long-term interest of the user.

In order to increase the efficiency of the marketing strategy of Georgian companies, it is necessary to establish a marketing program, to choose the right buyers and to determine the relevant values. For this it is necessary to divide the buyers into segments and take into account their demands. If the enterprise does not take into account the customer's needs, it will be damaged and may even be bankrupt. The marketing strategy of Georgian companies should include profitable and long-term relationships with the buyer as the preservation of existing buyers, as well as attracting new customers and increasing their number. Management of effective relationships with the buyer makes them to be excited. The entrepreneurial buyer remains loyal to the company and offers positive information. At least the slightest margin can make a huge gap in customer loyalty. Therefore, it is important not only satisfy their customers but also inspire them [2. p.77].

The marketing strategy should include a company's approach where the buyer is taking a seat. Within the framework of the overall management of Georgian companies' management, marketers should combine with other functional subdivisions of the company to create such a marketing strategy that will provide the highest value to a carefully selected target buyer. The buyer relationship is the most important concept of modern marketing. The management of the relationship with the buyers has been discussed as an asset management activity for buyers. According to this view, it included detailed information about personal consumers and their "moments of meeting" with the purpose of increasing the loyalty of buyers. Relationship management with buyers in the modern sense is a wider range, according to which the buyer's relationship management is the process of creating profitable relationships with the supplier of the highest values and satisfaction of the buyer. It deals with all aspects of the acquisition, preservation and growth of buyers.

The main components needed to establish customer relationships are the buyer's valuables and satisfaction. The way to the long-term relationship with the buyer is to create the highest values and satisfaction for him/her. The establishment of lucrative and long-term relationships with the buyer promotes the growth of business efficiency of Georgian companies. Finding and maintaining buyers is a difficult task. They are often confronted with choice because there is a wide range of products and

services available. The buyer buys from a company that offers the highest consumer value - the difference between the benefits and the value given. The buyer's satisfaction is dependent on the expectation between his/her expectations and perceptions that he/she has acquired for the function to be acquired. If the perceived quality is low, the buyer is dissatisfied; If the obtained quality coincides with the expectation, the buyer is satisfied; Whenever the quality perception exceeds the expectation, the customer is very satisfied. The companies in our country should do everything to ensure the importance of customer satisfaction. Managers of Georgian companies should understand that the loss of one buyer is more than just the loss of the sale of one item, because it means the loss of the sales stream that would make the most of his/her life. Georgian companies should set out to build relationships with buyers. The practice of relationship management with the buyer helps the marketers to buy profitable buyers, and thus the buyer has created all his lifetime values. In addition, this may help local companies in the increase in the share of the buyer's expenses. For this the Georgian companies need to offer a wide range of products and services to the buyers.

Georgian companies should properly manage the buyers for which they have to divide them into the following groups: 1. A user with a generous and low loyalty; 2. Profitable, though not many buyers; 3. A lucrative and loyal customer; 4. Very loyal, but not profitable customer. This indicates that different types of buyers need different communication management strategies. The goal is to establish the right relationship with the rightly selected buyers. A marketing-oriented marketing strategy must be created by a single marketing complex consisting of the company's controlled factors - product, price, place and stimulation.

In order to achieve the best marketing strategy and complexity, companies need to be involved in marketing analysis, planning, implementation and control. This allows the company to follow and adapt to the market environment and its participants. Managers of Georgian companies should be aware that they will not be able to benefit all customers. This is caused by the fact that all buyers have the same quality of goods and the same services are not satisfactory. There are many different types of users with different kinds of needs. The companies in our country must divide their product market into segments, choose the best of them and work out a profitable service strategy for this segment. This process must be implemented in three stages: first, market segmentation, the following target market selection and finally positioning on the market.

The consumer market consists of many buyers, products and needs. Marketers of companies operating in Georgia should decide which segment is the most beneficial to achieve their company goals. Customers and their services should be grouped according to the geographic, demographic, psychographic and behavioral factors. During segmentation of Georgian

market market should be divided into buyers' groups by different marks. Each segment can have a different marketing program. It is impossible to create a model that will be acceptable for all segment users. Therefore, Georgian companies' managers should concentrate on each segment. After defining market segments, our country companies can enter one or more segments. They should evaluate the attractiveness of each target segment and select one or some of them.

The company should select the segment where it will be able to create a favorable consumer price and maintain it over time [4. P-134]. Since Georgian firms possess limited quantity of resources, they should served only one or several special segments or "market niche". To Such "niche" big competitors do not pay attention or, for some reason, remain outside of their interest. Some of the companies in Georgia need to work on several segments related to each other. At the same time the company may be overridden to the users of different types but with similar wishes.

The majority of Georgian companies are working on one segment of service on the new market, and in case of success, it goes to other segments. After selecting the market segment, the managers of the Georgian companies should decide what position they will be seated on this segment. Thus, in terms of market relations, any company operating in Georgia increases the effectiveness of the production of its products depending on the real marketing strategy.

Therefore, jointly reviewing management and marketing strategies is a necessary condition for Georgian business success. In order to eradicate existing problems in this field, we consider the following measures:

1. Managers of companies operating in Georgia shall coordinate the functional subdivision of all of the companies (supply, manufacturing, financial, marketing, personnel, research and innovation). Managers of Georgian firms should be able to successfully merge management and marketing strategies.

2. Marketers, together with innovative managers, must design a sample of customer-oriented products with additional consumer properties. They should develop a marketing strategy that will provide a lucrative, long-term relationship with the buyer as well as to keep existing buyers, as well as attract new customers and increase their number.

3. Managers of Georgian companies should be involved in marketing analysis, planning, realization and control. They need to select a segment where they will be able to create a favorable consumer valuation. Marketers of the same companies should select a favorable segment of their firm. After that, managers should determine what position they will occupy on this segment.

4. Local companies must define their competitive advantages for becoming Georgian brand; For this purpose, it is necessary to offer their target customers more valuables.

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Modern Theoretical Approaches to the Stability of the Financial System Assessment

In the modern world the key problem is a financial security, in providing of which the special role is played by a stable development of the economy and especially of its most important part - the financial system.

Bankruptcy of hundreds financial institutions not only in developing countries but also in developed countries has a destabilizing effect on national economies and may lead to the financial and economic crises. For Ukraine, which integrates into the international community, a stable financial system becomes the basis for solving these problems.

In this circumstances one of the most urgent problems of the theory and practice is the formation of a stable financial system model. In this case the most important task for the national economy is to search for criterias, indicators and tools to detect latent destabilizing processes, to identify ways to overcome crisis phenomena and to strengthen the stability of the financial system.

This problem is very difficult. To find the solution is needed a serious fundamental research. The complexity is determined by the fact that the financial system is a complex concept, which includes a set of most important subsystems, such as credit and banking, payment, currency, budget, fiscal and others.

These subsystems, being connected and interacting, affect both one another and the whole financial system, which requires an appropriate assessment to determine the objective state of the national financial system.

At the moment in financial science there is no generally accepted methodology for assessing the stability of the national financial system. The consideration approaches of this problem by different researchers differ radically (stability of the financial system can be evaluated on the basis of one or several criteria, using expert assessments or formalized quantitative methods, based on actual or predicted values of applied criteria, etc.).

In recent years on the topic worked I.V. Belova, S.V. Bashlai, I.I. Goliush, Dadashova P.A., O.V. Kovalenko, I.I. Kavetska, V.I. Mischenko, O.I. Kireev, M.M. Shapovalova, S.A. Yakubovsky, T.A. Rodionova, O.I. Faryna and others.

Mostly in the works of domestic scientists this problem is considered narrowly. At the same time, the focus is not on the comprehensive assessment of the financial system stability as a whole, but on the analysis of the stability of individual, smaller subsystems.

So the purpose of this article, especially the analysis of modern approaches to the assessment the state financial system, is important for improving these methods.

Currently, in economic practice, there are different methods and different criteria for assessing the financial system of the state.

Increasing the intensity of emerging financial crises trends that have appeared in the early 1990s and have not lost their threatening influence in our time have contributed to the fact that most developed countries in the world have actively begun to work on developing systems for assessing and monitoring the financial system's sustainability. In particular, the monitoring of financial system stability in the central banks of France (Financial Stability Review), Sweden (The Financial Stability Report), Norway (The Norges Bank's report on financial stability), Finland (The Bank of Finland's financial stability analysis), Spain (Banco de Espana's Estabilidad Financiera), UK (The Bank of England Financial Stability Report). In these studies, the main objects of observation and analysis are indicators of macroeconomic development of the country and the assessment of the impact of exogenous factors on the economy; the state of the financial and banking sectors and the assessment of risks arising from integration into world of financial markets [3, p. 4].

These methods are based on the methodological approaches, formulated by international financial organizations. Among these approaches, it is possible to distinguish approaches based on the rating estimation and on calculations of different indexes.

For example, the Global Financial Centers Index (GFCI) was first published in March 2007 and continues to be published every six months. This index is calculated by the so-called «Models of valuation factors», which combines ratings and country ratings by individual formal indicators with evaluations of specialists of financial organizations identified as a result of their responses to questions formulated by the organizers of the study.

Within the framework of instrumental factors, the following aspects of competitiveness are analyzed:

- Business Environment;
- Financial Sector Development;
- Infrastructure;
- Human Capital;
- Reputational & General Factors.

The Financial Development Index Ranking, which is actually a rating of the national financial markets competitiveness, was first developed and presented on the World Economic Forum in 2008 in the Annual Report "Financial Development Report. 2008" is close to this methodology [10].

The rating offered in the Report is calculated on the basis of 7 blocks of information ("pillars") describing various aspects of the national financial market functioning:

- institutional conditions;
- business conditions;
- indicators of financial stability;

- indicators of the banking sector;
- indicators of the non-banking financial sector;
- indicators of financial markets;
- size, depth of markets and availability of the capital.

The following index is so called International Financial Centers Development Index, which was developed as a result of common efforts made by Xinhua News Agency and Chicago Mercantile Exchange Group (CME), which owns Dow Jones Index Service Co., and was presented in 2010. The methodology of the index uses the combination of objective indicators with subjective assessments (the results of the survey on the basis of standard questionnaires, as well as the results of interviews). The index is formed on the basis of a three-level system of objective indicators. Each first-level indicator is based on several indicators of the second level, which, in turn, are based on several indicators of the third level. The first level indicators include: financial market, growth and development, production support, service support, general conditions for the development of the financial market [7].

The contribution to the development of the methodology for assessing the financial system was made by the World Bank, which at the end of the twentieth century proposed the Financial Sector Assessment Program (hereinafter - FSAP), which was aimed to promote the creation of early diagnostics systems for vulnerable financial systems, the development of effective measures to counteract the appearance of possible problems in the financial sector, and the search for directions for the development of financial systems in different countries. In the 80's and 90's, the efforts of central banks around the world were focused on achieving monetary stability. At the beginning of the twenty first century 95 percent of IMF and World Bank countries expressed their readiness to participate in this financial sector evaluation program.

Table 1 shows the basic set of indicators of depository institutions financial stability that is used in the evaluation of the financial sector within FSAP [6].

After that, the methodology of evaluation was improved, today the World Bank proposes to assess the state of the financial market, based on the country's solvency indicators, using a number of indicators presented in the publications of the bank "Global Development Finance". In them, the financial system is estimated by the following indicators (in %): the ratio of external debt to GDP and the ratio of debt to the export of goods and services. Based on these criteria, countries are divided into three groups: high, medium and low levels of external debt, and the very nature of external debt is considered as an indicator that allows us to judge the state of the financial system of the state [5].

It should be noted that the rating methodology in assessing the level of stability of the financial system is based on some Ukrainian rating agencies:

the methodology of rating the investment attractiveness of the administrative-territorial units in the system "potential-risk" of the rating agency "Expert-Rating", the method of "ri" -ratings of financial stability of the municipal and financial sectors of the rating agency "IBI-Rating", which is the largest operator of the voluntary rating market in Ukraine, and others. It should be noted that Ukrainian rating agencies assign credit ratings mainly to banks. All of them have their strengths and weaknesses, but for the purpose of assessing the degree of stability of the financial system and financial markets in the region, they are only suitable to a limited extent [2].

Table 1

The basic set of indicators of financial stability

Sufficient capital	<ul style="list-style-type: none"> • equity to calculate sufficiency • Tier 1 capital to risk weighted assets
The quality of assets	<ul style="list-style-type: none"> • proportion of bad debts in the loan portfolio • problem loans, minus the special reserve for assets subject to credit risk • the share of loans to various sectors in the loan portfolio • high risk in relation to equity capital
Profit and profitability	<ul style="list-style-type: none"> • return on assets • Return on equity • interest margin • non-interest expenses to total income
Liquidity	<ul style="list-style-type: none"> • the ratio of liquid assets to total assets • the ratio of liquid assets to short term liabilities
Sensitivity to market risks	<ul style="list-style-type: none"> • duration assets (weighted average term to maturity of assets) • duration of liabilities (average term to maturity)

It should be noted that to date, the International Monetary Fund also directs its research to develop a methodology for assessing the financial system of a particular state. This organization has developed its evaluation methodology, which is based on the study of 12 key indicators.

The main indicators characterizing the financial system in accordance with the IMF's methodology.

The rating methodology is based on the methodology recommended for use by NBU specialists. According to their recommendations, it is expedient to carry out calculations for 12 obligatory and 13 auxiliary indicators. Mandatory indicators include:

- the ratio of regulatory capital to assets weighed at risk;
- the ratio of regulatory capital of level 1 to risk weighted assets;
- the ratio of inactive loans excluding capital reserves;
- the ratio of non-performing loans to total gross loans;
- the rate of return on assets;
- the rate of return on capital;

- the ratio of interest margin to gross income;
- the ratio of non-interest expenses to gross income;
- the ratio of liquid assets to total assets;
- the ratio of liquid assets to short-term liabilities;
- the ratio of the net open position in foreign currency to the capital [1].

Table 2

Key indicators of financial stability according to IMF methodology [8]

№	The name of the indicator	Description
1	The ratio of regulatory capital to risk-weighted assets	Calculated by dividing the total regulatory capital into risk weighted assets. Measure the capital adequacy of deposit institutions. Sufficiency and availability of capital ultimately determine the degree of reliability of financial institutions and their ability to withstand shocks in their balance sheets
2	The ratio of regulatory capital to level 1 to risk weighted assets	The indicator measures the capital adequacy of depository institutions based on the concept of the Basel Committee on Banking Supervision
3	The ratio of non-performing loans minus provisions to capital	Capital is understood as gross capital and reserves in the sectoral balance sheet. This indicator is defined as the coefficient of capital adequacy and indicates the ability of the bank capital to withstand losses from bad loans.
4	The ratio of non-performing loans to total gross loans	To total gross loans also include the cost of non-performing loans net of provisions. This indicator is often used as a substitute for asset quality indicators and is intended to identify problems with the quality of assets in a loan portfolio.
5	The ratio of loans by sectors of the economy to total gross loans	The indicator is defined as the asset quality ratio. It contains information on the distribution of loans (taking into account inactive loans less reserves) between residents and non-residents. The absence of sector diversification signals the existence of a potential threat to the financial system
6	The rate of return on assets	Calculated by dividing net income before tax by average total assets (financial and non-financial) for certain periods of time. The indicator is defined as the bank's profitability indicator and is intended to measure the effectiveness of deposit-taking corporations in the use of their assets.
7	Rate of return on capital	Calculated by dividing net profit before taxation by the average cost of capital over a specific period of time. Capital is understood as the total capital and reserves reflected in the sectoral balance sheet. This indicator is defined as the bank's profitability ratio and is intended to measure the effectiveness of deposit-taking corporations in using its capital.

8	The ratio of interest margin to gross	Calculated by dividing net interest income into gross income. This indicator is defined as an indicator of profitability, which reflects the proportion of net interest income in gross income. For banks with low debt load, this indicator will tend to be higher.
9	The ratio of non-interest expenses to gross income	This indicator of profitability, which measures the size of administrative expenses in relation to gross income, measures the efficiency of the use of resources by deposit-taking corporations.
10	Relation of liquid assets (basic) to total assets	This indicator can also be calculated by using liquid assets in a broad sense. The indicator is defined as the liquidity ratio of assets, which gives an idea of what is sufficient to meet the expected and unexpected liquidity requirements. The level of liquidity indicates the ability of deposit-taking corporations to withstand shocks in their balance sheets.
11	The ratio of liquid assets (broad indicator) to short-term liabilities	This indicator is defined as the instantaneous liquidity ratio of assets and is designed to find liquidity problems when deposit-taking institutions meet their short-term liabilities.
12	The ratio of net open position in foreign currency to the capital	Capital in this case is understood as aggregate regulatory capital or first-tier capital. This indicator is defined as an indicator of market risk sensitivity, which gives an idea of the effect of currency risk on the capital of deposit-taking corporations. It measures inconsistencies in foreign currency assets and liabilities to assess the vulnerability of exchange rate fluctuations.

Unfortunately, that tools for monitoring and assessing financial stability is not perfect and has flaws and limitations. For example, as the IMF recognizes, the existing methodology for monitoring financial sustainability indicators needs to be improved in part to clarify definitions of sustainability indicators and methods for their calculation [9]. Another example is that econometric models used in early warning systems are not always timely signaling the onset of crises, and sometimes, on the contrary, they can give false alarms.

This system of indicators requires further development, however, it is already possible now to determine the need to study not only financial indicators, but also to provide institutional support for the financial market of the country.

In this question the example is the experience of Kazakhstan, where its own approach to the definition of financial stability of the state was developed. To construct an aggregated index of financial sustainability, indicators have been selected reflecting the risks to which the banking system is more inclined [4].

Thus, for the analysis of financial stability, a set of indicators is used, which is divided into the following groups:

- 1) a group of indicators of capitalization;
- 2) a group of quality indicators of the loan portfolio;

- 3) a group of credit risk indicators
- 4) a group of indicators of market risks;
- 5) a group of performance indicators;
- 6) a group of indicators of liquidity risk.

For each indicator, with the exception of prudential indicators, on the basis of statistical methods, as well as approaches used in international practice, is assigned a marginal value, the achievement and / or exit beyond which indicates the existence of certain risks that will require the supervisory authority in life necessary measures in order to limit and eliminate them.

In order to assess the quality of indicators, a correlation analysis between the indicators was conducted. Formats of calculation of indicators: percentage ratio and growth rate. Each indicator is assigned scores and weights in the range from 1 to 4 and from 1 to 2, respectively (Table 3).

The assessment of the banking sector stability: in the sense of an aggregate index of 1 to 1.5 - the financial stability of banks classified as stable; from 1,5 to 2 - normal (with a moderate level of risk); from 2 to 2.5 - satisfactory (with a tendency to increase the risk); from 2.5 to 3 - satisfactory (with excessively high risk); from 3 to 3.5 - unstable; over 3.5 - critical.

At the same time, the possibilities of this technique are limited, because it examines financial stability in a fairly narrow segment - namely banking activity segment.

So, the analysis of these methods shows that they have a rather "narrow" focus: some of these techniques are aimed to study financial indicators that determine the state of the financial market, others - to clarify the stability of individual elements that form the basis of the financial system.

In this regard, we believe, it is necessary to develop a comprehensive methodology for assessment of the national financial system, which should be considered simultaneously and possibly addressed to resolve two groups of methodological problems.

1. Problems caused by a common approach to assess the stability of the national financial system:

- the presence of a large number of groups of factors that affect the sustainability of the national financial system;
- assessment of the degree of influence of certain groups of factors on the stability of the national financial system;
- quantitative measurement of the factors;
- comparability of the results of this measurement;
- the quality of the information base.

2. Problems associated with the need to correct accounting features and limitations that exist in assessing the stability of the national financial system - especially due to the method of evaluation used, the nature of available information and certain specific elements.

Table 3

The system of indicators for calculating the aggregated index of financial stability of the banking sector [4]

Name of the indicator	Limit values of indicators,%				
	Point 1	Point 2	Point 3	Point 4	Weight
I. Capitalization indicators					
Equity coefficient k1	> 10	10 - 9,5	9,5-6,5	<6,5	2
Coefficient of capital adequacy ratio k2	> 14	14 - 13	13 -12,5	< 12,5	2
II. Quality indicators for the loan portfolio					
The ratio of bad loans to the loan portfolio	<2	2 - 3	3 - 4	> 4	1
Formed provisions for loans to the loan portfolio	<4	4 - 5	5 - 7	> 7	2
Increase in overdue debt (principal debt and remuneration)	< 9	9 - 14,5	14,5 - 20	> 20	2
The ratio of loans with overdue debts over 90 days to a loan portfolio	< 2	2 - 4,5	4,5 - 7	> 7	2
The ratio of inactive loans to total assets	< 2	2 - 3	3 - 5	> 5	2
The ratio of unemployed loans to the loan portfolio	<4	4 - 6	6 - 8	> 8	2
III. Indicators of credit risk					
The ratio of loans to non-residents of the Republic of Kazakhstan to the loan portfolio	≤ 10	10 - 15	15 - 20	> 20	1
The ratio of mortgage loans to a loan portfolio	≤ 20	20 - 30	30 - 40	> 40	2
The ratio of construction sector loans to total loans	≤ 15	15 - 25	25 - 35	> 35	2
IV. Indicators of market risk					
The ratio of foreign currency loans to the loan portfolio	≤ 35	35 - 40	40 - 45	> 45	2
Relation of sensitive to changes liabilities in interest rates to equity (interest position)	< 100	100 - 110	110 - 120	> 120	2
The ratio of the currency net position to equity	< 15	15 - 20	20 - 25	> 25	1
V. Performance Indicators					
ROA	≥ 3	3 - 2,5	2,5 - 2	< 2	1
ROE	≥ 25	25 - 20	20 - 15	< 15	1
VI. Liquidity indicators					
Current liquidity ratio k4	≥ 50	50 - 40	40 - 30	< 30	1
Short-term liquidity ratio k5	≥ 70	70 - 60	60 - 50	< 50	1
Urgent liquidity ratio k4-1 (up to 7 days)	≥ 200	200 - 150	150 - 100	< 100	1
Urgent liquidity ratio k4-2 (up to 1 month)	≥ 190	190 - 140	140 - 90	< 90	1
Urgent liquidity ratio k4-3 (up to 3 months)	≥ 180	180 - 130	130 - 80	< 80	1
The ratio of total loans to deposits of legal entities and individuals (excluding interbank transactions and deposits of SPV)	≤ 125	125 - 175	175 - 225	> 225	2
The ratio of liabilities to non-residents (excluding contributions of special purpose organizations) to total liabilities	≤ 15	15 - 25	25 - 35	> 35	2
Relation of liquid assets to total assets	≥ 20	20 - 17	17 - 14	< 14	1

Thus, factors affecting the stability of the national financial system in the direction of influence can be positive (increase the stability of the financial system), neutral (preservation of stability at the same level) and negative (decrease stability). Accordingly, indicators for measuring and evaluating the

impact are used, which can be either individual (private) or generalized (integral, aggregated).

Within the bounds of the subject under the individual criteria that characterize the stability of the national financial system, the author suggests to understand the indicators reflecting the influence of any one factor, regardless of which group he is included, and under generalization - simultaneously reflect the influence of a certain set of factors.

General indicators may reflect the influence of factors, that are related both to the same group or different. The last generalizing criterion can reflect the impact of all existing factors or groups at once.

In the context of this problem, taking into account the extremely complex interconnections and interdependencies between individual groups of factors, as well as the peculiarities of their impact on the stability of the national financial system, the author considers the use of general indicators to be better.

According to the author, the application of such generalizing criteria allows solving the methodological problem associated with the presence of a large number of factors that affect the stability of the national financial system. This approach seems to be rather flexible, since it actually proposes the development of a general evaluation-related research scheme consisting of two phases:

- 1) on the first stage by synthesis using quantitative criteria is evaluated the stability of the national financial system;
- 2) on the second stage, regulatory authorities are developing and implementing concrete measures aimed at increasing stability.

The second methodological problem, which is related to the assessment of the degree of influence of certain groups of factors on the stability of the national financial system, the author believes it is possible to solve it through a well-founded selection of general indicators combined with the use of factor analysis. Each aggregate indicator used in the analysis should have a clear economic interpretation in terms of the impact on the stability of the financial system, be meaningful, objectively measurable and systematically tracked.

Accordingly, for each generalized indicator of the national financial system stability can be built an economic and mathematical model factor (for example based on the proposals of the linear dependence signs). As a result, the impact of each group of factors on sustainability can be estimated through its impact on specific productive generalizing criteria.

In fact, the use of factor analysis allows us to formalize the following logical chain: an individual factor - a group of factors - a generalized indicator - the stability of the national financial system as a whole.

To solve the problem of quantitative factors measuring the author proposes to approach this way: when choosing the criteria for generalized sustainability of the national financial system apply only quantitative parameters with the unique method of calculation.

The choice of quantitative criteria is proposed at each of the selected levels of the national financial system - macroeconomic, macroprudential and microprudential. Accordingly, you can group and generalize the criteria of stability:

- 1) macroeconomic criteria that characterize the sustainability of the national economy;
- 2) macroprudential criteria characterizing the stability of the financial market;
- 3) microprudential criteria that characterize the stability of large business entities that are the part of the national financial system.

By the macroeconomic criteria of the stability of the national financial system, the author suggests to include:

- 1) GDP;
- 2) inflation rate;
- 3) level of public debt burden;
- 4) deficit (surplus) of the state budget;
- 5) deficit (surplus) of the trade balance.

To the macroprudential criteria of the stability of the national financial system it is necessary to include:

- 1) the level of interest rates;
- 2) the rate of the national currency;
- 3) an index reflecting the dynamics of the stock market;
- 4) a similar parameter of the market of precious metals.

To the microprudential criteria of the stability of the national financial system, according to the author, should include ratings of the financial stability of:

- 1) credit organizations;
- 2) insurance organizations;
- 3) professional participants in financial markets.

In fact all the criteria selected to assess the stability are quantitative. They are published systematically or can be uniquely calculated on the basis of representative information that is regularly collected and regularly updated.

For example, the statistical data on the overwhelming majority of macroeconomic stability criteria of the financial system are collected, summarized and published by the State Statistics Service of Ukraine, the National Bank of Ukraine, the Ministry of Finance of Ukraine and the Ministry of Economic Development and Trade of Ukraine.

The data used to calculate the microprudential criteria is regularly disclosed by business entities, in particular, by special disclosure systems and on corporate websites, and all criteria have a clear formalized methodology for calculating.

Thus, the analysis and synthesis of the existing indicators and criteria for assessing the stability of the financial system allowed to identify their negative

sides. In particular, the methods used in foreign and domestic practice to assess the stability of the financial system are heterogeneous and mainly focused on the analysis of financial stability. Each of them has a narrow target orientation: in the best case, the assessment of individual subsystems of the financial system, individual markets, institutions of the financial system.

The author's approach to the implementation of a comprehensive quantitative assessment of the national financial system stability can largely solve the key methodological problems typical for qualitative and simplistic quantitative assessments of the national financial system state. According to the author, from the methodological point of view the most correct assessment of the stability of the national financial system is a comprehensive quantitative assessment. It involves the allocation of the macroeconomic, macroprudential and microprudential levels of the system and the use of rating assessments, which allows us to comprehensively examine the condition of the financial system of the state.

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The Role of Innovations in the World Global Space

At present, in the world globe space, innovation is named as one of the most important factor of obtaining the competitiveness on the market by the companies and achieving national economic growth rates of the country. Analysts considers that, the epoch of innovation began from XX century and especially from its first half (automobile, aviation, telephone, radio, cinema and television, nuclear power plants and weapons, the first electric-calculating machines, many other fields of science and economics created in this period), it`s the epoch, which transformed the knowledge as a basis of innovative development not only for economics, but for the whole civilization [8], or the mentioned epoch can be called the process of transforming of the scientific knowledge into innovations, which includes sequential chain of the evenets: „science-techniques-production”.

The actuality of the theme determines the goal of the work research and provides to study the role and importance of innovations in the world globe space.

The objectives, which should be implemented in accordance with the goal of the research are: to learn various definitions about innovation, formed by the scientists-economists; to study innovation as strategic element of globalization and the compatibility of innovative strategy with global challenges.

To analyze the trends, existing in the direction of innovations development in Georgia and in the world innovator countries as well on the basis of components of global index of innovations (development of institutions, human capital/research, infrastructure, market and business development, creation of the creative products, development of knowledge and technology).

Originality of the research

It`s been revealed the trends and problems, existing in the world globe innovative space, the development and eradication of which is possible with the working out-realization of the strategy of innovative policy by the state on the one hand and with the close cooperation to the business sector on the other hand. All these contribute business sector to create „personal welfare” and also to make a significant contribution together with the state in the creation of „general public welfare”.

In the modern civilized global innovative space, in response to the world economic forum and „strategy and research”, more than half of the companies named innovation as the first strategic priority and estimated as one of the most powerful stimulator for the globalization. In accordance with the statistical data, published by the research of innovative development, on

the global market, innovations are given preference among the respondents: 45.2 % of the TOP companies, 30.4 % of the med-size companies, 12 % of others.

During the research process of scientific work, it's been used method of gathering, analysis and synthesis of the data about current and created problematic processes in the world innovative space, the results of joint research of the world economic forum and "strategy and research", Cornell Institute, world business school (INSEAD), world intellectual property organization (WIPO); evaluations of foreign and Georgian experts. Revealing of the civilized innovative world, formed in accordance with all epochs, was done not only in practice, but in scientific-economic sphere as well, which laid the foundation of a variety definitions of innovations and by which is determined that, innovations never had, has and won't have homogeneous and exact definition, just like, there won't be even a "secret formula" of the "birth" of innovative ideas in practice.

By the evaluation of the world's famous innovators (K. Zhilet, H. Ford, A. Zinger, A. Morita and others), one of the initial of creation of innovations can be named humans' individual abduction towards the changes to create the novelties. The mentioned opinion is strengthened with the idea of English philosopher and economists B.D. Mandeville (in the work "Parable on bees"), expressed in 1732 year, that "we, humans, have a strong abduction towards the changes and a great desire to get the novelties" [7].

Practically, all innovative ideas, from its origin to realization, means the ongoing process, wherenew goods and service are created in order to satisfy customer's requirements and to get profit of the "personal welfare" for the manufacturer. The basis of the latter can be I. Shumpeter's and B. Tviss' definitions. According to I. Shumpeter's definition (1982 year), "innovation is new scientific-organizational combination of industrial factors, which is oriented to get profit" [5].

According to B. Tviss' definition (1988 year) "innovation is a process, when invention or idea has an economic content" [4].

Innovation involves to make changes on the basis of uniting new ideas: for the introduction of new different style of management in the organization, for the production of new product and service, what creates a long-term cycle of economic business activity of the country and organizationa as well. We can use a famous scientist's, I. Shumpeter's assertion (1943 year), as a basis of the above-mentioned, that "in economy, during the introduction of innovations, it's been noted so called "constructive destruction", which exiles outdated technologies and organizational structures from the market, their places are occupied bt the new, viable fields. This is followed by the economic growth and raise people's welfare. So, innovations are appeared as an engine of economic development, they define their effectiveness and increase labor productivity" [6].

Today, civilized innovative world is advisable to adapt public progress, to produce “individual, unique product and service” in order to satisfy their demands, because according to the Austrian sociologist`s - Kh. Nowotny`s discretion (2008 year) “today`s society lives in the epoch of attraction towards the innovations” [3].

Innovation is novelty, which „changes our world”, innovators, working on different stages, played an important role to create this special world (Tomas Edison, Steve Jobs, Nicola Tesla, Bill Gates, Alexander Bell, Sandford Fleming and others), who perceived the problems differently, existing in different fields and sphere and they „saw the world differently”, by which they established their place in the world global innovative space. The basis of the above mentioned can be the opinion of the inventor, author of grandiose innovative projects – billionaire, Ilon Mask, that „the purpose of human life is to solve our own problems, our family members`, relatives and the problems of humanities in general. Each of us should start the morning by taking care of this, otherwise, our existence has no idea” (one of the journalist asked what the meaning of life was, he answered).

As a result of analyzing the existing situation in the field of innovation in Georgia and as a result of studying the world innovative processes, we can conclude that attitude towards the innovative policy in Georgia is positive. This fact has a significant importance in connection with European integration, because economic growth in Europe, solving the social problems, overcoming the poverty, employment and eradication the backwardness of the regions are basically provided with a pursue of innovative policy. At present, in our country, prerequisites are created for the development of innovative policy and a number of practical steps are taken towards the innovative development, which are reflected in the global index components of innovations.

In the direction of innovations, studying-analyzing of the world trends have been carried out since 2012 year with the annually published global innovation index (GII), which includes: 1. Sun-index expenditures of innovations (institutes, human capital / research, infrastructure, development of the market and business) and 2. Sub-index of innovative product (creative products or creative results. Production of knowledge and technology).

In GII, each country is evaluated in accordance with the mentioned seven main components (totally 82 components) and its goal is: to show the world trends in the direction of innovations; to show the mechanisms, by which it`s possible to achieve long-term growth, productivity and increase of workplaces; to assist and advise countries, what is necessary for the development of innovations and what is necessary for creating required conditions/environment. GII is a significant lever for investors in order to make reasonable decisions to implement new investments in the economy of any country.

By analyzing the positions of Georgia in GII, it can be noted that, by 2016 year institutes/ institutional arrangements (political environment, regulatory environment, business environment) had the best result and it was granted 69.2 point from 100, by 2015 year this indicator was 68.2 point. Since 2013 year till now it has stable high result in the components of institutions.

The worst indicator in Georgia has human capital and education (general education, high education, research and development). In this category, country was granted 23.2 point by 2016 year and it had 91st place in rating. Compared with 2015 year, this indicator consisted of 23.6 point. Since 2013 year, point of Georgia is characterized with the growing dynamics in the mentioned component, but despite of the positive trend, the result is still low in the mentioned component. By 2017 year, the expenses incurred on the education is only 2% of GDP and with this indicator, country has 114th position and the whole expenses, incurred on the research and development (R&D) are only 0.1% of GDP and with this indicator the country has 104th place in the rating.

In the rating of 2017 year of United Nations Organization, with the index of human development, between the world countries, all northern European countries have leading positions. In this rating, Georgia has 70th place and is behind post-Soviet countries: Estonia (30th place), Lathuania (37th place), Russia (49th place), Belarus (52th place), Kazakhstan (56th place). It`s ahead of the neighbouring countries (Azerbaijan (78th place), Armenia and Ukraine (84th place) [9].

By 2016 year, in the development of infrastructure, (telecommunication infrastructure and ecological sustainability) Georgia was granted average indicator – 41.7 point, by 2015 year - 36.5 point, what is increased with 6.5 point compared with 2015 year. As for the component of infrastructure, according to the logistics index, it has 118th position by 2017 year.

According to the research cooperation of the university/industry, country is on the 107th position and according to cluster development – on the 111th place. Taxes of intellectual property consists of 0.1 % of the whole trade and with this indicator, country is on the 101st place. By 2017 year, in the innovative promotion component, it`s granted 26.5 point and took 90th place. With the criteria of innovative product Georgia has 60th place with 26.7 point. With the expenses, came on the innovations, it has 67th place with 41 point. The coefficient of innovative efficiency of the country consists of 0.7 and it has 67th place among 128 countries. By 2015 year, this coefficient consisted of 0.6.

By 2016 year, our country has an average indicator of the market development (credits, investments, trade, competitiveness and scale of the market) and it was granted 44.3 point from 100, by 2015 year, this indicator consisted of 52.8 point. Since 2013 year till now, the largest variable has the component of market development. Despite of this, according to data of 2016 year, point of the market development component after the (institutional) is

the highest between the other components, the mentioned indicator was the lowest in 2015 year.

Such indicators of the index, by which Georgia is far behind the advanced states, belongs the development level of business (employees knowledge level, existence of connections, required for innovation, opportunity of getting the knowledge), by which, by 2017 year, Georgia is on the 101st place among 127 countries. According to the report, only 10.5 % of the firms offer formal trainings (training related to the job) and with this indicator, country is on the 89th position [10].

So, from the mentioned components of the world innovative index, strong sides of Georgia are the following components: business environment (on the 6th place with rating), development level of the market (on the 7th place with rating). Weak sides are the following components: education (on the 115th place with rating), research and development (on the 103rd place with rating), employees` level of knowledge (on the 91st place with rating).

On the basis of joint research of Cornell Institute, world business school (INSEAD) and world intellectual property organization (WIPO), Global innovation index published in 2012 year, reflects (128) innovative environment of 142 country, on the basis of which, Georgia was on the 70th position by 2012 year and on the 73rd position by 2013 year. GII, which was published in 2015 year, included the indicators of 128 countries, what is 92.8 % of the world population and 97.9 % of the global GDP. On the basis of the mentioned data, Georgia was on the 73th position with 33.8 point (from 100) by 2015 year, by 2016 year, it was being in lead with 9 positions and with 33.9 point had 64th position. In 2017 year, “in the global innovative index”, among 127 countries of the world, Georgia was on the 68th position with 34.39 point, in 2018 year – it has 59th place. In 2018 year, compared with 2017 year, this indicator was improved with 9 coefficient.

According to the evaluation of Georgian specialists, in the global innovation index, worsening of positions is not connected with the internal processes of the country, because other countries greatly improved the components of this index. By their assessment, “this field is new for Georgia, let`s assume that country is startup in this direction, processes are dynamically developed, it just too new and it has so many challenges. Our project helps to improve startup environment, which will give the opportunity too many startups and venture capital to enter top the country and to develop.”

Practical experience of the developed countries of the world clears up that, in the country for the development of innovations and for the improvement of startup ecosystem, it`s necessary to be worked out such strategy of innovative policy, which foresees create/produce/encouragement of the innovative products and researches, even more activity of business sector in the use of innovations, in the introduction and creation; increasing the level of education; realization of high-technological innovative ideas

(hereby, it should be noted that, in Georgia, since 2018 year, practical steps have been taken on assessment and financing of technological idea (Tech-I) of global innovation of science and technologies (GIST), the organizers of which are American association for the advancement of science (AAAS) and Venture Well), what makes a significant contribution in the development of country's economy.

The most innovator countries, named by the World Economic Forum (WEF), are: Belgium, Austria, Great Britain, Norway, Taiwan, Denmark, Singapore, Japan, Holland, Sweden, Germany, United States, Finland, Israel and Switzerland. Practice clears up that, one of the most important regulatory mechanism of economic progress is the realization of innovative policy, oriented on high-technologies, worked out by the state, what promotes to be at the beginning of the list of global innovation index and to occupy the leading positions.

Over the years, the existence of productive innovative system in Switzerland, which has the advanced position of innovator countries, promotes the development of infrastructure in the country as well as encouragement of the talented people.

In Sweden, which has the second position, there are created several large startups. Including, online payments company Klarna and iZettle, which creates the readers of portable cards. Information technologies are one of the fastest developing sector of Sweden.

The share of communication and information technology product consists of 15 % of the common volume of country's export. In financing of this sector, in particular together with the companies, actively participates state too. In recent years, researches in micro and nano technologies became priority, which play a decisive role in the development of informatics, in particular in the development of computer systems.

In Great Britain, it's technological boom. It's be noted that, advanced financial-technological companies were established in London Funding Circle and TransferWise. Holland is on the ninth position, where scientific-research organizations are highly developed. Country is distinguished with the close collaboration between the universities and private sector.

United States of America is associated with innovations for many people. Here is located Silicon Valley, where the most of world technological innovations are created.

Finland is distinguished by the number of scientists and engineers. In the country, universities and private companies have a close collaboration with each other. It should be paid attention to the state system of innovative development and science and financing of Finland: direct assignments for the universities from the budget; financing the budget of the universities by the academy of science (16 %); state funds supporting the development of science and technologies. Academy of science addresses its resources to finance the fundamental researches, the basic source of the applied research is fund

“TEKES” (30 %), fund “SITRA” doesn’t participate on the stage of research activity. It’s the “capitalist” of venture, which finances the creation and development of new companies. The experience of “SITRA” breaks the neoliberal myth that state companies are inefficient and unprofitable with its essence [2].

Japan is one of the first innovator country.

Innovative activity started in 1990 year there, when Sony and Nintendo appeared. But, country finds it difficult to keep the positions. In 2007-2015 years, Japan has been in the top of five innovator countries. At present, it is on the eighth position. Singapore is on the ninth position between the countries. It, like Great Britain, is distinguished with financial-technological innovations. For more information, in 2014 year, in the country, cash award in the amount of 66 thousand 858 Dollars was announced for the most innovative idea, which would promote to increase GDP in the country.

Denmark is remarkable with the highest indicator of the development of renewable energy. Denmark covers 25% of “green” sources of electricity consumption, first of all on wind energy. Danish firms produce 38 % of the wind turbines in the world, with the total cost 3.5 billion Euro. 20 000 people are employed in this field. 90 % of the produced turbines goes to the export, (mainly in Germany). Government authorities and public authorities take part to pursue Danish innovative policy: confederation of Danish industry, Danish technical-scientist academy, Danish banks association, federation of small and medium enterprises, separate firms [5].

Germany is a technological hub of Europe. Together with many innovative activity, it’s be noted that country is homeland of Soundcloud. Norway too, where state bank and investment company was created in 2004 year. More than 500 people are employed in it with all directions of innovative activity.

Recommendations

Innovative as non-standard” form of realization of creative ideas, has an influence on the economy, policy and public life of the country, both inside the country and also in the global space. In the creation of “personal and general public welfare”, the main participant entities are state and business sector, which create national innovative system, defined by the national peculiarities, as a result of interaction over the years. In Georgia, for the formulating of national innovative system, it’s necessary to create the following fundamental conditions:

- Purposeful and sequential state policy, which includes the structural transformations; effective legal system: legislative provision and court system;

- To provide high-competitive business environment and attractive climate for the foreign and local high-tech investors;

- To reveal the purposeful, regulated role in the world global index of innovations for the improvement of positions:

- With indirect methods of financing in the development of innovative technologies, the best examples of which are named in Sweden, Singapore and other developed countries.

- Encouragement of scientific-technological activity, what envisages on the example of the developed countries: Tax credits in case of increase of financing for scientific-research and experimental-construction works; Tax holidays for the innovatively active small and medium enterprises; reduction of the funds, directed on the creation of venture innovative funds or fully release from it; Preferential taxation of the investments, attracted in small and medsize innovative business.

- To give an important role to create informational-communication systems of the state and to provide of sharing (loans) of advanced foreign achievements (including, with some violations of intellectual property rights), hat is widely used in the world practice.

- To develop, create and finance innovative infrastructure, the most common forms of which are: technoparks, technopolicies, business-incubators, technical-introduction special economic zones, technology transfer centers, educational and business centers and others.

- For the purpose of development of human capital, to carry out investment in the education, health care, information security, in supporting families, professional mobility, which together provide the growth of human`s creative skills.

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Strategic Directions of the ESCO Market Development in Ukraine and The EU

According to earlier studies [1], it has been proved that ESCOs develop, implement and provide or arrange financing for upfront EE investments for its clients. Repayments from savings allow clients to compensate ESCO's ongoing savings monitoring, Measurement & Verification (M&V) costs and assumption of risk through EPC or Third-Party Financing (TPF). The fundamental concept of the ESCO business model is that the client does not have to come up with any upfront capital investment and is only responsible for repaying the investment made or arranged by the ESCO. The two dominant EPC models in the world are shared savings and guaranteed savings. In Europe, a third approach is used called "chauffage". In a shared-savings EPC, the ESCO finances the total upfront capital cost of the project and is totally responsible for repaying the lender. The client pays the ESCO a percentage (or it can be a fixed amount) of its achieved savings from the project, large enough for the ESCO to repay the project investment to its lenders, cover M&V costs and any other associated costs. The energy-end user assumes no direct contractual obligation to repay the lender, only the ESCO has this obligation. In a guaranteed savings EPC, the client essentially applies for a loan, finances the project and makes periodic debt service payments to a financial institution. The ESCO bears no direct contractual obligation to repay the lender, only the energy end-user assumes this obligation. The ESCO's guarantee is not a guarantee of payment to the lender but rather a guarantee of savings performance to the energy end-user that is usually equal to its repayments to the lender. "Chauffage" or integrated solutions generally refer to a greater value-added approach. The concept offers conditioned space at a specified price per energy unit to be consumed or per some measurable criteria (square footage, production unit, etc.) through a supply and demand contract offered by the ESCO. The ESCO manages all supply and demand efficiencies. This concept derives from a previous contractual French approach of energy services delivered by a private company to a public authority or to another private body (e.g., owner of aggregate properties) called "contrat d'exploitation de chauffage" leading to the wording "chauffage" to qualify this form of EPC. In the former French approach, the contract used to contain up to three elements designated under energy supply cost; maintenance cost, total guarantee cost (replacement cost of the equipment at the end of its life).

In the course of the research, differentiation of ESCOs on the basis of their marketing approach was presented on figure 1. Separate ESCOs characteristics are given in the table 2, according to the source [1].

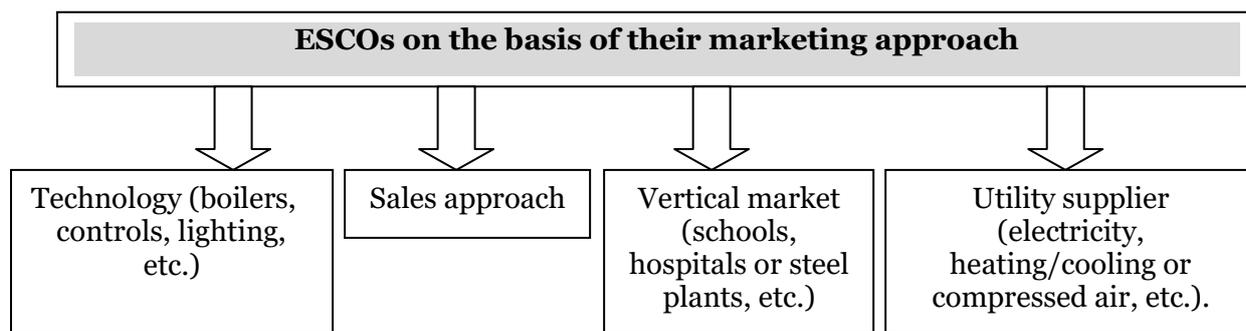


Fig. 1 – Differentiation of ESCOs on the basis of their marketing approach

Table 1 – ESCOs classification and characteristics

№	CATEGORIES	CHARACTERISTICS
1	Independent ESCOs	ESCOs that are “independent” in the sense that they are not owned by an electric or gas utility, an equipment/controls manufacturer or an energy supply company. Many “independent” ESCOs concentrate on a few geographic markets and/or target specific client market segments.
2	Building equipment manufacturers	ESCOs owned by building equipment or controls manufacturers. Many of these ESCOs have an extensive network of branch offices that provides a national (and international) footprint, with sales forces and specialized national staff providing packages of EE, renewables and distributed generation “solutions” to client market segments.
3	Utility companies	ESCOs owned by regulated or state-owned electric or gas utilities. Many utility-owned ESCOs currently concentrate on regional markets or focus on the service territories of their parent utilities.
4	Other energy/engineering companies	ESCOs owned by international oil/gas companies, non-regulated energy suppliers or large engineering firms.

The next part of our work summaries the trends identified in the market and draws conclusions about common barriers that hurdle ESCO market development [2]. Success factors that facilitate the uptake of the ESCO business model have also been identified. Finally, a set of recommendations is provided for a further ESCO market development.

Table 2 – Trends of functioning ESCO market in European Member States and Ukraine

№	TRENDS OF FUNCTIONING	CHARACTERISTICS
1	Increasing awareness	<p>The awareness and understanding of energy efficiency services has increased and providers are met with a lower degree of mistrust compared to previous years. The rise in energy prices (increasing the importance of energy consumption in cost efficiency) and a shift in mindsets related to defining energy efficiency as both a competitive advantage, tool to improve the green image of an organization and moral obligation related to environmental awareness are all factors for the raised awareness. The knowledge of the ESCO concept has also increased, creating more confidence in the market, where potential clients start to consider energy efficiency services more business-as-usual than as a specialty. In some countries, financial institutions have acquired more experience in financing energy efficiency projects and in taking into consideration the guaranteed savings offered by some ESCOs and energy performance contracting. For instance in France, finance institutions can cover the risk of the guaranteed savings by insuring the savings. Yet, low awareness of the specifics of the ESCO model and skepticism towards its advantages among both clients and financiers remains one of the most commonly reported barriers to the deployment of ESCO projects in the large majority of countries surveyed.</p>
2	Enabling public procurement rules	<p>Public procurement rules and evaluation criteria in the public tendering process remain the main barrier for ESCO project development in the public sector. However, significant improvements have been achieved in some countries in removing these barriers and/or by establishing procedures that favor ESCOs. For instance in Spain, until October 2007 when the new national procurement law was approved, procedures were not adapted to long term service contracts. With the entry into force of this law, public contract are limited to 20 years. The new Energy Efficiency agreements 2008-2016 in Finland aim at ensuring that the Municipalities are able to use ESCO services when implementing energy efficiency investments. In an increasing number of countries local authorities can retain the financial savings generated from energy saving projects, which has a crucial impact on their ability to enter into contractual arrangements with ESCOs.</p>

Continuation of table 2

3	Active public support	Public authorities have been increasingly active in supporting the development of an ESCO market in some countries by preparing ESCO model contracts, opening credit lines, working with public banks and preparing calls for tender to implement energy services in public buildings. In Sweden, to spur EPC projects, the Swedish Energy Agency is pursuing a "portfolio of flexible mechanisms" which include the formation of an ESCO network, customer oriented information, guidelines for the procurement process, model contracts, and project evaluation. The role of public support is to enhance both the demand for energy services and the supply of services, including by establishing appropriate framework conditions that channel private financing.
4	Economic downturn	The financial crisis and economic downturn have had important impacts, both positive and negative, on the initiation and development of ESCO projects. The economic downturn made ESCO clients more unstable, reducing their activity, increasing the difficulty in ensuring energy savings and raising the risk of insolvency. The economic downturn has also raised the importance of contractual flexibility. On the other hand, the financial crisis and economic restrictions have focussed the attention on achieving cost reductions through energy efficiency measures and taking advantage of the flexible financing mechanisms offered by ESCOs. In order to counterbalance the economic downturn, many projects have been initiated in the public sector with financial incentives for projects in the private market (especially related to building refurbishment). The shift in new projects from the industrial sector to public buildings has been related to the tightened access to finance in the private sector and higher investment risks.
5	Diverse market trends across national markets	Problems related to the stalling of the ESCO market often depend on the problematic access to finance, cross-subsidised energy prices and the unavailability of energy consumption data to construct baselines. In other states (such as Finland, the United Kingdom and Norway) the awareness and understanding of the ESCO market has increased, but without experiencing any rise in project implementation or market volume. In Norway, the number of ESCO has actually decreased during the past years with a shrinking ESCO market. The main barrier in these markets is the access to finance, which can be partly related to the economic downturn and financial crisis. By 2009 Ukraine have established a market with a high number of active market actors. In these countries the market transformation is related to changes in the legal framework and the availability of grants for project financing. Some European member states, such as Sweden, Italy, Spain and Denmark, have undergone a significant growth over the past years.

The study analyzed the existing barriers that hamper the deployment of the ESCO concept and EPC are identified (Fig. 2).

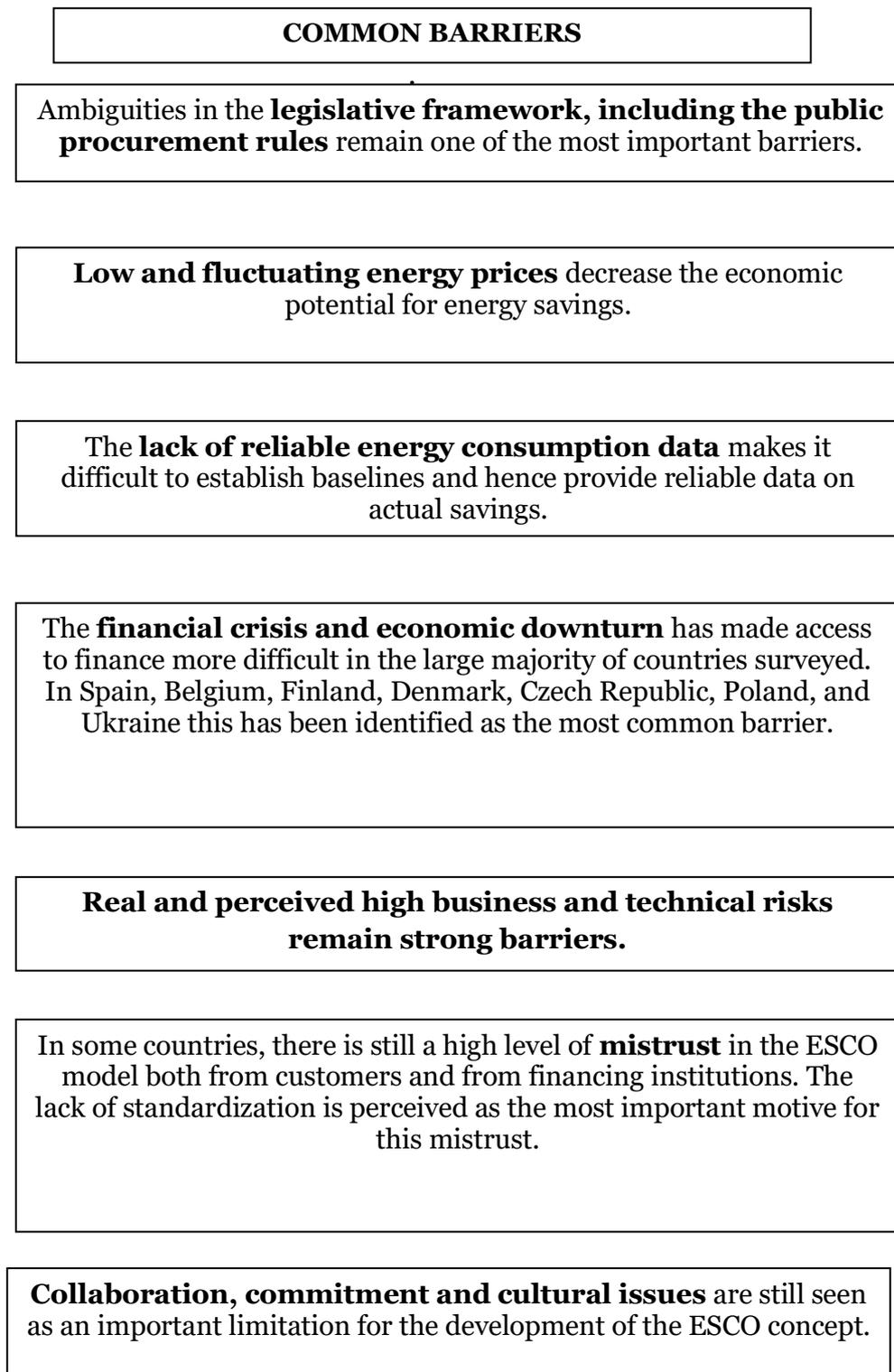


Fig. 2 – Common barriers in European Member States and Ukraine

Next in this work examines market conditions and emerging opportunities related to energy efficiency for buildings in Europe and Ukraine.

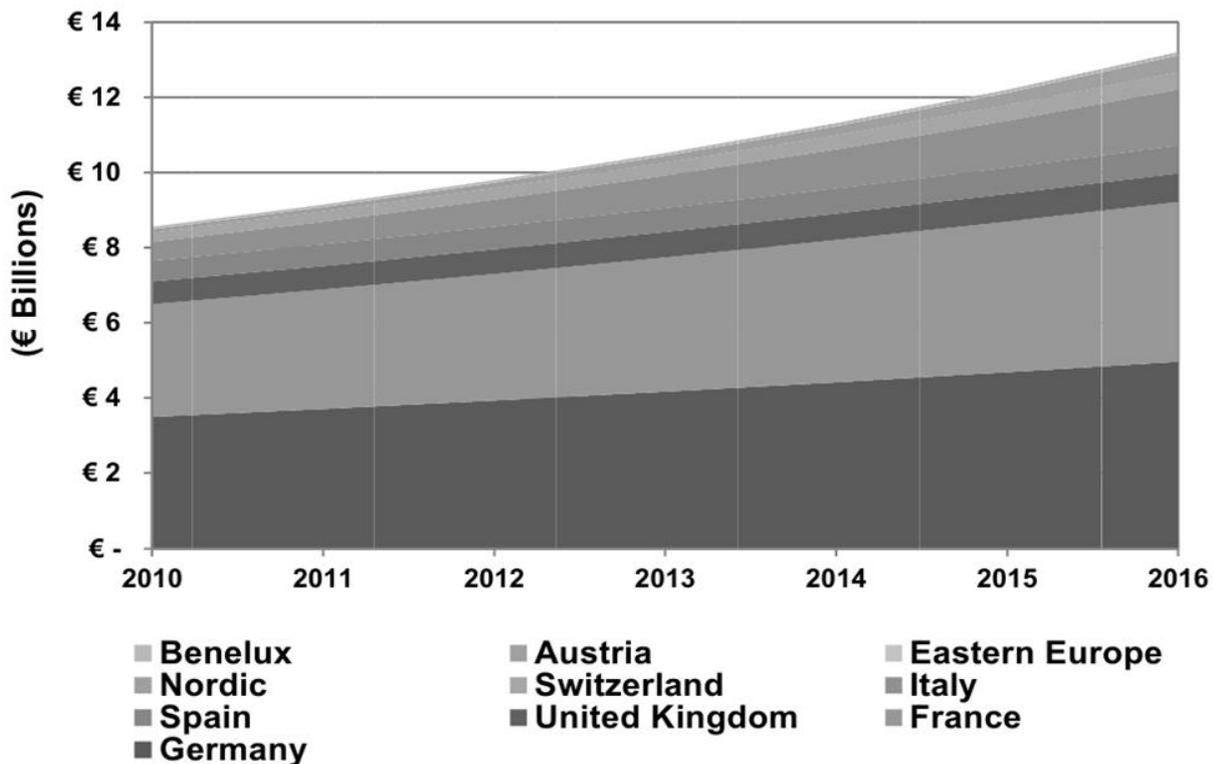


Fig. 3 – ESCO Revenue by Region, Baseline Scenario, Europe: 2010-2016

[3]

Analyzing ESCO Market in buildings we note that new buildings and major renovation in the European Union will be “nearly zero energy“ by 2021, through the phrase's definition will vary significantly by country. Regulatory support has begun and will increase with the 2011 and 2014 updates of National Energy Efficiency Action Plans. Less than 1% of exiting space is nearly zero energy at present, primarily Passive Houses. Of the 30 billion square meters of floor space in Western and Eastern Europe, 74 % is residential, and 2 % is affected annually by new construction or major renovation. Certified green building space will increase from less than 1% in 2010, to more than 2% in 2016, and is already 2% in France. Most energy efficiency promotions have focused on residential and public buildings. The largest energy efficiency markets are in Germany and France (fig. 3), comparable to the combined market of the rest of Europe. In Germany, half of the cities require Passive House construction in new public buildings. Although most ESCO activity is in public buildings, large ESCOs and construction companies have barely started adopting Passive House methodology. In France, the Grenelle plan for the environment stipulates that new construction will produce net positive energy by 2020 [3].

Corresponding to [4] were identified influencing factors on ESCOs (table 3) in particular we consider an European Experience.

Table 3 – Influencing factors on ESCOs : European Experience [4]

Nº	MAIN SPECIFIC BARRIERS	POSSIBLE SOLUTIONS
1	Lack or mismatch of appropriate financing : high transaction costs; high perceived risk of ESCO investment; lack of expertise/ experience on financial market; lack of "off-balance sheet" solutions, more commercial banks financing needed; accounting problems (investment vs. operating costs).	Favorable policy framework to shorten payback times (energy saving obligations, tax schemes, feed-in tariffs, building certifications) . Pooling strategies to reduce transaction costs. Lower investment risks through financial instruments (funds, guarantee schemes + ESCO assurance).
2	In relevance of residential buildings sector, incl. social housing: split incentives or landlord/ tenant dilemma; decision making process in multifamily properties; social housing: legal issues to increase rent.	Removing legal barriers

On the basis of existing studies directions [2] are systematized in the table below (table 4).

Table 4 – Directions for a further market development [2]

Nº	DIRECTIONS	CHARACTERISTICS
1	Focused policy support and supportive policy frameworks	It is essential to have a sound legislative framework that enables ESCO type projects and policies and measures that promote energy efficiency investments. In order to promote ESCO projects in the public sector a number of important steps are necessary. Firstly, adaptation of the public procurement laws in order to facilitate the evaluation of EPC providers and adapting the project cost evaluations in order to take into consideration lifecycle costs, including maintenance and energy costs. Secondly, update the procurement regulations by allowing group tendering by consortia and EPC providers to be evaluated on other grounds than previous EPC projects would facilitate the entrance of new and smaller actors in the market. Third, allow the inclusion of energy efficiency in technical tender specifications and use of lifecycle costing in public tender specifications. Clear, practical and ready-to-use guidelines on how to apply energy efficiency criteria in public procurement procedures are needed in order to improve the practical implementation of energy efficient public procurement.
2	Project bundling	Successful project bundling strategies can help overcome many of the key barriers to financing of ESCO projects. To achieve sufficient scale, a strategy is required that allows for the aggregation of individual projects, technologies, service offers, and investments into a larger and more comprehensive lots.
3	Accreditation and standardization for confidence	The establishment of a national legal framework for the identification and the establishment of quality standards and certification schemes for ESCOS is essential in order to boost the ESCO markets and maintain confidence in them.

4	Facilitating the access to appropriate forms of financing	The engagement of financial institutions is crucial for the establishment of a successful ESCO market. In immature ESCO markets public authorities or development financing institutions (DFIs) – including public banks – may need to promote customised financing products to respond to the specific barriers to energy efficiency financing present in each national market.
5	Establishing bankable ESCO project pipelines	Ensuring mechanisms for project development and delivery is instrumental in generating a steady flow of investment ready projects. The range of further tools available for ensuring bankable ESCO project pipelines includes: targeted communication about the profitability of energy efficiency investments; programmer and technical assistance facilities that build the capacities of market participants to develop and structure finance for projects, most notably providing training for feasibility study and business plan preparation across a range of possible project proponents.
6	Establishment of an ESCO association and the collaboration with national energy agencies	An ESCO association can act as a reference point for ESCOs customers and suppliers and, by grouping and concentration of ESCO professionals, can represent the point of view of the industry with a unified voice. In addition, the establishment of an association or a similar platform or forum could concentrate resources in information dissemination and capacity building. The association can create a support network for potential clients with capacity building, give direct advice, and access to information. The association could organize workshops and knowledge sharing events with ESCOs, potential clients and financial institutions in order to increase the knowledge of how ESCOs engage in projects and what benefits can ESCOs bring to project management from a perspective.

The study was started in [5] where the features of financing of energy service companies were found. In this study, the main objective was to reveal the peculiarities of the functioning of the ESCO Market in Ukraine and the EU, to identify the barriers and prospects for the development of this direction.

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Internal Audit Structure and Organization

In 1990s director General DG Budget worked out new concept PIFC (Public Internal Financial Control - PIFC) and strategy for the countries who wanted became member of EU, in order to provide a structured and operational model to assist national governments in re-engineering their internal control environment and in particular to upgrade their public sector control systems in line with international standards and EU best practice. This concept was challenge for our country. EU countries were interested in observing and controlling of public sector of ex-communism countries. In these countries corruption and inefficient financial governance were strongly demonstrated. Therefore this was a way to fight against corruption in the governance sector. The reform required specific actions by the governments and the readiness to implement reforms. The implementation of model worked out by EU about “Government financial control” consists of three main component:

1. Financial management and control system.
2. Functional independence internal audit
3. Harmonization center - Financial management and control system, also coordination subjects of internal audit and methodology of harmonization.

Strengthening of Government internal financial control is the main component of the financial sector management reform of the government, which helps government to set up modern control environment in the public administration. All operations must be adequate with principles of good management, productivity, transparency, efficiency and economics, also with regulation legislation. Inter audit is the instrument by which can be reached mentioned aims.

In Georgia structural sub-unit Harmonization center of ministry of Finance of Georgia is responsible for Georgian public governance and for development of audit system. Which main aim is to built up effective internal control system according standards. The main aim is to develop relations with all interested parties, with all budgetary institutions, government treasury, government auditory service and so on.

According the law about” Government internal financial control” harmonization center works out consolidated report and the ministry of finance represents it to the parliament for discussing. Controlling of public governance is regulated by the law about “Government internal financial control” , which was received in 2004 when Georgia chose to become member of European Family. According report of World bank, which was provided in Fanatical sector underlined, that we had low level of development of financial sector. In that time we had sharp corruption, nepotism and high level of distrust to financial institutes. We couldn’t answer requirement of

international organizations. In 2007 based on research of World Bank, Georgian government and European commission signed agreement about “Support Financial Management Reforms”, Ministry of finance established risk assessment and internal audit department, which was responsible for to build up new structural units of internal audit and to implement new control system of public finance. It must be responsible for financial control of the country and for stabilization of financial stability of the country.

In 2009 was work out project about “Strategy of development of internal financial control in government sector”. There was represented plan of development of internal audit. For this purpose on 26th of march 2010 parliament of Georgia received law about “Government internal audit and inspecting”, which was the base of internal audit system of public governance. According law was created 12 internal audit subjects in all ministries of Georgia, except ministry of justice, ministry of corrections, ministry of defense of Georgia. In 2010 we met first definition of “Internal audit in public governance.”

According the law of “Government internal audit and inspecting” it was necessary to create harmonization unit for implementation reforms. The main aim of this unit was coordinate effective work of units, avoid duplication of tasks, establishment and development of internal audit system. Harmonization center was responsible for trainings and syllabuses to ensure development of professional auditors. According all of this and by strategy document PIFC for the Georgian government was priority to establish harmonization center, for this on 7th of April 2010 according statement of president of Georgia N 215 was created internal audit harmonization unit. Based on this statement was created legal entity of public law – “Governance internal control national center”, which is responsible to work out methodology documents.

Nowadays has changes in the law about “Governance internal financial control” was made on 29th of December 2015. It is responsible for regulation and monitoring of financial control system of public institutes. It determines methodology of financial control and relations between Ministry of Finance and other sides. Law covers all public institutes and internal audit subjects are responsible to the head of department and in some special cases it works co ordinary with harmonization center.

Harmonization center- which is represented by Georgian ministry of Finance is unit of co ordinary of internal financial control model. It is responsible for assessment, coordination and harmonization of financial management and control system as a part of internal audit.

I think we have to work hard in this direction. We need more qualified personal in these sphere. We great example of developed countries such as Germany, Estonia and Belgium. If increase amount of high qualified personal and yearly certification system will cause, that auditors will follow all new

tendencies. It means that we will have high quality and more level of responsibility.

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Trends of Impact of State Strategy on the Development of Entrepreneurship in Georgia

Georgia has come face to face to new challenges, the most important of which is that, our country will be able to form closer relations with European countries in parallel with mutual, equitable and pragmatic relationship with other states under the current globalization process, going in the world, the part of which is he himself. Herewith, orientation should be the strengthening of existing positive sides of own, as the state social-economic system, to the transformation of weak and negative elements with consistent and understandable, acceptable painless methods and forms for our society, considering the best models of the past and contemporary periods of centuries-old experience of our own national and world civilization. (Bedianashvili, 2015).

The goal of the study is to increase the entrepreneurial thinking in Georgia and to study the problems of the development of entrepreneurial activity, to evaluate the regulating and supporting system from the state`s side and on the basis of it, to give our own recommendations.

During the study it`s been used the methods of analysis, synthesis, evaluation, historic, statistical and empirical. For complex studying of the issue, it`s been used the results of study of Georgian and foreign scientists, reports of governmental and non-governmental, national and international organizations, statistical data.

Economic policy of Georgian government is based on the three main principle. The first principle is to provide a fast and effective economic growth, oriented on the development of real (production) sector of economy, what promotes to solve economic problems, existing in the country, to create the work place and to overcome the poverty. The second principle is to pursue the economic policy, which will promote inclusive economic growth, what means universal involvement of the population in the development process of economic (Including diaspora, migrant, ethnic minorities and other groups), as a result of economic growth, the welfare of each member of the society, their social equality and improvement of population`s living conditions. The third key principle is to use natural resources rationally in the development process of economic, to provide economic security and sustainability and to avoid the risks of natural disasters (strategy 2020, 2014).

Georgia concluded free trade agreement with European union, European free trade association, Turkey, China and with CIS countries. Georgia uses preferential trade regimes with strategic countries of economically developed, such they`re: USA, Canada, Japan. Country uses with preferred promotion regime with the members of the world trade organization. This is the market of several billion customers, what forms huge market potential, the reasonable use of which accelerates the economic growth of Georgia

significantly. Also, it's important so called "To buy time", or reasonable use of positive and negative experiences of the developed countries, as it happened, for example, in rather smaller countries with population and territory than Georgia is: Such as the Baltic republics, Malta, Cyprus, Luxembourg and others, which have already adopted European peace, stability, economic development and welfare (Samadashvili, 2016).

In spite of ensuring the above-mentioned formal relationships at desired level and by simplifying the barriers to access on the huge consumer market, Georgia has failed to overcome the development-expanding of entrepreneurial sector and the problem of achieving high-productivity. So, on the background of certain achieving of the international economic collaboration, it's actual to look for the ways of developing the real entrepreneurial sector.

At present, entrepreneurship plays an important role in achieving high rates of economic success and growth, The more entrepreneur has the opportunity to demonstrate his initiative and creative capabilities, it will be the less distance between the results of potential and actual results of development.

The prerequisites of the development of business and entrepreneurship can be combined into three groups:

- State policy in relation to business;
- Community culture and value system;
- Humans` inclination and their skill towards the entrepreneurial activity.

Under the modern conditions, for the successful development of entrepreneurship, it's necessary optimal harmonization of the state, customers and economic entities, for which, it's important regulated and effective normative-legal base, which promotes the stimulation of the entrepreneurs activity and create favorable conditions. For the development of entrepreneurship, it's necessary regulating and supporting the systemic state. They're the measures, which have economic, legal and administrative character, which are directed to the development of national entrepreneurship in the context of sustainable social-economic development of the country.

To ensure with the development of entrepreneurship is to master new prospective production, modernization, increase of competitiveness, increasing the openness of the economy, to create the mechanisms for sustainable development of economy of the country. The development of entrepreneurship is the foundation, on which is build up other remaining parts of economy. Besides that, it has a great importance for the intellectual development of the personal potential of the country. The strategy, directed to the development of real sector will cause the demand on such qualification specialists as they're: engineers, technologists, inventors, constructors and others. The development of real sector originates the necessity of existence of

project and scientific-research institutions, what will lead to the effort to solve the objectives to improve the education. And the result of it will be intellectual development of the nation, what will contribute one of the most important challenge, existing before the country, the construction of economy, based on the knowledge, what is in chain connection to increase the competitiveness of the country.

In this direction, it's important to support the policy, directed to the stimulating of giving the ideas, entrepreneurial thinking, what means the growth of a number of individuals, having a readiness of risk in the future, get a knowledge and support the development of technologies. For the purpose of increasing the degree of entrepreneurial thinking and culture, it's desirable to interfere in the educational system and to implement the initiatives of entrepreneurial education. The existence of supporting policy of the business, especially of small and medium business, without increasing public entrepreneurial thinking, will necessarily be short-term. Researchers offer us the following directions of implementation of entrepreneurial skill and policy: educational support, support of the institutions, related to the entrepreneurship, support of mentor initiatives, education and lifelong learning, flexibility of the workforce and employment of migrants, creation and support of knowledge of high technologies, support of scientific-research initiatives and others. (Hasidi J., Komsel A., Mekvabishvili E., Gagnidze I., Lekashvili E, Natsvaladze M., 2009).

In the strategy of social-economy development, worked out by the government of Georgia, it's outlined that state policy should be directed to the rising of human resources, especially to the opportunities of young people. Modern labor market requires to prepare high-qualified academic and technical work-force. It's necessary to introduce supporting mechanisms, which will simplify beginner businessmen and enterprises to have an access on information, finances and education and promotes to form high enterprise culture in them.

It should be noted that, in the direction of economic and social development of Georgia, it's been worked out program documents, in which special attention is paid to the accelerated development of real sector. To create favorable entrepreneurial environment for the development of entrepreneurship and to develop private sector is one of the priority of the government of Georgia. In this direction, government has taken out some effective steps, the results of which are presented in some ways, but we think that, it will be more obvious in the next years.

In recent years, entrepreneurial sector of Georgia is distinguished with the trend of growth. In 2016 year, In the entrepreneurial sector, the rate of turnover consisted more than 64081.8 ml GEL, what is increased with 12.5 % compared with 2015 year and with 82.4 % - compared with 2012 year. As for producing of the product, in 2016 year it consisted of 34156.9 GEL, what is more than 13.9 % compared with the indicator of 2015 year and with 47.9 % -

compared with 2012 year. As for the number of employees, in 2016 year, the number of employees was 666790 men, from where 91 % was employed in private sector and 9 % in state sector. In 2016 year, compared with 2015 year, the number of employees increased with 6 % and with 24.8 % compared with 2012 year. Herewith, in 2013 year the number of employees, employed in private sector was 89 % what is 2 % behind the indicator of 2016 year. This indicates that private sector gradually tries to take responsibility to solve the social problems, what itself is positive trend.

However, despite the diversity of the reforms, implemented in the country and increasing the results of entrepreneurial activity, its social-economic results are still unsatisfactory, which is preferably expressed in the growth of general poverty level. If in 2015 year, this indicator was 16.4 % of the total number of household, in 2017 year, this indicator increased till 19.6 %; But, despite of this, the situation is better compared with 2013 year. (Research, 2018).

As it was noted above, industry development has no alternative, if the country needs to survive and develop, it`s necessary to develop real economy and its flagship industry. Otherwise, our attempt of development will look like a walk around the circle.¹ It should be noted that, Georgia has enough resource potential for the development of such directions of industry as they`re: timber production, Food Industry, Textile Manufacturing, Chemical Production, Pharmaceutical (Up to 80 endemic varieties of medicinal plants are found in Georgia) (Gagnidze I, 2015), production and others. By 016 year, 9174.2ml GEL was produced in the industry, what is 27 % of the whole production. From this, manufacturing industry, what is very important for our country, has 77 % and other have mining industry and production-distribution of electricity, gas and water-supply. The product, which is produced in Georgia, has added low value. As we see, at this stage, only the processing industry is rather developed, which is not directly related to the natural resources, obtained in Georgia and on the local product of agriculture. The reason of it is the lower level of technological development and innovation, what at the same time stipulates irrational use of natural resources and endangers natural wealth of the country. In the development field of innovations and technologies, the main task of the state policy is complex facilitate of innovation activity and transfer and introduction of the latest technologies on both national and regional level as well. State encourages to introduce modern technologies focused on environmental protection and the development of “Green economy”. (strategy 2020.2014).

It should be safely said that, real production is the basis of country`s economy and development. The opportunities of the development of service

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<http://iverioni.com.ge/16509-ra-saftrthkhes-uqmnis-turizmi-thanamedrove-saqarthvelos-da-ratom-unda-ganvithardes-realuri-ekonomika.html>

sector is done without real sector, which is the basis of trade, bank sector and for the development of other types of service.

The strategy of tourism development has been worked out in the country, but the example of its vainness is that the number of tourists is increasing every year but economic and social condition of the country is not properly improved. In 2017 year, the share of tourism in GDP consisted of 6.86 %, what exceeds the indicator of 2016 year with 0.11 %. In 2017 year, the incomes got from the tourism are 2 751.3 mln GEL, what is more than 27 % compared with the indicator of 2016 year. By 2017 year, the number of the international travelers are 7 556 273 and in the first-four months of 2018 year – 2 060 264 men. By 2018 year, it's expectable more than 8 million international travelers and more than 3 billion income from the tourism (statistics, 2018 year).

We think that, tourism can bring positive effect if local industry and agriculture is developed or real economics, arrived tourist will be fed with local products and will stop in hotels, which are created with local citizens' investments. Otherwise, most of income, got from the tourism, are still going to the foreign economy. After that, small part of the remaining income, can't make influence on the social-economic development.

Many projects have been carried out in Georgia since 2014 year, which have been financed by the state, so, state is the main investor. State, as investor, participates in the development of business. In particular, it carries out the programs such as: "Produce in Georgia – projects: Host in Georgia, shoot in Georgia, promotion of micro and small business, "startup Georgia" and etc.

According to the decree of Georgian government, since June 2016 year, venture investment program activated in the country – "Startup Georgia", which is a part of 4-point plan of government. State program provided financial support innovative ideas of the beginner businesses, it includes different kinds of components: financing, simplifying tax and legal procedures, also, promote of the relevant education.

The coordinators of the project are "Partnership Fund" and "Georgian Innovation and Technology Agency" gives financing only to the unique high-technological innovative ideas, and partner fund – to the innovative projects. For the whole program, on the first stage was allocated 11 million GEL, what was hereinafter increased till 35 million GEL.

Venture investment project was intended for high technologies and startup, which include such fields as they're: aircraft production, Automobiles, Artificial Intelligence, Biotechnology, Bioinformatics, Computer Engineering, Computer Science, Information Technology, Nanotechnologies, Nuclear Technology, Electromagnetic Radiation, Robotics, Semiconductors and Telecommunication.

High technological projects were assessed by the venture investors from silicon valley. Special attention was paid to the innovation of the project, business sustainability and perspective.

Innovative and technologies agency of Georgia also provides the submission of the successful projects for the international investors to obtain additional investments in Silicon Valley. Within the development strategy of informational technologies and innovative ecosystem, the final aim of the similar measures, made by the government, is to create common entrepreneurial environment and to encourage young, beginner businessmen for the rapid development of the country. Project promotes the beginner businessmen, whose business needs this kind of promotion and it's very important for the formation of their business, what finally stipulates public progress.

The perfection of innovative product is important for the establishment of the market. The existence of the program is unique chance to be implemented the idea by the investor from the beginning and create the product, which will say new word, on Georgian and foreign market as well². The goal of "startup Georgia" promotes the development of business, based on the innovators' ideas in Georgia and its entering to the international market.

We should also pay the attention to the reform, which was initiated by the government since January 1, 2017 year - Deferred income tax, or so called, "Estonian model", which serves to the promotion and simulation of business. He has already got the result, in accordance with the three-quarters data (we haven't annual data yet), growth in the reinvestment component of the direct foreign investments is about 500 million GEL. But it is not the final result, we need more than 2 year in order to see the effect and kindness of the reform³. It should also be noted that the most recent initiative of small entrepreneurship support, which entered into the force since July 1, 2018 year and foresees to bring down turnover tax for the physical persons of "status of small business" from 5 to 1 %. We think that, this is significant activity, the results of which will come quickly and promotes to increase entrepreneurial activity.

So, despite of the fact that, the transaction period on the market economy is distinguished with the diversity of the reforms and western allowances consist of hundreds of millions GEL, the economic condition of the country still remains far from the western and ion particular from European standards. If we see the current structure of the export of Georgia, it will be ease to outline the fields with relative advantages, the better development of

² <http://www.economy.ge/?page=projects&s=29>

³ <http://www.interpressnews.ge/ge/eqskluzivi/483559-chven-gvtcirdeba-globaluri-khedva-araordinaruli-midgomebi-da-fundamentaluri-cvlilebebi.html>

which increases economic growth. They`re, energetic, agriculture, food and light industry, tourism and financial sector, construction and others. From the day of restoration of state independence of Georgia till now, entrepreneurship passed complex and controversial way. For the rapid development of business, economic, political and legal environment can`t create the basis, but in whole it was characterized with the growth tendency.

Between the measures, to be made for the development of entrepreneurship in the future, we consider as actual the following:

- Perfection of sectoral structure of economy. Nowadays, sectoral structure is lower competitive and can`t respond to the modern requirements and challenges of the state and society. Our consumer market is almost based on the import with $\frac{3}{4}$, on foreign product, accordingly, the most important field of economy is trade (17.6 % of GDP), industry (16.4 % of GDP), and the share of service is significantly lower. With this speed, economy of Georgia will have the difficulty to correct the backward from European countries;
- To Increase of entrepreneurial culture in the population;
- To support replacement of import;
- To strengthen the reforms in the agriculture. It should overcome knowledge and problem of technologies and to increase labor productivity; it is not less important the issue of merging the farming;
- New platform gained special actuality over the world within the modern conditions – mastering of digital and informational technologies, financial technologies, we think that, this latest is “uncultivated” of this century, Georgia should be able to master and find its own niche, place;
- To strengthen the format of free relationships in the direction of export and import of capital and service, goods and services with different countries. It should be noted that, to use this agreements is done more actually nowadays in the direction of movement of the labor force.

So, for Georgia, It`s still important global vision, radical, Basic changes. Otherwise, daily issues will still be problematic and the steps won`t be taken, which can give the results in the future.

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Ecological Tourism on the Protected Areas of Georgia as a Factor of Social-Economic Development of the Regions

The main problem of social-economic development of Georgia is the assurance of ecologic safety for the citizens, maintenance of natural environment and creation of the conditions for rational usage of nature. During last years, a number of legal acts were become into force directed to the improvement of the ecologic conditions in Georgia. Although the measures taken, the actions implemented for ecologic improvement of the country are not effective enough.

The Agency of Protected Areas of Georgia and Georgian National Tourism Administration, acting jointly, have received a huge experience in the sphere of developing the ecological tourism on the protected areas of Georgia that needs to be generalized. The analysis of the theoretical and practical materials around the theme allows to complex observation of environmental, genetic, ecological and cultural-educational measures of public management, revelation of gapes and formation of the directions of raising the contribution of protected areas in the social-economic development of the regions.

The research theme was chosen not only for the actuality of the problems of development of protected areas in Georgia, but also for the low level of development of ecological tourism on these areas that is the important factor of social-economic development of the region.

The research aims to learn the activity of protected areas in Georgia for reveal the development directions of ecological tourism.

The research tasks. According to the research main goal the following tasks were accomplished:

- The contribution of protected areas in Georgian economy was revealed;
- The specifics of formation of protected areas in Georgia were defined;
- Tourism activity analysis on the protected areas in Georgia was carried out;
- The interdependence between the ecological tourism and social-economic development of protected area regions was revealed;
- The set of measures was offered for the Georgian regions' future development via raising the contribution of ecological tourism.

The object of the research is the Georgia's public policy in the sphere of maintenance of natural protected areas and development of ecological tourism on these territories.

The subjects of the research are the relationships and interdependences in the sphere of environment protection and ecology.

Today the tourism development becomes the sphere of higher importance not only for being the strong source of revenues, but also for the number of positive effects: It strengthens the development of infrastructure; raises the economic activity of a number of business fields in the context of tourism development and ensures the employment; supports the conservation of historic-cultural traditions and traditional handicrafts; attracts the investment; raises the image of the country etc.

Tourism, along with agriculture sector, represents the fields that have the higher potential for economic development of Georgia. Tourism development contributes in social-economic development of country's regions and ensures the raising of local citizens' wellbeing.

Today Georgia faces the necessity to define the prior directions of regional development that will lay the role of locomotive of sustainable and stable development of regions. It is also creates a possibility of development of other, new spheres, that allows the positive multiplier effect in a regional cut (Devadze, 2009). One of these perspective directions could be the development of ecological tourism on the protected areas of Georgia.

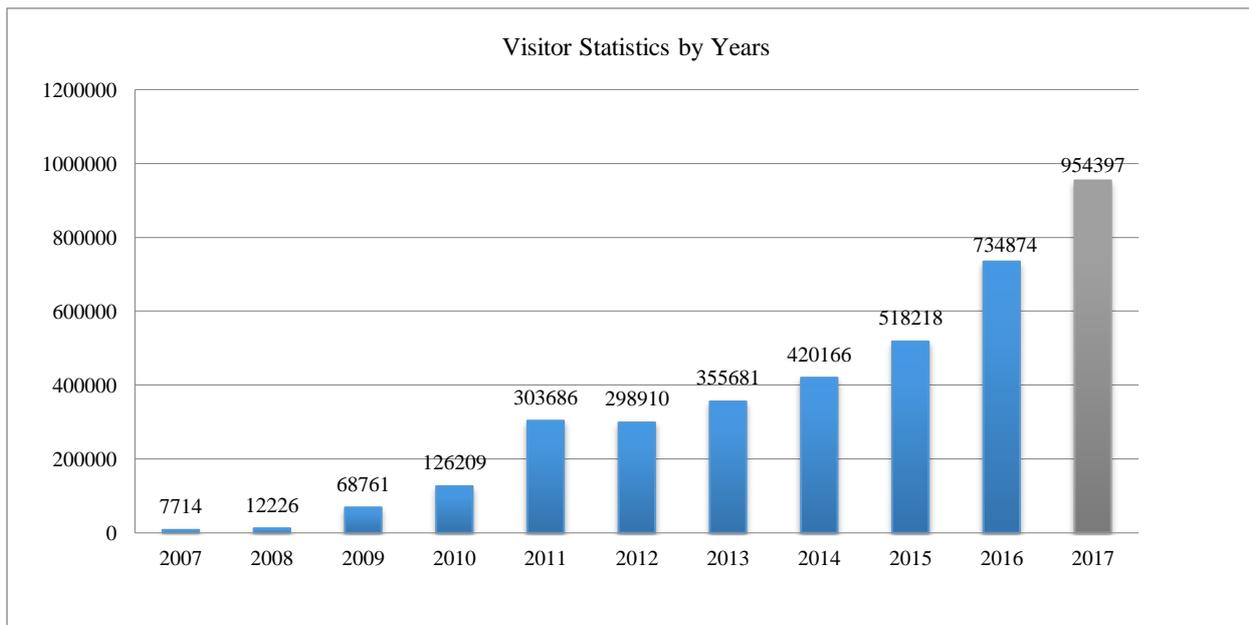
Tourism ecological segment of tourism would be oriented on usage of natural, cultural-historic and other resources to create specific tourist product. Ecological tourism could be very perspective field to develop tourism in Georgia because the country has a huge tourist potential that represents the ground to form the material base for ecologic tourism (Devadze & Grdzlishvili, 2012).

Based on information of the Agency of Protected Areas (2017 yearly report, 2018), there are a number of protected areas in Georgia for today: 14 state reserve territories (area of 139,048 hectares); 11 national parks (area of 349327,1 thousand hectares), 19 wildlife sanctuaries (area of 59857 hectares), 40 natural monuments (area of 2941,43 hectares), 2 protected landscapes (area of 34,708 thousand hectares) that, in total, consists the 8,6% of the territory of Georgia.

In 2017 the protected areas of Georgia number of visits (954397 visitors) count the 30% growth compared with the 2016 (734874 visitors) (see the diagram 1.). 57% of above mentioned number are Georgian citizens (541634 visitors), 43% - international visitors (412763 visitors).

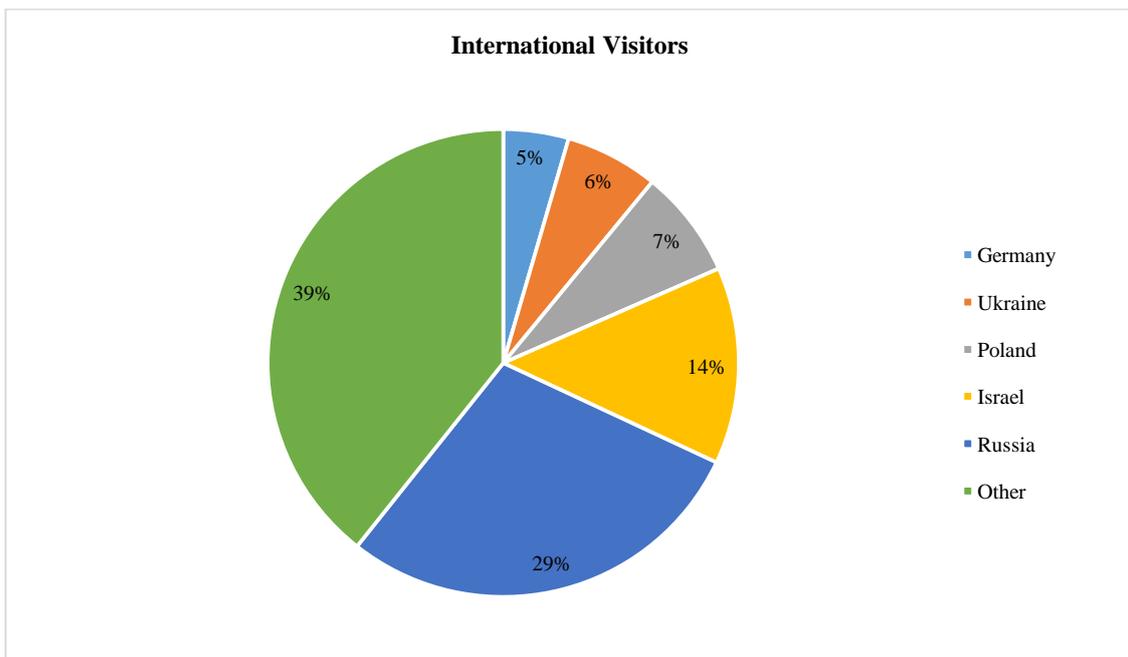
In 2017 the number of international visitors of protected areas in Georgia showed the growth of 33%. The highest number of visitors is from Russia – 29% (118250 visitors), Israel – 14% (56164 visitors), Poland – 7% (30855 visitors), Ukraine – 6% (26461 visitors), Germany – 5% (18510 visitors) (see the diagram 2).

Diagram 1. Number of Visitors of protected areas in Georgia 2007-2017 (Thousand visitors)



Source: 2017 report of the Agency of Protected Areas

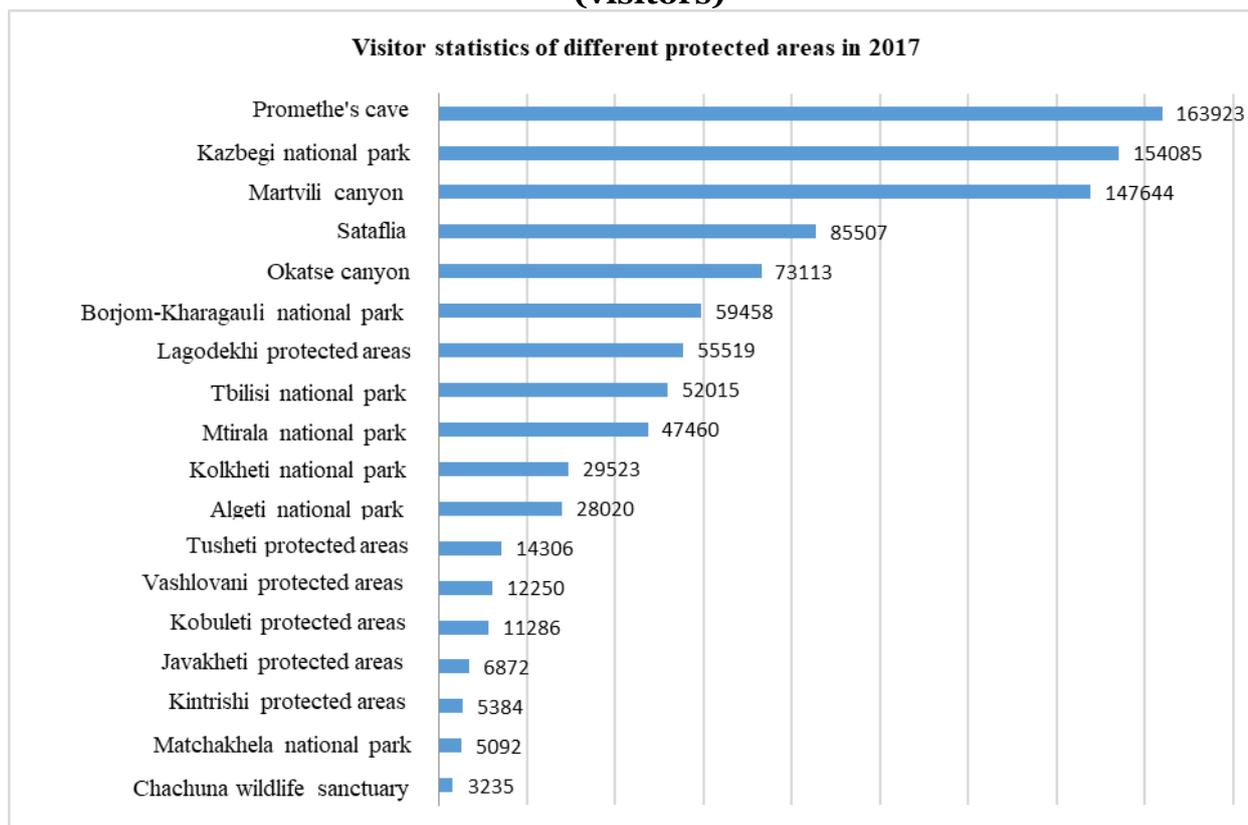
Diagram 2. international visitors of protected areas in 2017



Source: 2017 report of the Agency of Protected Areas

As for visitor number visiting the different protected areas in Georgia in 2017, the situation is reflected on the diagram 3.

Diagram 3. Number of visitors of different protected areas in 2017 (visitors)



Source: 2017 report of the Agency of Protected Areas

In 2017 the revenues from ecotourism services consisted of 4482891 Lari representing 94% growth compared to 2016 (2313697 Lari).

For the purposes of conservation of forest rare ecosystems in the protected areas of Georgia the relict flora territories are identified, the traditional routes in forests are revealed and mapped; the 24-hour monitoring system is working during fire-threat period. The different educational activities are regularly implemented on the protected areas in Georgia. The main beneficiaries of such activities are the educational institutions, eco-groups and local population, also the visitors.

It should be also mentioned that the development of ecological tourism is restricted by the influence of several factors, particularly: imperfect legislation – there is no legal status of ecological tourism defined (there are some imperfections in relative laws and regulations); Lack of the interest to the implementation of the mechanisms of management and economic cooperation; Municipal public institutions are not implementing at full range their managerial functions that define the role of municipalities in organization and regulation of ecologic tourism (Devadze & Chaganava, 2017). There also should be mentioned the other factors limiting the development of ecological tourism in Georgia:

- Seasonality that leads to partial employment of personnel during a Year;

- Possible destruction of local cultural environment;
- Lack of developed infrastructure;
- Lack of acknowledgement of possibilities of ecological tourism in local population;
- Lack of support at regional and country levels.

As practice has shown the local public institutions are not use at full range their abilities and resources for development the suitable conditions for ecological tourism, particularly: attraction of investment; development of small and medium size entrepreneurship; partnership with private sector; involvement of society. In the area of protected territory the local population business activity level is relatively low – lack of starting capital restrains the development of tourist infrastructure on the basis of local resources and abilities.

It is desirable to direct the planning and developing process of ecological tourism on protected areas in Georgia to the stimulation of tourist interests for the improvement of economic figures of protected areas, preservation of natural and cultural heritage and raising the wellbeing of the people involved.

To economically benefit of development of ecologic tourism the protected area and the relative regions should meet the two requirements:

- Creation of such a new product and service the tourists would be agreed to pay for them;
- Minimization of “capital outflow” from the given region.

The policy supporting the long-term economic growth of the region and stimulating tourists to visit the destination repeatedly should be implemented for the ecotourism sphere on the protected areas (Chaganava, 2012). The complex of measures ensuring the local employment, maximizing the social-economic benefits for local society by the rising the tourism consumption activity, reducing “capital outflow” from region should be carried out.

Ecologic tourism on the protected areas could become the key factor of preservation the nature and cultural heritage in the region. It raises the amount of financial resources for local budget by different types of revenues that could be used for covering the environment protection costs, supporting the cultural traditions and raising the level of education.

As a result of the analysis of development of ecological tourism on protected areas of Georgia, it could be concluded that the ecological tourism needs the support, first of all, on regional level, where the key players should be tourism business regional associations solving the following tasks for the eco-tourism development on the protected areas in the regions:

- Formation of information systems for ecological tourism development regional programs and their methodical assurance;
- Creation of mechanisms for the formation of new objects in the sphere of ecological tourism;

- Capacity building in the tourism business to raise the entrepreneur activity;
- Creation of mechanism of revealing the perspective investment projects for the development of ecological tourism.

Tourism business regional associations, in cooperation with local administration, regional funds, and labor organizations should mentor the formation of tourism infrastructure in destinations. The formation mechanism on destination should be based on the public program of ecological tourism support that should cover: improvement of legislative base; development and methodical assurance of information network; formation of financial infrastructure with participation of funds, special banks, and insurance and investment institutions; development of industrial-technological and social-business centers, business-incubators and technoparks.

According of all the above mentioned, the key strategic direction of ecological tourism development on the protected areas of Georgia should be revealed:

It is desirable to create the protected area's development fund, for supporting the improvement of local population social and economic conditions (in the aspect of advocacy of their economic and social rights).

For the improving of social and economic conditions of local population and in parallel, of the protected areas, the auxiliary zone projects should be prepared that will support the creation of the alternative sources of revenues (e.g. guesthouses, different taverns or bistros, guide services etc.).

On the country level government interaction in the development of ecotourism on the protected areas could be implemented as follows:

- Legislative and Government support of tourism. It is necessary to regulate legislatively and concretize the issue of rent the land lots on protected areas;
- Elaboration of normative documents that ease the regulated tourism and vacation (e.g. creation of maximum norms of anthropogenic intervention, service reimbursement system etc.);
- Formation of system of education and re-education of the protected area personnel responsible for organization of tourism and vacation.

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Pigovian Tax and Sustainable Tourism

All the countries around the globe acknowledge the importance of tourism. But not all of them acknowledge the dilemma between tourism development and environment. When the given destination starts to develop (no matter it happens on city or village, region or country level), all the stakeholders forget about ecology. Economic growth and social benefits derived from tourism development is good anabolic to weaken the society's attention on environment. The later the society awakes the bigger the problems with ecology it faces.

By no means, the environment problem is the main negative side effect of tourism. Although the tourism-voters could argue that the tourism is not the problem but solution – for it gives the local society enough revenues to support the environmental balance. But the counterargument is also substantial – the policymakers mostly tend to direct the higher flows of taxes back to the tourism infrastructure and promotion to attract more tourists than to environment protection programs, especially in pre-election period, and in this point of view tourism is not a solution but a part of the problem.

It is well-known that the Pigovian tax is one of the instruments of solution the negative externalities. Theoretically the tax mechanism is very clear – higher tax rate raise the costs of production, reduce the production and shrink the negative side effect. In Contrary, lower tax rate reduces the costs, stimulate production and raises the externalities.

But this is the story of static economic conditions. How does it work in dynamics? How does Pigovian tax influence the tourism in the process of growth, or decline? Does it solve the environment problems? What is the cost of such solution? Are there any other solutions for the dilemma between tourism and environment? The given research attempts to answer these questions.

Last decade several interesting researches have been made in the sphere of tourism negative externalities (environmental issues) and taxation, for example Ihalanayake used Computable general equilibrium model to evaluate the tourism taxation effect on externalities (Ihalanayake, 2013). Another interesting work of Paziienza considers the conditions of tourism taxation and allocation of collected funds for the destinations with non-renewable or scarce resources (Paziienza, 2011). Rinaldi also analyses the tourism externalities and the relative taxation and gives the examples of taxation in Italy (Rinaldi, 2012).

Relatively old but much interesting research of Piga discusses the possibility of optimal use of natural resources by imposing the taxes in different market situations (Piga, 2006) - What is most interesting and corresponds to the conclusions of given research, the taxation is discussed by Piga as a tool that has effect only in conjunction with other instruments. But

the story of criticism of Pigovian tax as an effective tool has quite old origins, for example the work of Carlton and Loury (Carlton, Loury, 1980).

As one of most comprehensive works in the sphere of environment and tourism for last decade, Holden's book also introduces the Pigovian tax model to explain ways to deal with externalities in tourism (Holden, 2008). The another book that discusses the tourism negative externalities and the ways to deal with them is Devadze and Grdzlishvili's work dedicated to Georgia tourism case (Devadze, Grdzlishvili, 2012)

The research made by three scholars from university of Botswana (Kolawole, Mbaiwa, Mmopelwa; 2016) shows how crucial is the tourism negative (environmental) externalities for quality of life in the destination.

The Actuality of the issue formed the main direction of the research.

The goal of the given research is to find the theoretical solution for tourism-environment dilemma in the framework of Pigovian tax model.

The following tasks were taken according to the research goal:

1. Pigovian tax graphic model was modernized according to the research goal;
2. The model was used to show how tourism destination growth effects on the model conditions;
3. Government attempts to keep tourism destination sustainability were identified;
4. The alternative solution for sustainability was carried out.

The research uses the graphic model of Pigovian taxation as a base for analysis. In static framework the Pigovian tax appeared as an effective tool to control the situation with negative externalities, but in dynamic framework it could restrict growth and development in a manner that would not be acceptable for tourism policy makers, investors, industry actors and other stakeholders.

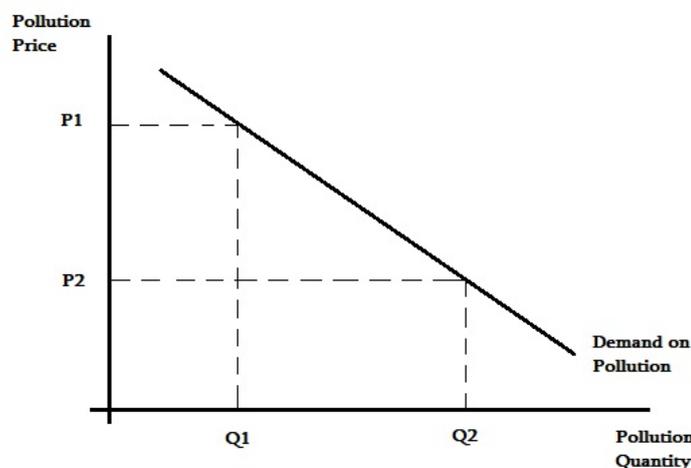


Figure 1. Pigovian tax model

First of all the Pigovian tax model should be recalled. It connects the price for pollution to the quantity of pollution (figure 1). If the price for pollution for the tourism destination actors is low (P_2), they pollute more

(Q_2), but higher price for pollution (P_1) reduces the pollution Q_1 . Demand on Pollution shows the negative relationship between these variables. Two important points should be indicated on the model to continue the analysis. First of all it's the Q_{max} point that shows the maximum level of pollution that is acceptable for the destination in aspect of self-revival and existing conditions of environment measures. The second point is P_{min} point that shows the Pigovian tax minimum rate to keep the tourism destination pollution on the level Q_{max} (Figure 2).

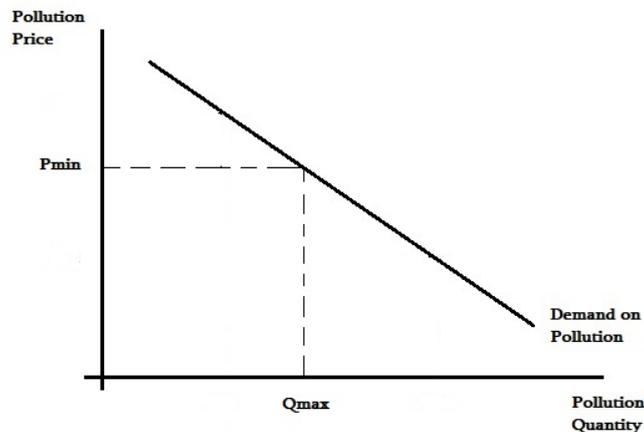


Figure 2. Maximum level of pollution

Suppose that the tourism destination is at the level of pollution of Q_1 (Figure 3), it means that the tax rate equal to P_1 is not enough to keep the environmental balance in the destination. In this situation, the raise of tax rate up to P_2 level seems to be the rational decision. The result for such a rise could be the reduced quantity of demanded pollution down to Q_2 level. Let's suppose again that the tourism business actors do not object for such a raising and the newcomers into the industry doesn't change their investment plans for that moment. In this case the Pigovian tax could be considered as an optimal solution for tourism-environment dilemma.

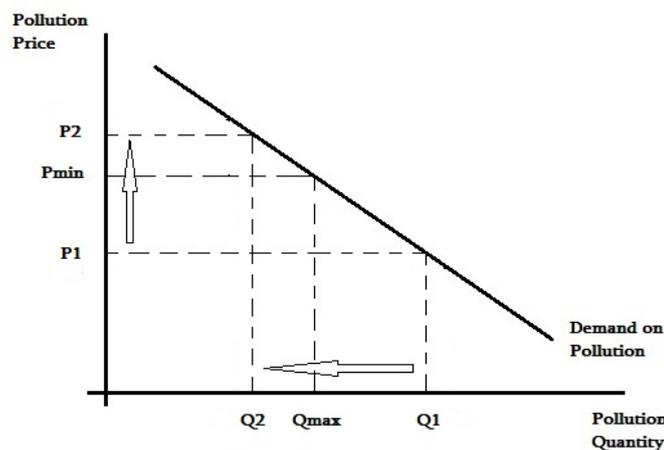


Figure 3. Pigovian tax effect on tourism destination

But the tourism destination is never in static position. It is developing, and as a result, the demand for pollution is also changing. Assume that the tourism in the destination is rising. it means that there are more travelers visiting the destination and, as a result, more actors in the spheres of transportation, accommodation and food and other services that leads to more pressure on environment and raises the demand on pollution (Figure 4).

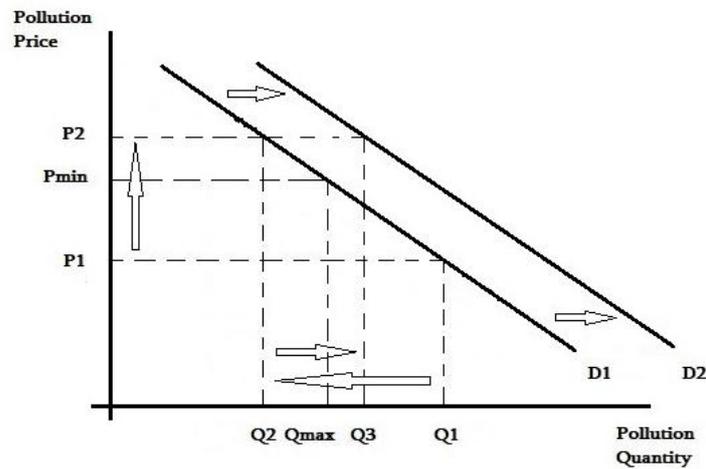


Figure 4. Rising demand on pollution

What is the result for such changes? The main conclusion that could be made is that the Pigovian tax is only short-run solution for a problem, because, as it is shown on the figure 4, the raised demand D_2 leads to the level of pollution of Q_3 – the level that exceeds the Q_{max} acceptable level of pollution. In the long run, Pigovian tax loses its effect.

The problem is deeper that it appears at first sight. The policy makers should, to keep the environmental balance on the acceptable level of Q_2 below the Q_{max} , raise the tax again up to P_3 level (Figure 5).

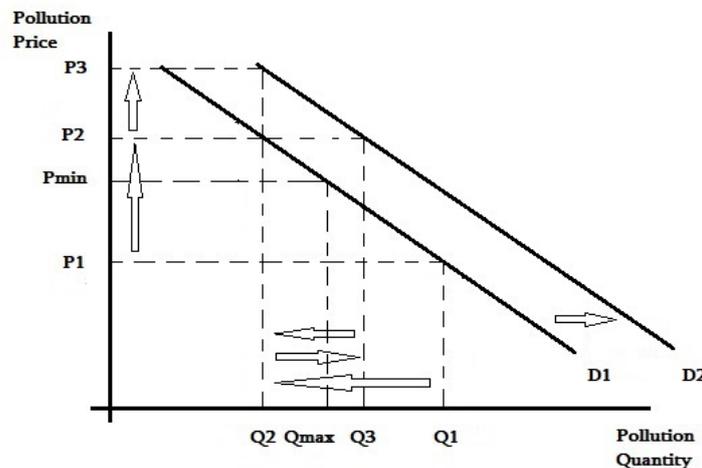


Figure 5. Necessity to raise the tax again

The situation on the figure 5 could be characterized, as too much pressure on business and investment decisions. If the level of taxation on P_2 was more or less acceptable for business and it could be argued that this raise is made for wellbeing of everyone, such an argumentation couldn't be effective on the level of P_3 . Also the persons who are making the decisions about investment and considering the overall investment conditions in the region might be afraid of continuing process of tax rising and change their minds to invest in tourism destination.

Pigovian tax remains also the short-run solution in the case when the destination starts to decline (Figure 6). Reduced tourist flows lead to less number of economic actors serving them and, as a result, the reduced demand on pollution. In case, when the tax rate was raised up to P_2 to keep the pollution under Q_{max} level, tourism decline leads to the quantity of pollution on Q_4 level but along with the complaining businessman that they are under high tax pressures. Now the policy makers should lower the tax somewhere near the P_4 level to get back to the acceptable Q_2 level of pollution. Now the society will start to complain about raised pollution.

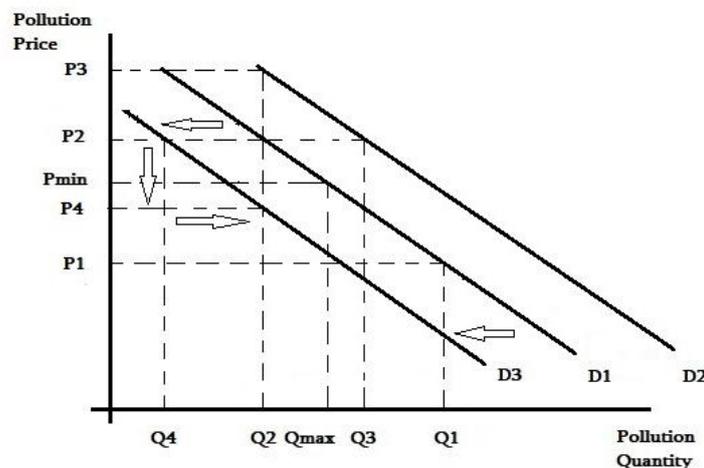


Figure 6. Tourism decline and necessity of lower the tax

It could be concluded that the Pigovian tax rate changes doesn't have a long-run effect on sustainability for tourism destinations. In the long run the pollution problem appears again or there are complains about high tax pressure. That's why for long-run solution there is a necessity to find another ways.

Making businessmen more environmentally responsible is one of them. Instead of playing with tax rates, the policy makers could direct their administrative and financial resources on implementing the programs that makes the tourism business actors more environment-friendly. The effect of such programs is shown on the figure 7 below.

Suppose that tourism destination is at point $(P_2; Q_3)$ where the tourism growth lead to higher pollution than the maximum level. Instead of raising

the tax rate again, the policy makers start to implement the programs to make industry actors more environment-aware.

The result could be the reduced demand for pollution - demand curve would move to D_4 position, and in the situation of unchanged P_2 tax level, the quantity of pollution would consist the Q_5 level – much lower than Q_{max} , or even Q_2 . It means that mind-changed business sector could solve the dilemma of tourism-environment by itself.

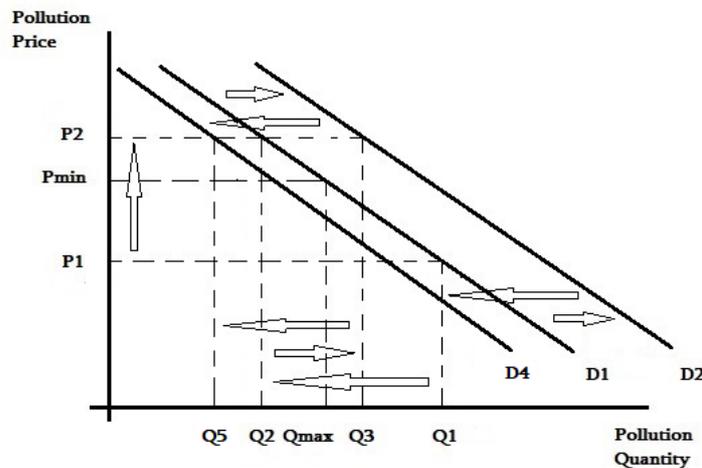


Figure 7. Environment-friendly business sector

But there is one counterargument that places the hypothesis shown on the figure 7 under the doubt. It lies in the sphere of costs. Two important questions arise.

Is more environment-friendly “production” of tourism services cheaper solution? And the following question is most crucial – could the destination with environment-friendly industry win the competitive game with other destinations where the industry actors don’t care much about environment?

Of course it is more expensive to make the production environment-friendly. Although there are not the newest (and much expensive) technologies to be implemented in the sphere of transportation, accommodation, feed and other elements of tourist product and only the simplest things, such as the changing in employees’ behavior should be implemented, nevertheless these actions require additional costs and more or less effect on the total costs of production.

Well, it seems the figure 7, that shows the interdependence of Pigovian tax rate and the quantity of pollution, is correct, because it shows that more environment-friendly industry actors pollute less, and the logic is almost the same – becoming more responsible, the businessman spend more on environment-friendly technologies, and the higher costs lead to reduced production and reduced pollution.

By no means, the environment-friendly tourism business is the business with higher costs, but there are some arguments supporting such programs against the Pigovian taxation.

First of all, Pigovian Tax is a financial instrument – from the point of view of industry actors the tax is just additional expenditures. Even for the situation, when collected tax fund is used particularly for ecologic programs, the environment-aware stimulating programs seem to be more effective - the industry starts to invest in ecology directly, without trough public service mechanism.

Second, if Pigovian tax, in a long run, leads to the complains of businessmen and effects negatively on investment decisions, the environment-aware stimulating programs have no such effect – in contrary they stimulate the spending on economy – because the tourism industry actors and investment decision makers are environment-friendly now and they not should but will to spend for ecology.

Third, Pigovian tax effects industry actors, but environment-aware stimulating programs effect all the stakeholders – businessman, tourists, local population – and lead to decline of demand on pollution in higher volume than Pigovian tax.

Fourth, it is well-known that to prevent something is cheaper than to threat the degraded one – to prevent environment degradation is better solution that to collect taxes and after that implement the public ecology programs.

Taking into account all the above mentioned, the answer of first question could be formulated: The changing taxation policy with environment-friendly stimulating programs will reduce the demand for pollution, but tax costs will be changed with costs on environment-friendly technologies. As for effect, the programs affecting on the level of awareness for environment would have more effect on pollution than taxation.

Suppose the first question is answered, but the second one remains unanswered. It seems to be very logic that the destination with higher costs should lost the competition with other destinations. But there are a couple of arguments in favor of environment-friendly behavior.

First of all, competitors win only short-run game – in the long run the given destination will run forward with its preserved environment and rational use of resources. In financial terms its competitors will have much bigger problems dealing with ecology and would be forced to impose highest rate Pigovian taxes to solve the issue. The environmental imbalance disengages the tourists and high taxes disengage the investors – in the long run the environment-friendly destination could win.

Second, the competition game could be won in a short run also – becoming environment-friendly and including this in destination's promotion campaign the destination changes its market segment – now more tourists who respect the environment and are environment-aware persons start to choose the given destination to visit.

All above mentioned means, that the environment-friendly behavior could be the factor of winning in competition not only in a long, but also in a short run.

Finally, several conclusions could be made in the framework of given research:

Pigovian tax could be considered as only short-run solution for tourism externalities, in cases when the tourism destinations start to grow or decline, the tax doesn't work – it couldn't stop the pollution or lead to complains about high tax pressure.

Changing the Pigovian taxation by the programs that stimulate environment-friendly behavior could be more effective alternative, although it they also tend to raise the production costs, their positive influence on pollution quantity could be higher.

Environment-friendly destinations, where the production costs are higher, could win the competition game with other destinations not only in long-run but also in short run, by attracting more environment-aware tourists.

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Challenges to Food Security and Some Aspects of their Solution in Georgia

Food security is a situation that exists when all people, at all times, have physical and economic access to safe and sufficient food to meet their needs for an active and healthy life. The quantitative aptitude and access are the key food security aspects at the national level.

Grain is one of the most important guarantees of food security, but the market stability is greatly influenced by the production level of cereals and legumes, meat, milk and dairy, fish, sugar, vegetable oils, potatoes, eggs, fruit-vegetables and drinks.

The charity organization Oxfam implements a food security project in Georgia, Armenia and Azerbaijan. Food safety, as the concept, entered our region together with Oxfam project as the concept of food access policy framework. This is a combination of state policy approaches that provide healthy and diversified food in the country at affordable prices.

Often, food security is also considered at national security level, in the sense that if the policy framework does not create favorable environmental conditions for the country to have food security, its national security is at risk. That is why there is a short-term and long-term planning policy that prevents the population from the shocks caused by food shortages. Food security is, first of all, political will and constitute the unity of sequential and cohesive programs the main purpose of which is the constant and stable ensuring of county population with healthy and safe food.

According to the latest data, Georgian population spends over half of its income (58%) on food, which ranges between 10-15% in developed countries, i.e. approximately 72% of food consumed in Georgia is imported. According to the absolute rating of 2015, Georgia paid 835 million US dollars to buy food, in 2016 - 836 million USD, while in 2017, the mentioned amount consisted of 922.5 million USD.

Undoubtedly, this trend will negatively be reflected not only on food security of Georgia but on sustainable economic development as well. The common balance of trade of Georgia is negative too, as well as the food trade balance and functioning of the economy of the country is depended on import.

Consumption of bread and pastry in the daily ration of Georgian population is 1.8-2.0 times exceeds the physiological norms, that further reduces the already low level of the self-sufficiency ratio. As we know, the majority of the Georgian traditional dishes consists of dough. Due to the low purchasing power, Georgian population mostly consumes pastry. Therefore, 62% of the energetic value of the food ration in Georgia comes on pastry (while it consists of 15% in rich countries).

In this regard, we'd like to highlight high dependence of Georgia on wheat and flour import, mainly from Russia, Ukraine and Kazakhstan. The

local production of the country satisfies only 12% of demand on the wheat, which is approximately a stock of one month. According to statistical data, the local wheat production in Georgia decreased by 80,000 tons if compared with 2015-2016. It should be noted that in academic and political circles most of all agree that Georgia, due to its small territory, is not able to fully satisfy demand on wheat,

According to above said, they prove that the trend of establishment of the dominant specific share of the pastry in the total volume of consumed food in Georgian ration much more aggravates and puts the food security of the Georgian population under the risk. What if the country provide population with sufficient amount of bread products? What alternative strategy should there be to avoid such shocks? This very should be part of the security policy.

The necessity of development of the food security policy based on the correct, scientifically substantiated and solid arguments is clearly illustrated by the example of grain (in particular wheat). Thus, food security does not mean only physical consumption of food. An integral part of food security is the quality of the product, balanced energetic value and the presence of microelements necessary for the healthy development of the body. In this regard, the situation is alarming.

Table 1. Self-sufficiency ratio (in %) in 2012-2017

	2012	2013	2014	2015	2016	2017
Wheat	9	12	7	17	19	15
Corn	100	96	91	77	79	64
Potato	89	100	88	90	92	109
Vegetables	78	75	66	66	64	65
Grapes	127	130	165	121	150	183
Beef	36	39	43	48	48	46
Pork	36	41	44	47	42	36
Sheep and goat meat	83	85	79	75	100	223
Poultry meat	21	18	24	30	35	32
Above mentioned trend	92	91	90	87	82	82
Above mentioned trend	100	95	96	102	100	98

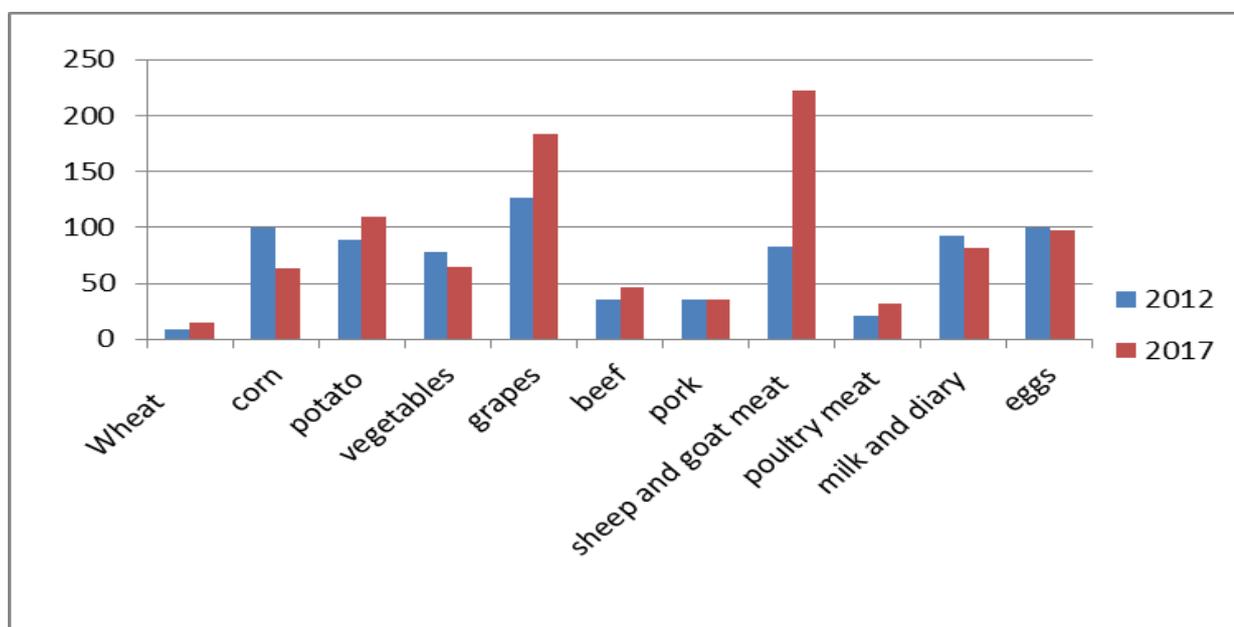
The report of the Ministry of Agriculture of 2016 states that a working group has been created and recommendations have been developed to ensure the monitoring of food security. According to the results achieved by the end of 2016, the information base of agricultural products is created and periodically updated; the yield indicators are available within the short period of harvesting and the baseline works are done for prediction of the future yield.

According to the National Statistics Office of Georgia, the standard procedures have been created for updating the database of the Ministry of

Agriculture and the process of updating the data is hastened. Periodical preparation of the publications of considered as the future plan, which mainly include the food security issues in the country. However, it should be said that the plan remains a plan and in the report of 2017 there is nothing said about it.

If we look back at the self-sufficiency coefficient of food security of 2012-2017, it can be said that in comparison with 2012, the systemic changes and complex measures are possible in to be implemented in real-world employment of rural population in any country and achieving an appropriate level of socio-economic development in a short time. Raising of the entrepreneurial activity of human resources is one of the most important activities. That is why we can confidently say that, taking care of the peasants and stimulate their work for feeding up the society (constant relationship with land) should become the main priority of agricultural policy, as well as reducing social-cultural differences between the village and the city.

Diagram 1. Change of self-sufficiency coefficient



At the same time, the Georgian government has approved the Strategy for the Development of Agriculture for 2015-2020. Supporting of agriculture has become the priority of our country, tax benefits have been established, the income generated by the primary supply of industrial goods before the industrial processing of agricultural products (before changing the commodity code) produced in Georgia by the person employed in agriculture is exempted from paying the VAT in full and income tax – in partial, as well as the profit distribution and the expenses incurred / implemented within the

same activities, which are envisaged by the “B” and “D” subparagraphs of the First Section of Article 97, if the revenue received by such supply during the calendar year does not exceed 200,000 GEL.

According to the Agriculture Development Strategy, the state will prepare a food security plan for emergency safety or emergency situations. Monitoring of basic food products stock indexes and assessment of availability will be conducted. Implementation of agriculture development strategy, tax allowances will help to increase the self-sufficiency of the country with food, maintenance stability of the food market, diversification of export markets. Thus, as shown above, the food self-sufficiency level of Georgian population is very low. It is also noteworthy that the level of dependence of the population on food import is very high, that results in quite low level of purchasing power. On this account, the population of Georgia is mostly consuming bread products. Therefore, most of the food ration in our country comes on bread products. Besides, dependence of Georgia on wheat and flour imports is high. The local production of the country satisfies only 12% of demand on the wheat, which is approximately a stock of one month. According to statistical data, the local wheat production in Georgia is decreased if compared with previous years. This has its objective reason: Georgia, due to its small territory, cannot fully satisfy the demand for wheat. The following measures should be taken for solution of the problems of vital importance for Georgia:

1. The Georgian authorities should encourage job creation in agriculture through subsidizing grain production. Moreover, the experience of overseas shows that this field of economy is not able “to rejoice” without subsidiary and dotation;

2. It is necessary to implement the ecologically pure, latest technology (green revolution) in the agrarian sector, acquisition of the arable tractors, irrigation flying equipment, mechanization of cultivation, installation of irrigation and drainage equipment, bringing and modification of the international experience of rural management, marketing and organization;

3. Increasing qualifications of farmers employed in the agricultural sector, training-requalification of the existing agronomists, preparation of new staff, their information about the events taking place on the agricultural market abroad;

4. Evaluation of existing and potential risks in the agrarian sector, their prevention and development of the strategic measures for their elimination;

5. Strengthening the food security component in the long term strategy of agriculture development, diversification of imported food products, implementation and administration of EU standards on import of food products and local production which is one of the necessary

prerequisites to satisfy the obligations under the Association Agreement between Georgia and the European Union.

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Tax Benefits of Tourism Business

The important prerequisite for the expansion and development of tourism market in Georgia is to strengthen the state's regulatory role, in particular the improvement of the existing legislation in the field of tourism and its subsidiaries. The perfection of the legislative base itself is an attractive and favorable tax base for tourism and resort sphere to attract foreign and local investments.

Investments play an important role in achieving rapid pace in economic development and economic growth of the country. A high level of investment is the main priority of Georgia's economic policy in terms of domestic and foreign direct investments. (Main Data and Directions of the Country, 2012-2015, Government of Georgia, Tbilisi, 2011, p: 3, p. 8).

In April 2017, Georgia hosted the two-day conference of the United Nations World Tourism Organization Europe and Asia mining resort - "Innovative Strategies for Sustainable Tourism Development", which aimed to:

1. Sustainable Development and Planning,
2. Investments and Stimulation,
3. Operating issues. https://www.researchgate.net/publication/325094754_mdgradi_turizmi_da_misi_rol_i_kveqnis_ekonomikis_mdgradobashi).

Since 2005 the new tax code has been launched in Georgia, with the declared goal of liberal investment environment. (http://georgia.gov.ge/index.php?lang_id=ENG&sec_id=41.) For this purpose, the Tax Code of Georgia provides important benefits to foreign and local investors, it is another additional instrument of liberal policy towards direct foreign investments is the Agreement on "Avoidance of Double Taxation", which is concluded with the country's main trading and economic partner countries. (Official site of Ministry of Finance of Georgia, <http://mof.ge/4793>)

In the sphere of economy, such as tourism, all conditions for investment growth are developed. It should be noted that there is no tax benefit for tourism development, though -- Approval of the Rule for Functioning and Cancellation of a Tourist Entity for the Person by the resolution of Government of Georgia No 279 23/06/2015 underlying an important approach that is called tourism development preferential taxation.

The abovementioned resolution is approved on the basis of Section 26 of Article 26 of the Tax Code of Georgia and determines the terms and conditions for granting this status to the person, as well as the minimum area for use as hotel rooms/apartments from the total area of the building according to the self-governing units.

The status of a tourist enterprise by its own initiative can be granted to a legal entity, which builds a hotel, carries out hotel assets/their part transfer (with the right of redemption or without it) and the valuation agreement with the acquisition of this property (Including lease, right of use, management right, property trust, intermediary or/and other similar contractual condition) provide the hotel, assets/their parts usage thereof as hotel rooms/apartments. The Unified Internal Registry of Persons with Tourist

Entrepreneurs is maintained by the Legal Entity of Public Law - Revenue Service (hereinafter - Revenue Service) within the Ministry of Finance of Georgia.

Thus in tourism business can be involved not only companies operating in the hotel business, but also construction companies that will fulfill the requests made for the status of a tourist enterprise after completion of construction. Namely:

a) At least 30% of the total area of the building is intended for use as hotel rooms/ apartments. The purpose of using the area as hotel rooms/apartments means that the amount of the specified area should be considered as hotel rooms/apartments. The provisions of this subparagraph shall apply on the territory of all local self-government entities;

b) Notified within a period of 10 calendar years from the receipt of the building (hotel) by the tourist entity and/or the person/persons invited to for the functioning/operating of the unit/part of the hotel on the basis of the relevant contract declared by person/persons (Including the tax authority according to the facility specified in the relevant period) VAT taxable turnover in total (except VAT transactions) shall not be less than the turnover exempt from the VAT prescribed under Article 168 (4) subparagraph “G” of the Tax Code of Georgia as a result of the delivery of the same property assets/part thereof.

Explanation of a tourism enterprise is linked to tax benefits from a number of taxes according to the applicable tax code.

According to the tax code the following basic taxes are established:

- Income tax;
- Profit tax;
- VAT
- Excise tax;
- property tax;
- Land tax.

It should be noted that in order to facilitate tourism business development, Article 82, sub-paragraph „J” of the Tax Code of Georgia and Article 983 shall be exempted from income tax and profit tax, the service provided free of charge, (which is considered to be profit for the owner of the hotel room) and which will be operated by a tourist enterprise or hotel operation by it/natural person invited for operation, during the calendar year no more than 60 days.

As well as profit tax is exempted according to Georgian Civil Code Article 99 “R” sub-paragraph until January 1, 2026 by tourism zone entrepreneur rendering hotel service distribution of profit earned and expenses incurred/implemented within the same activities pursuant to Article 97 paragraph one subparagraphs (b) and (d) of the same Code; I.e., the expenses incurred or other payments are not related to economic activity;

And the amount of representative expenses incurred above the limit set by this Code shall not be taxed from profit tax.

It is important the subparagraph "k" of Article 100 of the Tax Code of Georgia under which by tourist entity for a natural person provision of hotel services (used as hotel rooms/ apartments) will not be included in the joint revenues, or exempt from taxes, by the use of hotel assets/part of the property owned by a natural person.

Article 1332. By tourism enterprise hotel assets/its parts transfer to natural person according to relevant agreement issued payment will be taxed at the rate of 5%, as it knows to us similar allotment from the payment source usually is taxable by income tax 20%. That means tax burden is 15%, and at the same time the income received by a natural person, which was taxed at the source of payment, will not be included in the recipient joint income and will no longer be taxed.

Tourist zone entrepreneurial entity is also defined, according to Article 37 of the Tax Code of Georgia - this is the person or entrepreneur legal entity, also, the entrepreneur natural person and the main essence here is that their property should be in a free tourist zone (for example Kobuleti, Anaklia and Ganmukhuri tourism zones) land plot, under construction/constructed average/high class hotel, for the construction of which is spent or will be spent at least 1 000 000 GEL except for the ordinary activities of the hotel, the right to carry out other activities this person - the investor does not have.

Tourism enterprise activities and operating issues, status, regulates revenue service.

Tourism enterprise status it grants according to specific object (hotel). The Revenue Service has the right to request a tourist company to provide the means of securities the value of which does not exceed 18% of the compensated amount of the supplied assets.

It is important that the Government of Georgia set a rule on granting tourism enterprise status, functioning and abolition on 4 October 2012, Which obviously defines the conditions for the granting the status, the functioning and abolition of the rule and the minimum area used for the hotel rooms from the total area of the building according to the local self-governing units. Different demands towards them is set by the Government of Georgia, and the Registry of Tourism Enterprises is maintained by the Revenue Service of the Ministry of Finance of Georgia.

In the rule is interpreted what is considered as rent, building, hotel room and hotel assets. As you know, based on that the issues, which are governed by normative acts cannot be a multi-pronged interpretation, so this rule accurately explains the importance of each, which is somewhat capable of answering all possible questions related to these issues.

The granting of the status of a tourist enterprise is determined according to the specific object (hotel), which according to construction document is envisaged as a hotel. Prior to entering the hotel into operation,

they should apply to the Revenue Service for granting the status. This statement shall contain a corporate name, person's registration data (identification code, name, address), brief description of the activity. The application shall also be attached by a construction permit, a document certifying the right of land ownership/usage and the cadastral map of the territory where the construction should be launched and project of construction document. Revenue Service will make a decision within 10 working days on refusal or granting a tourist enterprise status. Together with granting a tourist enterprise status, the Revenue Service may require such means of security as a bank guarantee, the insurance policy issued by persons defined by the Government of Georgia and the lien/mortgage lodging of property, the value of which is carried out by a person from the list of persons and state enterprises issuing audited financial statements and/or issuing expert and audit conclusions for the enterprises determined by the Decree No 360 of the Government of Georgia of 5 September 2012. The obligation to submit a conclusion about the value of property to the Revenue Service is provided by a tourist enterprise.

It should also be noted that people with the status of a tourist enterprise have significant commitments, in particular, they should ensure that no more than 10 calendar years after the building (hotel) enters into operation the persons invited for the functioning of the hotel, VAT taxable income (except VAT transactions) shall not be less than VAT payable compensation amount defined by Sub-paragraph "gh" of Article 168 of the Tax Code of Georgia as a result of the delivery of the same property assets/part of the same hotel;

a) Delivery of hotel assets/part thereof to another person by a tourist enterprise for a purpose of its releasing. If the tourism enterprise receives a lease back within two years after delivery of the property of the hotel/part thereof to other person, the transaction is also exempt from the right and the right deduct and tourism enterprise has the right to submit a revised declaration of relevant period; (12.06.2012. N6446)

b) At least 30 percent of the total area of the building is intended to have a hotel number/ apartment, not more than 20 percent of the households can be used for permanent residence. The provision of this subsection shall apply to all local self-government entities.

The termination of the tourist enterprise status is in the case when the terms of the activity provided by the Tax Code and Decree of Georgia are violated or initiated by tourism enterprise, Of course, if from the receipt the building (hotel) into operation no more than 10 calendar years, excluding declared income in total from VAT for a particular unit (Excluding VAT-exempt transactions) will not be as result of hotel assets/their part delivery the Tax Code Article 168, paragraph 4 of the right to deduct VAT exempt taxable compensation hours. The head of the tax authority on cancellation of the status of a tourist enterprise shall issue the relevant individual administrative legal act.

One of the expressions of promoting tourism development is that certain benefits are provided by the same code in different directions. For example, the profit received by hotel service by the tourism zone entrepreneur subject and the cost of the land plot received by the tourist zone entrepreneur is exempt from income tax until January 1, 2026. As well until January 1, 2026, tourist zone entrepreneur property related to hotel service is exempt from property tax. In accordance with transitional provisions in case of the alienation of the hotel built within the investment limits by tourism zone entrepreneur, the privileges also are applied to the new owner, except when the new owner no longer provides hotel operation/services. It should be noted that, when the entrepreneurial entity of the tourist zone does not ensure the functioning of the hotel, direct reference regarding cancellation of this privilege is not provided by the Code. To be more precise, an attempt to cancel this benefit is provided in section 309, paragraph 18. According to it the same code article 99, first paragraph, “T” subparagraph – the profit earned by tourism zone entrepreneur by hotel operation until January 1, 2026 and u) The value of the land plot (plot) received by the tourist zone entrepreneur and the benefits set out in paragraph 17 of this Article does not apply, if the tourist zone entrepreneur entity or by tourism zones entrepreneur entity in case of hotel alienation build within the limit of investment, the new owner no longer provides hotel operation/services.

Also, according to the tax code the benefits are set in respect of the value added tax, without the right of offset from VAT is freed tour operators operating in incoming tourism in the Georgia and providing them with a package of tourism services on the territory of Georgia.

This is the main list of the issues that in our point of view greatly contributes the development of tourism enterprises and tourism development, which is one of the important prerequisites for the country's economic progress.

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- 2 http://georgia.gov.ge/index.php?lang_id=ENG&sec_id=41.
3. *Official site of the Ministry of Finance of Georgia, <http://mof.ge/4793>*
4. *Decree No. 279 23/06/2015 of the Government of Georgia on Approving the Rule of Approval, Functioning and Cancellation of a Tourist Enterprise Status for the persons”.*
5. *Tax Code of Georgia*

The Impact of Demographic Aging on the Formation of Labor Market of Georgia

Labor market formation is based on labor resources. Labor resources - the active part of the country's population, i.e. the part of the population involved in the different fields of the country, or claims to work. In turn, the working population, according to social and economical, cultural, political and other social conditions is divided into two groups: economically active population (part of the working population participating in social production. Also it includes the part of the population that does not work at a certain time, is waiting for work and wants to work) and economically inactive people (the part of the population that does not have any job and does not look for one because of being involved in domestic work, it also includes students and military personnel as well as the population of the pension age who are not involved in production). Economically active population with participation in the process of social production, contribute to the gross domestic product and national income, which is one of the main indicators of the country's economy assessment. Demographic aging factor affects the number of Georgian economically active population.

Demographic aging is the increase in the number of elderly people in the total number of the population. The reason for the demographic aging are the long-term changes in the nature of the population birth. They distinguish "aging from the bottom", which is determined by the decrease of the number of children as a result of birth defects and "aging from the top", which is due to the decrease in mortality at the age of the elderly and the growth of average life expectancy, which increases the number and share of the elderly people. It turned out that demographic aging is largely determined by "aging from the bottom". The increase of the average life expectancy is less likely to affect demographic aging, since the decrease in mortality is primarily related to children's age, which contributes to some extent to the rejuvenescence of the population.

Demographic aging was discovered at the end of the XIX century, but its significance, scope and origins began to be realized from the second half of the 20th century. Different scales have been developed for assessing the demographic aging process. One of the most widely known scales is worked out by Zh. Bozhe-Garnier and developed by E. Rosset:

Stage	The share of people aged 60 and older (%)	Stages and levels of the population aging
I	Less than 8	Demographic youth
II	From 8 to 10	Barrier to aging
III	From 10 to 12	Proper aging
IV	12 and more	Demographic aging
	From 12 to 14	Starting level of the demographic age
	From 14 to 16	Average level
	From 16 to 18	High level
	18 and more	Extremely high level

According to this scale, the highest level of demographic aging of the population in Georgia is fixed by January 1, 2018 - 20.6%, and by 2010 it was defined by 18.3%.

The demographs of the United Nations have worked out a three-stage scale for the relative assessment of the number of people aged 65 and older:

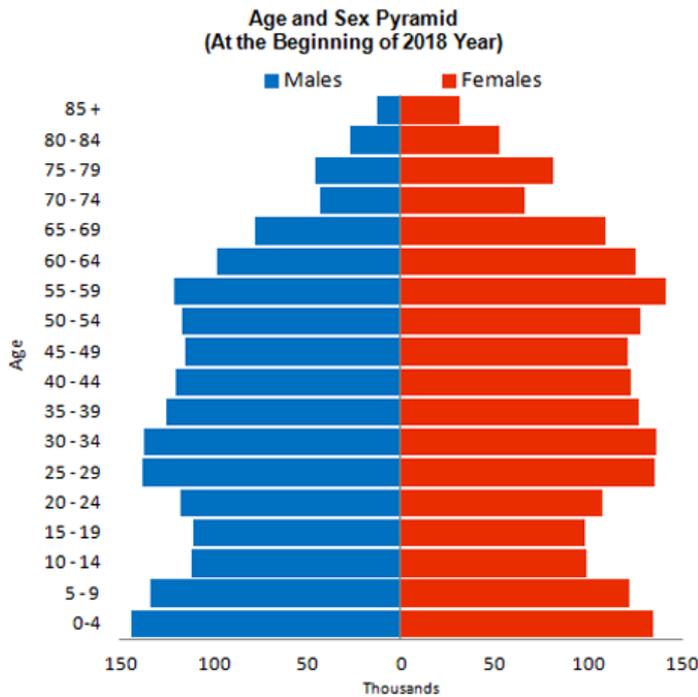
- less than 4% - young population;
- 4-7% - the population on the barrier of aging;
- more than 7% - old population. [7. P. 134]

According to this scale too, by 2018, Georgian population is considered aged 14,6%.

We can identify two main factors of demographic aging: death (the increase of life expectancy) and birth decrease. These factors are clearly shown on the sex-age pyramid of the Georgian population.

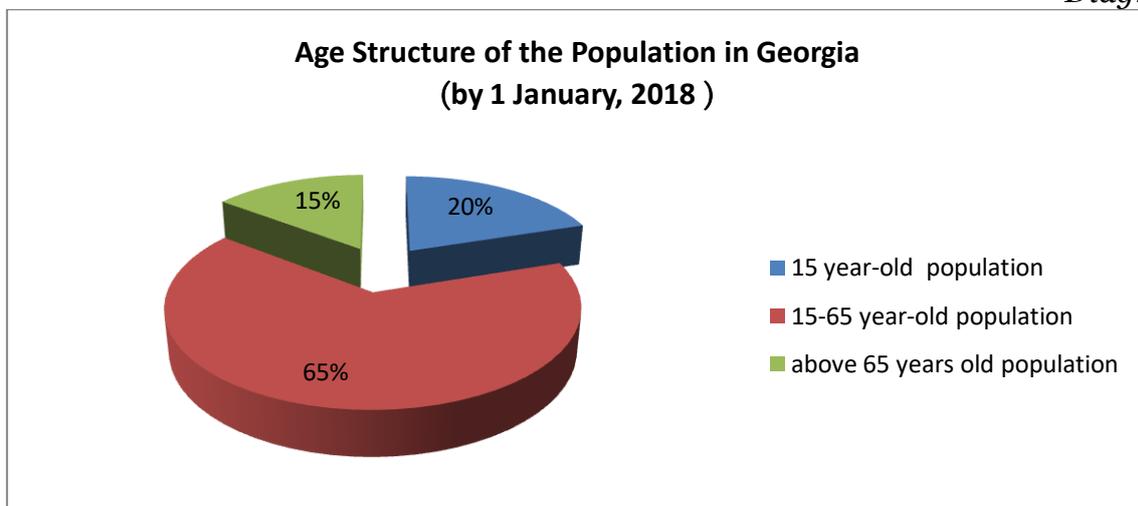
In pyramid analysis, great attention is paid to its form, as well as the size of the population of individual sex-age groups. In the case of high birth and death rate, the pyramid will have a wider base and a narrow top. According to the age-sex pyramid of the Georgian population, we can say that the level of birth rate in the country is not so high, because in men as well as in women the 0-4 year age groups are exceeded by the number of the upper age groups. Which indicates high level of birth rate in previous years. The wide top of the pyramid indicates life expectancy. The decrease of death rate, especially in upper age groups, causes increases of the pyramid top.

Diagram 1



Population may be divided into three categories: 15 year-old population (younger than employable age), 15-65 year-old population (of the employable age) and above 65 years old (of older than employable) of pension age. A person of an employable age has to support all the other groups - younger than of an employable age and of older than employable. The age structure of Georgian population is presented in the diagram:

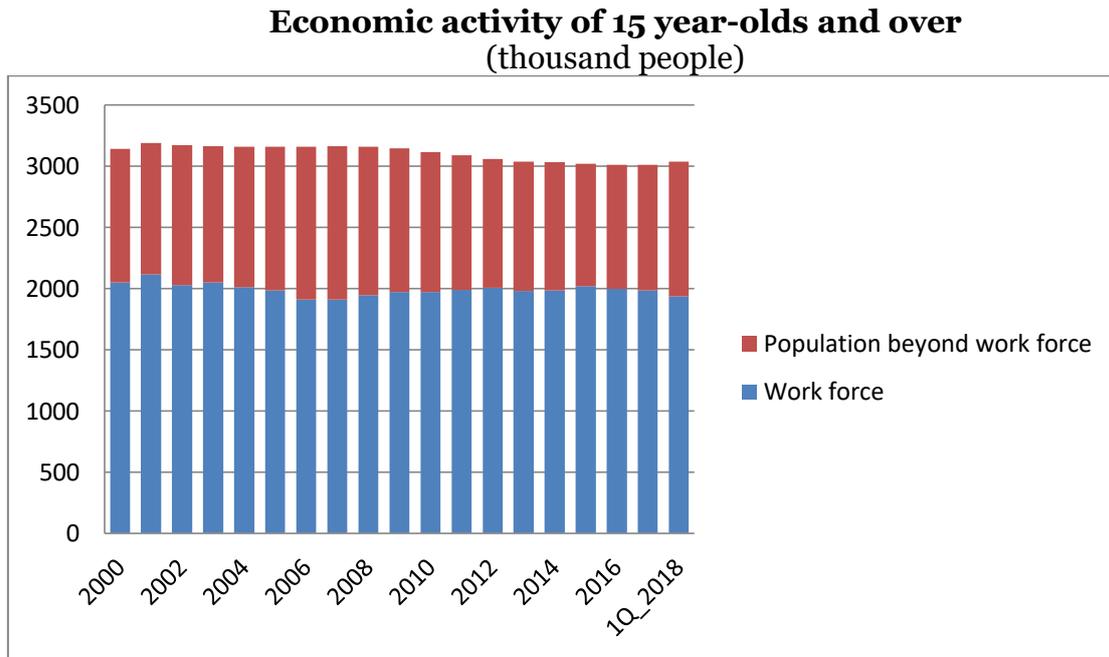
Diagram 2



According to the diagram, the largest share of population in the total number of population is occupied by the population of an employable age.

In recent years, the dynamics of the existing employable population is distinguished by the decrease tendency, which is caused by the general decrease in population of the country, including increased rate of migration.

Diagram 3



The number of work forces in the first quarter of 2018 was 1938.7 thousand people. Compared to 2000, it decreased by 5.39% and compared to 2017 it decreased by 2,23%. In relation to 2000 the number of population decreased by 9,4%.

The number of economically active population (work force) is unevenly developed by years. In order to identify the correct tendency, growth is decreasing or decreasing, it needs to be leveled. We can use a linear function when leveled:

$$\hat{y}_t = a_0 + a_1 t$$

where , t are years

$$\begin{cases} na_0 + a_1 \sum t = \sum y \\ a_0 \sum t + a_1 \sum t^2 = \sum ty \end{cases}$$

to calculate the parameters a_0 and a_1 we use a normal equation system:

By solving the equation system we find the numerical values of the parameters.

We can apply a simplified method to calculate this equation if we move counting into the centre of the dynamic line, then

$$\sum t = 0$$

accordingly, $a_0 = \frac{\sum y}{n}$ $a_1 = \frac{\sum yt}{\sum t^2}$

Table 1

Years	y	t	yt	t ²	\hat{y}_t
2009	1971,8	-5	-9859	25	1986.16
2010	1970,9	-4	-7883,6	16	1985.62
2011	1988,2	-3	-5964,6	9	1985.08
2012	2004,5	-2	-4009	4	1984.54
2013	1978,6	-1	-1978,6	1	1984
2014	1984,6	1	1984,6	1	1982.92
2015	2018,0	2	4036	4	1982.38
2016	1996,2	3	5988,6	9	1981.84
2017	1983,1	4	7932,4	16	1981.3
2018	1938,7	5	9693,5	25	1980.76
Σ	19834,6	0	-59,7	110	19834,6

$$a_0 = 1983,46$$

$$a_1 = -0,54$$

$$\hat{y}_t = a_0 + a_1 t = 1983,46 - 0,54 t$$

Based on the calculations we can conclude that the number of economically active population is characterized by decreasing tendency.

Table 2

Work force

Age	A thousand people	$S_{med.}$
15-19	51,8	51,8
20-24	135,7	187,5
25-29	211,2	398,7
30-34	192,8	591,5
35-39	192,7	784,2
40-44	198,8	983
45-49	188,2	1171,2
50-54	214,7	1385,9
55-59	210,9	1596,8
60-64	155,3	1752,1

$$\bar{X}_{mod.} = x_{mod.} + h_{mod.} \frac{f_{mod.} - f_{mod.-1}}{(f_{mod.} - f_{mod.-1}) + (f_{mod.} - f_{mod.+1})} \approx 66 \text{ year}$$

$$\bar{X}_{med.} = x_{med.} + f_{med.} \frac{\frac{\Sigma f}{2} - \Sigma S_{med.-1}}{f_{med.}} \approx 45,2 \text{ year}$$

The modal age of the workforce has been defined by 66 years, and therefore, the highest number of employed people is of this age, but in fact 76.2% of the population of this age is self-employed. The median age is 45 years (median is a middle member of ranged series). Calculations give us basis to conclude that the formation of labor market in Georgia takes place on the background of demographic aging.

Demographic load indicators are used to describe age structure, which is a generalized quantitative feature of the age structure of the population. The demographic load indicator allows us to estimate the level of demographic load and the structure of every 1000 working person. Demographic load indicators on the example of Georgia are as follows:

Child Load Indicator:

By 2010 $k_1 = \frac{S_{0-14}}{S_{15-59}} 1000 = 263,9$; By 2016 - 314,1; By 2018 - 336.2 children.

Elderly loading coefficient:

By 2010 $k_2 = \frac{S_{60+}}{S_{15-59}} 1000 = 283,9$; By 2016 - 328.8; By 2018 - 347.3 elderly

Common load coefficient:

$k_3 = \frac{S_{0-14} + S_{60+}}{S_{15-59}} 1000 = K_1 + K_2 = 547,8$; By 2016 - 642,9; By 2018 - 683.5 children and the elderly.

Demographic load coefficient is determined on the basis of the interrelation of children under 15 years of age, employable age and pension age. This simple indicator shows how many juveniles and pensioners are to be supported an employable person. Both private and overall demographic load indicators increase in dynamics. Load coefficient of the elderly exceeds the child load coefficient by its meaning.

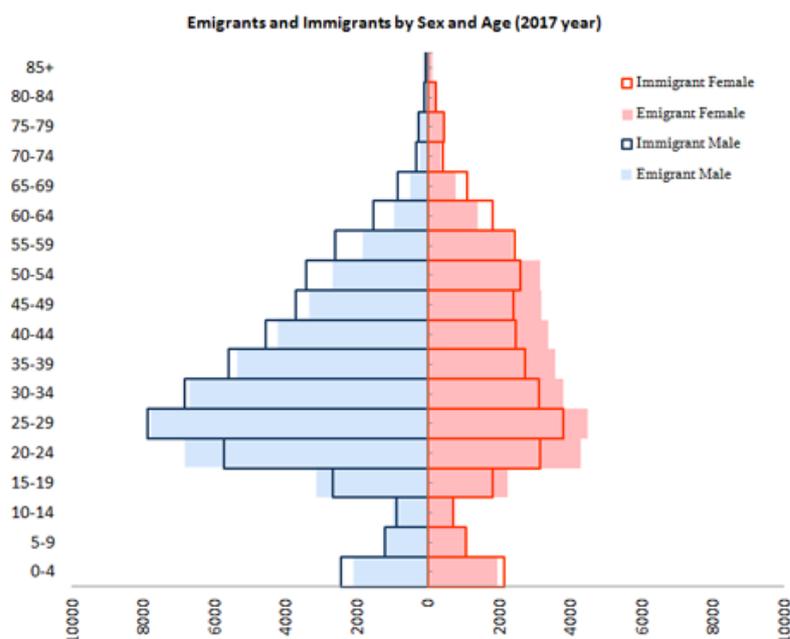
On the basis of the overall demographic load coefficient we can assume that every person who is younger than 15 years old and a pensioner is unproductive and from the age of 15 to 60 - productive, but that is actually not true. In less developed countries the significant rate of employed people is right taken by those who are younger than 15 and more than 60 years old. Accordingly, it is difficult to characterize the country's economic-demographic state by considering the demographic load coefficient.

Georgia, from a demographic point of view, is on a transitional stage, facing remarkable challenges. According to the United Nations Population Division (UNPD), the rate of 65 and older people in Georgia, which was 14 percent in 2015, will increase by 19 percent by 2030. According to the prognosis further growth of life expectancy is expected: If in 2012, women's life expectancy in Georgia was 79 years old and men's 70, by 2030 the numbers, respectively, will increase up to 80.6 and 74.1 years. Today's labor market does not correspond to the needs of elderly people. The active involvement of elderly people in the social life are prevented by many factors, these are: lack of proper infrastructure and services, limited possibilities of acquiring new knowledge and skills, poor income and stigma, which leads to rejecting older people. Population aging can also cause significant social

challenges, as the social inequality in the age of elderly becomes significantly stronger. [16]

Population aging also conditioned by external migration, in which more population of employable age can be found. If the level of birth rate is also low, the number of population of pension age and the average life expectancy is respectively increased. Everything affects all aspects of social life, social as well as economic. According to the data of 2017 in Georgia, the birth rate is 14.3 per 1000 people and the average life expectancy is defined by 73.5 years. Migration is an important factor for demographic aging for Georgia.

Diagram 4



The diagram clearly shows what age group belongs to the biggest share of migrants - this is a population of employable age.

The growth of life expectancy of the population indicates the improved quality of life, but the increase in the share of older people negatively affects the country's economic growth. Increasing the share of the population over 60 years leads to the demographic load of the population of an employable age. If we take into consideration the low level of birth rate as well, and the fact that even employables get older, accordingly, the expenditure for pension and medical services are also increased. The decrease in the share of the employable population will be reflected on the employment capacity. Consequently, capital investments will be reduced.

Conclusion

Birth, increase of external migrations, high rate of life expectancy of the nation indicate the aging of the nation. Statistical analysis shows that with the decrease in the overall number of the population, the population of the elderly

is increasing and the share of the number of the employables is decreasing. Demographic problems are negatively reflected on the number of workforce and consequently on the formation of labor market.

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Economic and Legal Aspects of Providing Activities of Ukrainian Enterprises

Ensuring effective and resultive operation of enterprises is a permanent and simultaneously dynamic problem of the country's economic system. This is due in the first place to the fact that they are the main producers of the gross national product of the country. Secondly, the dynamism of this problem is explained by constant changes in the development of economic parameters, both objective and subjective in the internal and external environment of the enterprises.

This is especially true of the production and commercial activities of agribusiness entities, which are to ensuring not only the food security of the country, but also in the formation of financial resources in the field of agrarian production.

Agribusiness subjects should include not only agrarian enterprises, but also other participants in the agrarian market. Moreover, under the agrarian market in this study should be understood as a set of relations that arise between the direct producers of agrarian products and its potential consumers, which are the main elements of the market system, as well as other commercial structures. The latter include organizations involved in supplying raw materials for the production process, carrying out logistics activities to support the processes of sales in the market, as well as structures responsible for the financial provision of producers' production capabilities and for their compliance with the existing legislation of the country. At the same time, in the conditions of the agrarian market potential consumers should be considered enterprises of further processing and storage of agricultural products, enterprises - exporters and intermediary organizations, which are engaged in the procurement of goods for further resale. The final consumers of agricultural products are represented by the population of the country, who consume finished goods of non-agrarian, but already agro-food market. The composition and structure of market participants and the features of the formation and functioning of agrarian and agro-food markets, which are related to the goods presented on the market should be distinguished.

The research was constructed in such a way that the agrarian market is formed by the objective component. Therefore, the raw materials segment of production and commercial activities of agribusiness subjects is the main. Such a system can be represented by the corresponding architecture, presented in Fig. 1

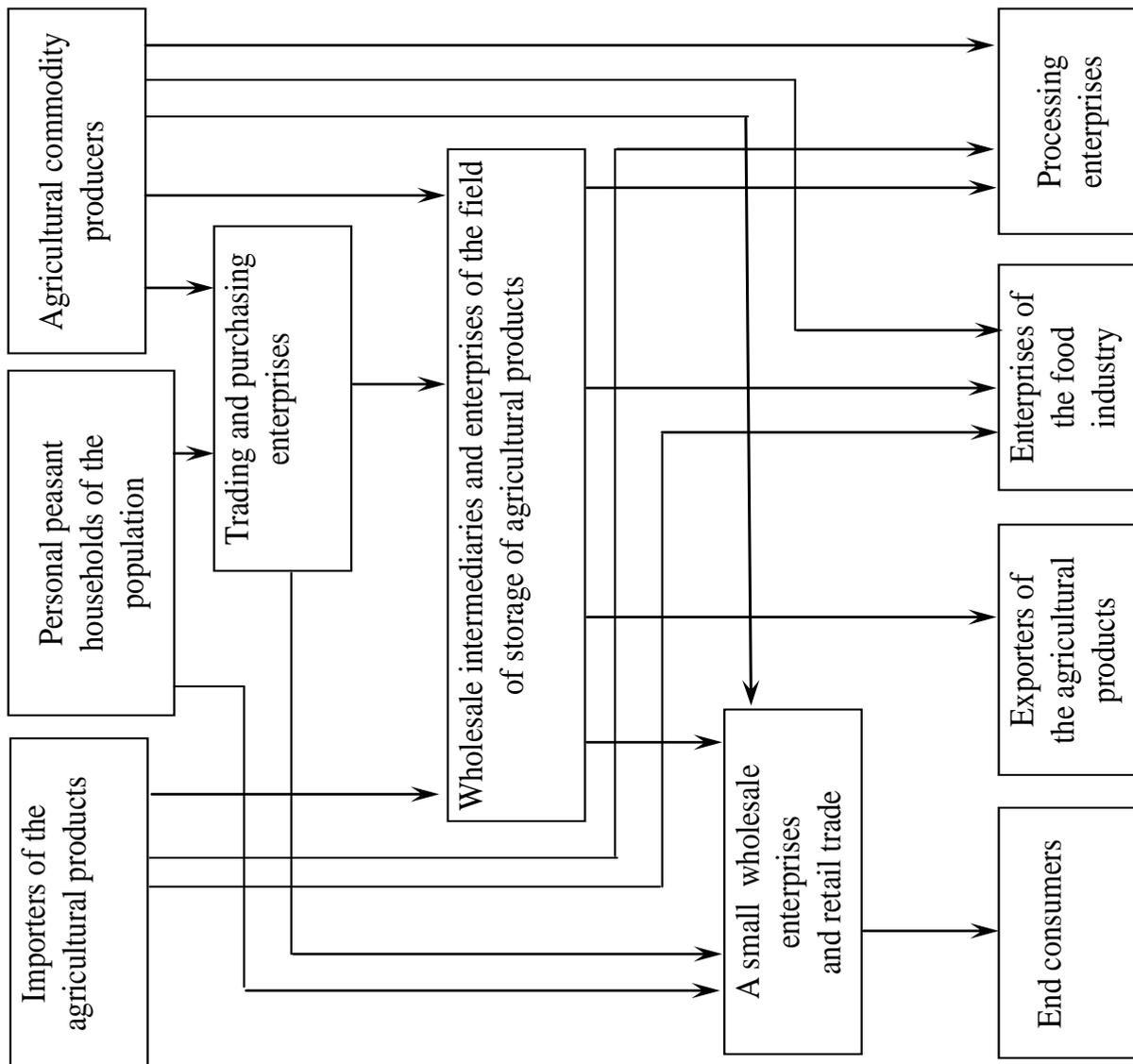


Fig. 1. Architecture of the agro-raw materials segment of the market

The research of production and commercial activity of agribusiness entities of Ukraine allows to distinguish the main producers of agrarian products, which are agricultural enterprises. Moreover, the peculiarities of the formation of the agrarian market for agricultural enterprises cause injustice of redistribution of financial interests for participants of the different sizes. Thus, according to the Commercial Code of Ukraine, which is the basic legal document in the activity of enterprises, it is established that enterprises are divided into sizes (large, medium and small) in accordance with the income received from the sale of products and the average number of employees. Based on the size of agricultural enterprises in Ukraine, the vast majority relates to small businesses, the second place is occupied by medium-sized enterprises. The third place take large agricultural enterprises only, which include holding companies. It should be noted that the problems of effective

functioning concern exactly the first two categories, which is caused by a number of factors, both subjective and objective.

The main negative factors of influence include the following: divergence in the formation of economic interests in the market, the presence of the price disparity, the problem of the formation of the necessary financial and logistical support, the mismatch in the organization of the business of the existing systems and the latest technologies of economic and legal support, and others.

All this are completely traced in the obtained economic results of the investigated enterprises, which do not have clear tendencies for the further forecasting. So, as the performance of the main activity in the conditions of Ukrainian agrarian market shows, the tendency towards its decrease was significant. In particular, this was confirmed by the fact that in 2017, agricultural products received a profitability of 9.8% only due to the profitability of crop production yields of 20.9% and a significant decline in livestock production - a loss was 1.3%.

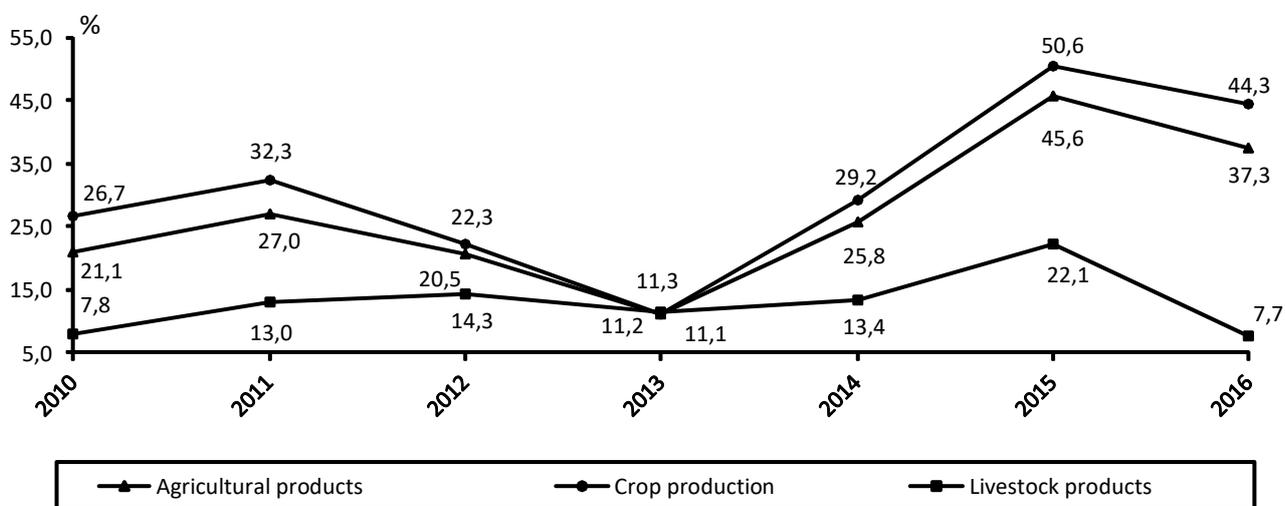
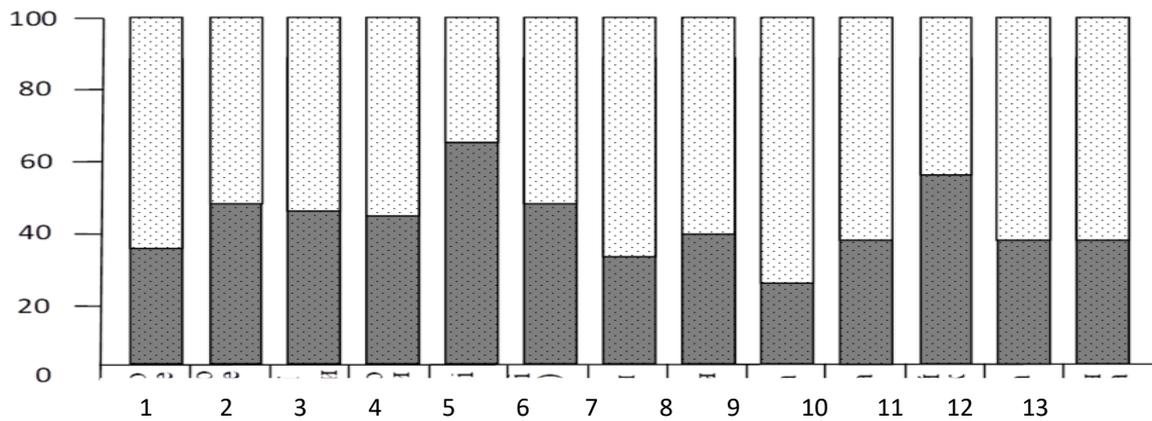


Fig. 2. The effectiveness of agricultural enterprises in Ukraine, %

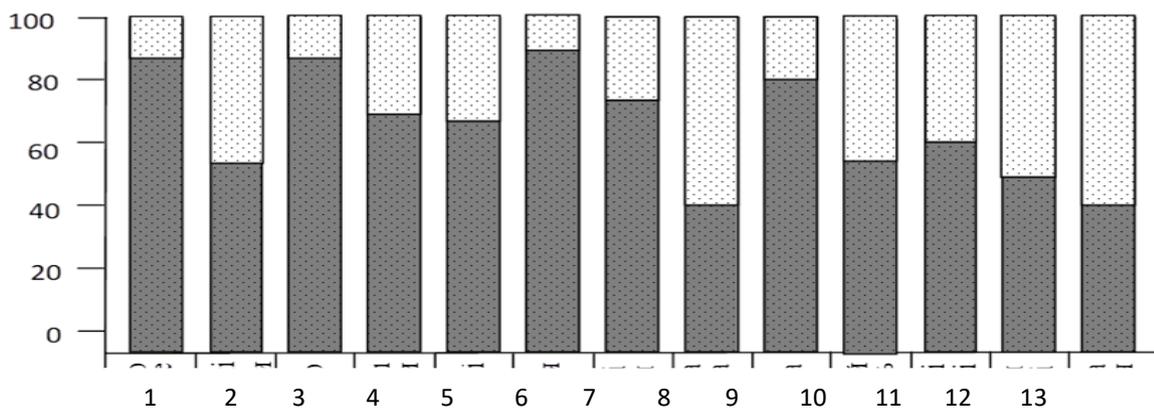
It should be noted that the above data also contains the results of the activities of the agricultural holding enterprises. Therefore, the actual existing situation in the effectiveness of the performance of small and medium-sized enterprises which are the main producers of agricultural products is even lower.

The comparison by the price conjuncture and production costs in the conditions of the Ukrainian agrarian market makes it possible to draw conclusions about the absence of influence on the formation of prices by agricultural producers, which is a negative trend.



- | | | | |
|--------------------|--------------------------|---------------|----------------------|
| 1 – Fresh milk | 5 – Poultry meat | 8 – Potato | 11 – Sugar beet |
| 2 – Butter | 6 – Chicken eggs (dozen) | 9 – Buckwheat | 12 – Cabbage |
| 3 – Meat of cattle | 7 – Wheat | 10 – Carrot | 13 – Sunflower seeds |
| 4 – Pork Meat | | | |

Fig. 3. The structure of the final price of the sale of agrarian products, %



- | | | | |
|--------------------|--------------------------|----------------------|---------------------------|
| 1 – Fresh milk | 5 – Poultry meat | 8 – Bread and pastry | 11 – Processed vegetables |
| 2 – Dairy products | 6 – Chicken eggs (dozen) | 9 – Flour | 12 – Processed fruits |
| 3 – Meat | 7 – Pasta | 10 – Potato starch | 13 – Sunflower Oil |
| 4 – Meat products | | | |

Fig. 4. Structure of expenses of the production of agrarian products, %

Table 1. - Structure of distribution channels of agricultural products in Ukraine

Product	2013		2014		2015		2016	
	ths. tons	share,%						
Cereals and legumes								
Total realized, including:	33668,8	100	38343,7	100	40220,5	100	45830,2	100
Recycling enterprises	1246,9	3,7	1518,8	3,9	1332,2	3,3	1538,3	3,3
On the market	1239,1	3,6	1308,4	3,4	1264,4	3,1	1021,2	2,2
Intermediary structures	29069	86,3	33294	86,8	35656,6	88,6	41460,5	90,4
Other directions	2113,8	6,2	2222,5	5,8	1967,3	4,8	1810,2	3,9
Oil crops								
Total realized, including:	10784,8	100	12186,2	100	13172,8	100	14630,7	100
Recycling enterprises	531,5	4,9	691,4	5,7	809,6	6,1	854,5	5,8
On the market	309,4	2,9	291,8	2,4	267,5	2,0	220,3	1,5
Intermediary structures	9898	91,8	11159,1	91,6	12060,6	91,6	13523,5	92,4
Other directions	45,9	0,4	43,9	0,4	35,1	0,3	32,4	0,2
Vegetables								
Total realized, including:	961,6	100,0	885,9	100,0	955,5	100,0	1043,8	100,0
Recycling enterprises	398,7	41,5	317,1	35,8	448,8	47,0	556,2	53,3
On the market	68,3	7,1	59,2	6,7	38,1	4,0	29,1	2,8
Intermediary structures	491,5	51,1	506,4	57,2	466,9	48,9	457,6	43,8
Other directions	3,1	0,3	3,2	0,4	1,7	0,2	0,9	0,1
Cattle and poultry (live weight)								
Total realized, including:	1736,4	100	1953	100	1957,6	100	1947,2	100
Recycling enterprises	399,7	23,0	467,7	23,9	459,6	23,5	447,1	23,0
On the market	115,6	6,7	128,1	6,6	144,3	7,4	127,9	6,6
Intermediary structures	1209,4	69,6	1345,6	68,9	1347,4	68,8	1367,2	70,2
Other directions	11,7	0,7	11,6	0,6	6,3	0,3	5,0	0,3
Milk and dairy products								
Total realized, including:	2360,1	100	2409	100	2506,2	100	2538,3	100
Recycling enterprises	2218,9	94,0	2263,6	94,0	2379,4	94,9	2401,3	94,6
On the market	37,8	1,6	36,3	1,5	32,0	1,3	30,3	1,2
Intermediary structures	98,5	4,2	104,8	4,4	91,3	3,6	103,8	4,1
Other directions	4,9	0,2	4,3	0,2	3,5	0,1	2,9	0,1

These results are the consequences of two main factors: the discrepancy between the formation of existing distribution channels and the current

opportunities for the development of theories of enterprise management and the presence of price dictation from the side of the intermediary organizations, which are currently the main potential consumers of agro-raw materials and, as noted above, are among the main participants market relations, forming the final result. The latter also confirms the necessity of state regulation of market relations in the agrarian sector.

From the above, one can conclude that the functioning of the Ukrainian agrarian market, in general, and the main actors of agribusiness, in particular, has a number of problematic issues, the solution of which should take place in the area of ensuring the proper level of their effectiveness.

Particular attention deserves the problems of legal provision of the functioning of the agrarian market, which are connected with the gradual monopolization of the production sphere by the structures of the holding type, and in the commercial sphere - intermediary organizations as a consumers of the products of agro-raw materials. The study of the legal basis of entrepreneurial activity in Ukraine made it possible to draw conclusions. First and foremost, the fact that the current situation is caused by the lack of compliance of the legislative provision of recent years with the current aggressive demands of economic relations. Secondly, insecurity of entrepreneurial activity is a sufficient legal guarantee of property rights and their protection. This, in recent years, is becoming increasingly relevant due to the existence of various types of raids in the agrarian sector. Moreover, legal regulation and resolution of such situations takes place in accordance with existing procedures for a rather long time. This completely slows down the process of agribusiness activity, especially given seasonal production in the agrarian sector. Thirdly, at present there is no single state system supporting the development of entrepreneurial activity in the agrarian sector. This also applies to the absence of appropriate regulatory and enforcement mechanisms and effective mechanisms for implementing public policy.

Therefore, the formation of a legal framework corresponding to the current realities of market relations functioning is one of the most important prerequisites for the development of the Ukrainian economy. The legislative base in the field of agrarian entrepreneurship should be a unified system, on the basis of mutual harmonization of norms, on the integral normative-legal state regulation of agrarian production at all levels of market infrastructure. And, as the world experience proves, a successful and effective business activity in the agrarian sector is possible through the creation of a unified legal framework, the proper provision of legal assistance to Ukrainian producers, the legal protection of their activities, which will guarantee their development opportunities, as well as regulate problematic issues regarding the conditions and features of functioning in the market.

Consequently, the main condition of the effective operation of enterprises should be factors of an economic, organizational and legal nature, which, in the first place, will solve problems of formation of the price conditions on the

market, and also take into account possibilities of correction of the architecture and structure of the Ukrainian agrarian market participants.

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PART III

**JURISPRUDENCE,
PUBLIC MANAGEMENT
AND POLITICAL
SCIENCES**

*Innovations in Science: the Challenges of
Our Time*

**Accent Graphics Communications & Publishing
2018**

Professionalization of Ukrainian Civil Service through English Language Learning: Legal, Educational and Motivational Aspects

European integration of Ukraine is currently one of the main strategic goals of our country. EU-Ukraine collaboration is very active: there are Ukraine-EU summits; meeting of the Cooperation Council; consultations at the level of foreign ministers and at the level of political directors of the Ministry of Foreign Affairs etc. Obviously, this rises the question of the need to efficiently arrange oral and written communication at different levels of state administration for solving common issues and consultations on the national EU-related issues. Providing the different languages used in EU, effective oral and written communication requires usage of a common international language. In this context, English language is seen as the language of international communication, which unites civil servants of various nationalities. Accordingly, the development and improvement of English competence of civil servants of Ukraine is a time requirement to enhance their professionalism and open free access to a world-wide network of specialists in the sphere of public administration, as well as civil servants from member states of the European Union.

Though there are scientific papers on the issue of development of communicative competences of civil servants (Amosova L.V., Astapova T.O., Derbeniova L.V., Zirka I.V., Kolisnichenko N.M., Opriatnyi S.M. and others) and professionalization of civil service of Ukraine (Kikiniva K.O., Koziiivska O.I., Malanchii M.O., Nyniuk I.I., Rudakevych M.I., Filipova T.V. and others), the place of English language competence among professional requirement to civil servants is still poorly defined, as well as ways of its formation and development.

The goal of the article is to substantiate the importance of English language competence for the professionalization of the civil service of Ukraine and to propose possible ways of enhancing its development among civil servants.

To reach our goal we have analyzed scientific papers of national researchers on the topic of this article, as well as relevant normative documents on the issues of civil service in Ukraine.

Among the normative documents on civil service in Ukraine, the first to mention is the Concept of adaptation of the civil service institute in Ukraine to the standards of the European Union, approved by the Presidential Decree No.278/2004 of 05.03.2004. The Concept confirms that the current system of civil service in Ukraine has certain issues that require further resolution, in particular by adapting this institution to EU standards in the following priority areas: 1) improvement of the legal basis of the civil service functioning; 2) reform of the system of remuneration of civil servants; 3) establishing the procedure for providing state services and improving the

legal regulation of the requirements of professional ethics of civil servants;
4) improving and enhancing the efficiency of civil service management;
5) professionalization of the civil service [1].

We shall pay special attention to the last area, civil service professionalization. Researches show that professionalization includes a combination of three components: the development of a profession, the formation of a civil servant as a specialist and the formation of civil servants as a specific socio-professional group. The professionalism of civil servants can also be defined as the ability to find, taking into account conditions and real possibilities, the most effective ways and means of realizing the tasks within the limits of the given powers, to use the professional technologies applied in democratic societies, to have a permanent motivation to work and to enjoy it, to achieve high results in the performance of their duties, to comply with relevant ethical standards, to have and to understand the prospect of their professional future and go forward to reach it [2].

The professional development of specialists enrolled in the personnel reserve includes: 1) systematic training through self-education; 2) periodic training and advanced training, including abroad (in case of foreign language proficiency); 3) participation in communicative activities in the relevant areas of activity; 4) internship in state bodies; 5) performance of duties by position etc. [3, c.80].

Taking into account professionalization of civil service of Ukraine in conditions of Eurointegration, it is necessary to refer to European requirements for civil service. Studies on European standards of civil service state that these standards are based on the principles of the rule of law, legality, patriotism, integrity, professionalism, political neutrality, loyalty, publicity, transparency, stability, responsibility, efficiency, effectiveness and equal access to the civil service. Accordingly, the professionalization of the civil service should include: 1) identification and development of priority professional qualities of civil servants in accordance with European civil service standards; 2) development, testing and implementation of the complex of elements of professional training of civil servants taking into account modern requirements for professionalism in the civil service; 3) gradual renewal of the personnel by civil servants who have professional education in the field of public administration; 4) creation of favorable conditions for individual professional qualification development of civil servants; 5) the organization of equal access of citizens to the civil service [2].

Correspondingly, T.Yu. Vytko states that both: a candidate for a civil servant job and an employee of a government body during his/her professional activity should be evaluated not as a carrier of professional knowledge but as a person who carries the knowledge, skills and abilities necessary for effective work in this position[4].

Considering English language dominance in the international civil service discourse, English language competence development is regarded as

one of the mechanisms for Ukrainian civil service professionalization and integration into the European context. A great achievement of the new edition of the Law of Ukraine “On Civil Service” No. 889-19 of December 10, 2015, is the introduction for civil servants of “A” category in Article 20 “Requirements to persons , who apply for admission to the civil service” of an demand regarding the possession of a foreign language, which is one of the official languages of the Council of Europe [5]. Moreover, foreign language knowledge is in the Order of the National Agency of Ukraine on Civil Service No. 11 dated September 13, 2011 in the list of skills that influence the procedure of the competition for vacancies in the civil service, being a candidate's competitive advantage [6].

Taking into account all the above mentioned, we may conclude that the professionalization of the civil service of Ukraine takes place in the context of European norms and principles and focuses on the professional and personal growth of a civil servant as a specialist in a particular field. Both normative documents and the works of scientists agree on the need for modernization of the specialist training system in the field of public administration, as well as the development of new mechanisms for increasing the motivation of a civil servant to self-education and self-development. Accordingly, there are necessary changes starting eith the normative field of civil service of Ukraine, to the professional activity of a separate civil servant.

Formation and development of English language competence from this point of view serves as a mechanism for involving European experience of civil service and its standards, and increasing the communicative competence of a civil servant to work in the international professional environment. There is some supporting basis for this in the Ukrainian legislation. Still, the current state of development of the civil service of Ukraine faces a number of challenges, namely: 1) the need for a more specific normative recognition of English language competence as an indicator of high qualification of a civil servant; 2) the absence of a single concept of English language competence consistent, continuous formation in the system of higher education of future civil servants; 3) secondary (sometimes absence) development of English language competence in the system of advanced training; 4) a small influence on the career growth of civil servants; 5) insufficient motivation towards English language competence development among the civil service personnel.

The proposed further ways of increasing the level of English language competence of civil servants of Ukraine we see as possible responses to these challenges.

If we speak about legal support of English language development among civil servants, we believe it is important to clarify the its level sufficient for performing professional duties for civil servants of different categories. Required by the law possession of a foreign language, and English in particular, is not specified, that is a drawback as a person may possess it on the A2 level, which is not enough for effective work in a foreign language

environment. Therefore, we consider it necessary to establish as the standard for civil servants of “A” category the B2 level as a minimum, and the levels C1-C2 as a competitive advantage of the candidate during the competitive selection for a higher position, as well as the ground for career development of the official. Regarding the positions of lower categories, a foreign language competence, especially in English, should be evaluated as a competitive advantage of an employee / candidate for civil service position, in case of confirmation of B2 level. What is more, strategic plans of civil service modernization should include step-by-step increase of the number of civil servants proficient in English or other official languages of the Council of Europe, as personal horizontal links are becoming more and more important public administration, and so even low-level officials should be able to lead correspondence and communicate with foreign colleagues to achieve greater results in professional activity and public administration development.

If to consider the system of education of civil servants, from the point of view of foreign language training, the key aspect is the continuity of this process. It is known that the longer a person does not work on the language, the sooner it is forgotten, the vocabulary decreases, the number of grammatical errors increases. Accordingly, it is important to construct a logical, sequential chain of studying English “school-university-work”. Due to the reform in the basic education system, the English language must be studied from the first grade and up to the graduation. As for university education, within the autonomy of institutions of higher education, they are allowed to form curricula of specialties at their discretion. Our experience shows that traditionally more attention to studying English is given by future specialists in such areas as computer engineering, information technology, programming etc. Students in these areas usually have professional language courses from the first year, which allows them to consolidate and further develop knowledge and skills acquired at school. In other specialties, the situation varies.

Considering the importance of English language competence for civil servants of Ukraine, we consider it advisable to recommend higher education institutions to include the subject "English for professional orientation" for Bachelors and Master students in the specialty 074 Public Management and Administration to study it from the first year of the bachelor's degree, and continuing in the Master studies. The syllabus should logically unite the foreign language courses in lexical and grammatical content, reflecting the understanding of the importance of developing foreign language communication skills in the spheres of domestic and professional communication, as well as the formation of socio-cultural competence for the countries of the “English-speaking world” and other strategic partners of Ukraine.

Moreover, bearing in mind the importance of communication with a native speaker to overcome the psychological barrier of using a foreign

language in real situations and better develop foreign language and socio-cultural competencies, we consider it advisable to recommend cooperation with international organizations and foundations, like the Peace Corps, which regularly send their volunteers to Ukraine to organize English-speaking clubs, educational projects, or sometimes even conduct their own English classes. In addition, a university can provide a great opportunity for students to develop their professional skills and English competence by collaborating with foreign higher education institutions and inviting their specialists to teach short or long-term specialty courses in English (appropriate financial support is possible through participation in the European Union Erasmus + KA1). This experience has all chances of success at senior undergraduate and postgraduate courses provided that students were taught the foreign language.

The issue of English language competence at civil servants postgraduate training is also extremely important. At present, centres of advanced training offer courses on the study of foreign languages and this trend is developing quite successfully among non-state institutions and organizations. Accordingly, it is important that civil servants have the opportunity to use their services for further development of their English language competence while working in a governmental body. This should be a regular, continuous process. English language courses at work in commercial firms which understand the importance of relevant knowledge are successful experiences that should be taken by public authorities, especially at the highest level. Such classes are more convenient for workers because they do not require spending time on the road and allow to plan work more efficiently. They are also convenient for a teacher who sees directly the conditions and content of their students' work and, accordingly, can better select the training material. Another advantage of the courses in the workplace is the formation of groups of colleagues who know each other well and work on joint projects and tasks. This may help to avoid the stage of "acquaintance" and bring communication in English in situations that are really important in their professional life.

English language competence should be also connected to career development of civil servant as the last is a powerful motivational trigger. L.O. Voronko notes that the essence of the successful career of a civil servant is the positive dynamics of professional development of a person in the context of its promotion, which is related to the acquisition of professionalism, experience and performance of activity within the position, and involves the realization of personal potential, economic growth and achievement of the corresponding status [7].

The development of English language competence must be positioned by the heads of civil service bodies as one of the factors of career development of a civil servant, his professionalization. A civil servant must be aware that passing a course on a foreign language and a successful demonstration of English language communication skills in the professional field will be

assessed by his/her management at the level of the advanced training in the specialty. In addition, the civil servant should be informed about the prospects for expanding and diversifying the professional activities that open up with the acquisition of English. For example, it may be: internship abroad, participation in international projects of personal and professional development, participation in international round tables / meetings / conferences etc., membership in official delegations to partner countries etc.

At the same time, career development is not the only element of motivational support of English language development. The main content of motivation is the three key concepts: efforts, organizational tasks and individual needs. Motivation of employees – one of the most important tasks of the head. It requires skills, assertiveness and understanding of human nature [8, c. 39 - 40].

N.F. Artemenko notes that purposeful management takes into account the individual needs of each civil servant at each particular stage and creates the motivational conditions for their satisfaction. Such strategy combines two elements: 1) identification of individual needs; 2) creating appropriate working environment for their satisfaction. According to the researcher, the motivation of labour is intended to contribute to the formation of a new type of public servant: an initiative, enterprising, focused on maximum achievements in work, capable of creative innovation, to work with complete dedication and conscious interest in achieving high results of activity [8, c. 45].

Sociological researches of factors that motivate civil servants to perform their professional were conducted in 2015 by two scientists, L. Malimon and I. Hlova. The questioner was formulated in the form of sentences with open endings. The acquired results were summarized in 11 groups of motives of professional activity of civil servants. The first three places were taken by:

1. Motives concerning the socio-psychological features of an employee: personal, moral and ethical, intellectual and professional-business qualities of the civil service employee (31.3%);

2. Motives related to the duties and nature of the civil servant's activity: observance of the oath, knowledge of the legislation, performance of the functions of the state, specificity of activity, performance of the assigned duties etc. (20,6%);

3. Motives for stimulation and encouragement (15.7%), expressed by statements related to both material (wages, working conditions, vacation) and immaterial (moral encouragement) values [9, c. 131 to 132].

Fewer points received motives for interpersonal interaction (9%), interest in activities (5.5%), self-actualization (4.7%), forcedness / influence of the situation (conditions and circumstances) (3.6%), public utility (3, 1%), livelihoods (2.7%), status and prestige (2.7%), career growth (1.1%) [9, p. 132-133]. It goes without saying that these results are representative for civil servants of a particular city, but nevertheless it gives a good start for further

researches of such kind on a more global level in Ukraine and gives grounds for particular assumptions as for existing motivational triggers of civil servants on the whole.

Accordingly, the motivation of civil servants to learn English depends greatly on the manager's ability to correctly assign a task in accordance with the dominant motivating factors of an individual employee, to outline prospects for the future, to create appropriate working conditions and not to leave unnoticed the corresponding successes in fulfilling the task. It is well-known that a wide range of opportunities for the development of English competence has been discovered today and personal motivation is a key point to the next step – their usage.

So, the formation and development of the English language competence of civil servants of Ukraine is a part of the complex process of adaptation of the civil service of Ukraine to the standards of the European Union and the preparation of our civil servants for an active work in the English-speaking environment. Improvement of English language knowledge depends on a number of factors, namely: normative-legal support, the domestic system of education, the influence on the career development of an employee and his/her general motivation to self-development and advanced training in this direction. The proposed measures, in our opinion, will contribute to the positive impact of the above-mentioned factors on the activity of the civil servants in Ukraine.

At the same time, more research is needed to clarify optimal percentage of civil servants with a level of English at C1 and B2 levels for effective civil service activity.

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The Process of Advancing the Ideas of Radical Islamism through Transnational Tactics Terrorism

Throughout its existence, humanity has been constantly confronted with confrontations, wars, expansions and other conflicts that arose on a religious basis and incurred significant losses. The urgency of the study is due to the fact that the issue of counter-terrorism is actively considered in the world community, and terrorists are finding new ways of terror, in order to promote the ideas of Islamism and attract the attention of the media to their actions. The use of terrorism as a tactical means of propaganda of radical Islamism raises doubts about the security of the civilian population, since it is the object of the demonstrative use of the violence of radical Muslims.

Terrorism is becoming global in scope, so transnational Islamic terrorism needs to be deeply rooted in order to preserve peace and prevent human casualties.

The global community is actively concerned with counter-terrorism issues, but it is difficult to solve a problem that is global in nature and every time gets new faces. One should not ignore the fact that the efforts are directed at combating terrorism, forcing the latter to change the tactics of action: to actively work in cyberspace and to develop methods of advocacy work. Therefore, the issue of propaganda of radical Islamism through transnational terrorism should be explored in more detail.

Goals of the chapter are to study of the tactics of promoting radical Islamism through transnational terrorism, because through modern technology information about terrorist acts is spreading rapidly by MMC and attracting a large number of people around the world. Achievement of the research goal is possible subject to the following tasks:

- 1) analyzing the features of Islam as the youngest religion in the world;
- 2) comparing the tactics of promoting radical Islamism with the marketing of early Christianity, to identify common and distinctive features;
- 3) analyzing loud human-rights assaults as informational drivers that are used by the world's leading media and are widely publicized in the world;
- 4) analyzing the tactics of propaganda of the ideas of radical Islamism according to the criteria: the messages that the Islamists send to the world by their actions; tools used in propaganda; distribution channels; the main speakers of radical Islamist groups; measures taken by radical Islamists; communication models in the propagation of radical Islamism.
- 5) studying the features of modern terrorism, its goals and means of achieving them through the MMC.

In the course of the study, systematic methods were used analysis (to find out the methods of the impact of radical Islamism on the audience), monitoring (for analyzing information reports on terrorist

attacks in the MMC), comparison (to understand the congruency of Islam today with the actions of Christianity in the Middle Ages), the method of content analysis (to identify the main messengers , which send Islamic terrorist groups to the audience).

Before moving on to the analysis of tactics of propaganda transnational terrorism with a radical Islamist origin, one should pay a little attention to early Christianity and its marketing. Almost throughout history, religious fanatics committed terror at the state level and by the hands of the state. For example, the Inquisition passed “ heretics” into the hands of secular authority for executions. You can also mention the famous pogroms of the Catholics of the Albigenses, the Huguenots, the Terror against the Americans, and so on. W. Heathmeyer and J. Haigan defined the Inquisition, Crusades, Religious Wars, and anti-Semitism as "some of the most infamous examples of Christian violence" (Heitmeyer W., 2003). To this list, D. Weaver added: "Pontiff warriors, support for the death penalty, corporal punishment under the guise of “regret a sharp, corrupted child” justification of slavery, colonialism around the world for the sake of converting to Christianity, systematic violence of women, which they suffered from men ". [2] (J. Denny Weaver, 2003)

Having thus influenced almost a third of mankind and established presence on all continents, Christianity today only holds supportive marketing measures without resorting to active promotion of oneself. The relay of Christianity was taken over by Islamist terrorist organizations, which are currently aggressive marketing to attract new audiences, using the most advanced tools, tools and tactics. That is, they repeat the tactics of early Christianity for the advancement of their ideas and act most in the territories of Christianity.

If today Islam is the second religion of mankind is 1.6 billion adherents, 23% of humanity, then, according to the Pew Research Center, by 2050 Islam is overtaken by Christianity, but with preservation of tendencies by the end of the 21st century it is over. [3] (Pew Research Center 2015)

The Muslim world has long been not limited to the countries of the Middle East.

The number of those who profess Islam is growing, respectively, the number of potential terrorists is also increasing. In addition, Muslims are not attracted to their Islamist movement by the Muslim people themselves, thereby influencing their minds and giving a ghostly hope that they are bloodshed in the name of Allah.

Radical Islamism is the ideology of organizations, parties and armed groups that uses Islam as a universal program of political, economic and social organization of society.

One of the basic principles of Islamism is the promotion of Shari'a which are the controlled areas in Islamists controlled by the Shari'a and the unconditional implementation of the Qur'an's ordinances. At first glance, such behavior does not contradict the essence of religion. But if Islam promotes the observance of moral norms, then the ideology of radical Islam appeals to manipulate religious feelings and an appeal to fulfill the sacred duty of every Muslim - to lead jihad, that is, to commit physical assault on "wrong".

At the same time, radical Islamists ignore the fact of the so-called "great jihad", which is essentially an internal struggle over evil in the mind of man, and only "small jihad" is recognized, which manifests itself in the commission of aggressive actions [4]. (V. Shestopalets, 2018)

Islamic terrorism, which is precisely the term used by the media to define the actions of radical Islamists, has a transnational character. As the Ukrainian researcher V. Kantsir explains, "... transnational terrorists are treated as groups operating in other countries with the help of similar groups in different regions of the world.

A transnational characterization may mean the export of terrorist violence outside the borders of one's own state and the killing or bodily harm to foreigners not involved in the terrorist struggle "[5]. (V. Kantsir, 2010) It follows from this that radical Islamists are actively expanding their capabilities in the "sacred struggle" by recruiting new members around the world.

As we live in the information society, terrorism has the character of not only armed confrontation, but also psychological pressure at the expense of spreading it to the sphere of mass communications. In this way, it is much easier to destabilize society and to break the security of the population. Any active actions on the part of terrorists are becoming an informational drive, which immediately interested in the media. It should be noted that in this regard, as it may sound terribly, the media are to some extent allied with terrorists, because without the informational coverage of journalists, the effect of such actions will be extremely small, as it will directly concern the people they are sent to.

According to the English philosopher Jan Schreiber, one of the main goals of the terrorists is to increase the target audience [6]. (Getman, 2018) It is obvious that for this purpose it is necessary to create an informational drive, the scale of which will be equal to the scale of the tragedy itself. These are terrorist attacks.

The information potential of a terrorist act is enormous, understood by both parties (subjects of terrorist activity and those who are behind it). It creates an information reason, and the mass media acts as a means of informing and advocacy for the activities of terrorists. In addition, it should be emphasized that the commission of a terrorist act is more likely to be a

means of manipulating public consciousness rather than creating an informational drive.

The most terrible terrorist act that shook the whole world was in September 11, 2001.

The year when al Qaeda suicide bombers rocked the Pentagon and the World Trade Center with civilian aircraft, has become an example of how Islamists use the media for their own purposes. The time interval between the collision of the first and second planes and twin towers of the Shopping Center was exactly 17 minutes. It was so much time that the terrorists have focused on the fact that the local media responded to the terrorist attack and showed it live [7]. (M. Liskovich, S. Saulyak, 2015).

Responsibility for committing this terrorist act was assumed by Al-Qaeda "is an Islamist terrorist organization headed by Ayman al-Zawahiri sponsored by Osama bin Laden". To this day Al Qaida remains one of the most influential organizations that promote radical Islamism and jihad through transnational terrorism.

In addition, a truly horrible, September 11th terrorist attack on the account of al-Qaeda's group has a number of terrorist acts in various parts of the world. In particular:

- March 11, 2004 - The explosions at the Atocee station in Madrid, due to which 191 people were killed and 1800 were injured
- July 7, 2005 - there were bombs in the three wagons of the London Metro, who took lives of 52 people, about 700 were injured, according to data also killed 4 suicide bombers
- On January 7, 2015, Charlie Hebdo employees were shot dead in Paris for caricatures of Islam, 12 people were killed, 11 were injured
- On January 18, 2017, a mined car exploded at a military base in Mali, 77 soldiers were killed, 117 were injured in various degrees of gravity [8] (TSN, 2015).

Although Al Qaeda has a significant influence on other terrorist groups, its leaders have never sought to forcibly annex other Islamists or exert pressure on religious minorities living in a Muslim environment in some way. That is why today the most dangerous is an international terrorist organization is the "Islamic State", formerly known as the IDIL (Islamic State of Iraq and Levant) [9]. (O. Reznikova, 2016)

The actions of the militants of the "Islamic State" are more like an open war: active recruitment of foreigners, the use of heavy weapons, extremist activity. IDs do not deny their involvement in terrorist attacks around the world. Since its proclamation, the ID has assumed responsibility for such acts of terrorism:

- Shooting in Tunis on June 26, 2015
- Explosions and shootings in Paris on November 13, 2015
- Pedestrian bus ride in Barcelona on August 17, 2017

- Shooting in Las Vegas on October 2, 2017 (the FBI denies this information) [10]. (TSN, 2017)

The above-mentioned terrorist acts only a small portion of the bloody massacres carried out by the "Islamic State" over the wrong ones, their actions are truly cruel and sometimes even beyond the understanding of the militants themselves.

The study of G. Weimann [11, pp. 99-102] (G. Weimann, 1994), R. Dowling [12, p.12- 24] (R. Dowling, 1986) demonstrate that contemporary terrorists are carefully selecting a place in the process of preparing a terrorist attack, taking into account the media needs and specificities for providing journalists with vivid illustrations and staffing. When planning a terrorist attack, attention is paid to the deadlines of the release of newspapers and news releases to receive in the short term the desired reaction of the audience. J. Bell, an expert on terrorism, described the symbiosis of terrorists and newswires with an apt phrase: "Abdul, do not shoot! We are not in the prime time!" [13, p.48]. (J. Bell, 1978)

The Islamists' advocacy work includes a range of work on various fronts of the media space. This is their weapon, which they use against terrorists, as well as those that strengthen their position in the global space of international terrorism.

To study the tactics of propaganda of Islam is worth the following points:

- 1) the messages sent by Islamists to the world by their actions;
- 2) tools used in propaganda;
- 3) distribution channels;
- 4) the main speakers of Islamist groups;
- 5) activities carried out by Islamists;
- 6) communication models in propaganda of Islamism.

1. The ideology of radical Islamism aims to introduce Islam as a new world order, to unite all Muslims and to unite other non-believers in Allah. During the existence of a radical Islamist movement, his group set out goals that were to be achieved by their active actions. These goals were radical Islamists communicating to the community in the messiahs. After analyzing how the world is made, it is possible to distinguish three main messages sent by radical Islamists:

- "There is no God except Allah, and Muhammad is his messenger"

Since these words are the first and main teachings of Islam, it will be correct to regard them as the main message of radical Islamism.

- Utopia of the Islamic Caliphate

This message, that Muslims should return to the territory of the state in which they have to live and which they should glorify, became the most popular after the formation of the "Islamic state".

- Live in utopia or die by the death of the infidels

Moreover, this message, again with the advent of the ID, refers not only to the faithful, but also to Muslims who do not share the views of radical Islamists.

2. While conducting their propaganda, Islamic terrorists do not neglect even the most cruel tactical means and tools. They try to maximize all opportunities. Publications in mass media, community in social networks, official statements and terrorists appeals, misinformation, public executions.

The effect of a terrorist attack depends on the number of casualties. The more casualties they are the loudest act of terrorism, and therefore, the greater the resonance is this event in the media. Thus, it can be predicted that radical Islamists will use the tactics of further escalating terrorist acts with more victims and violence to receive free broadcast and first column in the world's leading media. The media themselves will obediently broadcast all the horrible information drives that only the terrorists invented.

Gestures are quite a peculiar instrument of propaganda in radical Islamism. They almost do not pay attention to them, but often in the gesture you can see a hidden message. For example, militants of the "Islamic State" use the index finger of the right hand to raise their character as a symbol of their cause. In the Muslim world, this means honoring the first "pillar" of Islam - "There is no God except Allah, and Mohammed is his messenger."

Another gesture is "Three Chalets". He is being used by the Palestinians as a sign of the support of the Hamas militants. These are three fingers raised up, which associate three Israeli teenagers who were to be swapped for captive Palestinian militants, one of whom was Gilad Shalit.

In their propaganda, Islamic terrorists are actively using the video, especially with shocking scenes of violence. It was in this respect that the "Islamic State", whose own media center (Al-Khayyat), featured hundreds of full-length films and short videos depicting public executions and other cruelties.

3. Channels of propagation of radical Islamist propaganda are:

- Mass media (both own radical-islamic and world-wide)
- Internet pages, since the world wide web allows videoconferencing and conferencing, sending messages to a large number of users in the absence of censorship, control and regulation of information flows
- social networks (in particular the most active terrorists use telegram messenger)
- YouTube Video Hosting.

4. Since the main transnational Islamist terrorist organizations still remain Al Qaeda and the Islamic State, it can be assumed that the speakers who speak out speak on behalf of all radical Islamic groups associated with them. Exceptions are small groups that operate geographically and have their own speakers.

In particular, Ayman al-Zawahiri's spiritual leader, usually in the name of al-Qa'ida, is often followed by Osama bin Laden.

The speakers among the militants of the "Islamic State" are also enough to be called the most famous:

- Abu Bakr al-Baghdadi (leader of the ID, is considered dead, but the media reports that he is hiding in Syria)
- Jihadi Sid (the real name of Siddhartha Jar, in his address says that he is ready to follow Adolf Hitler's desire to destroy the entire Jewish people)
- Abdel Mahed Abdel Beri (a British rapper, who went over to the side of ID fighters, he was accused of brutal murder of American journalists)
- Abu Muhammad al-Adnan (killed in Syria in August 2016) [14]. (V. Sazonov, 2016).

5. If we consider terrorism as a means of promoting the ideas of radical Islamism, then first of all you need to pay attention to the measures that terrorists use in their activities. The terrorist attacks by radical Islamic groups and suicide bombing terrorists have already caused a large number of casualties, and the media are actively reporting that terrorists are preparing new terrorist attacks. This information undermines the confidence of the civilian population in its security, because it calls for preparation for new tragedies, on the one hand, and, on the other, enables to prevent a threat and to prevent a terrorist attack.

6. In the propaganda of radical Islamism, terrorists use the communication model of a source change. The essence of this is that the propagandist (radical Islamists) places his message (address, publication or direct committing a terrorist attack) in another source (world media, geography of the country), from where it comes to the recipient of information (power, civilian population, other Muslims). Thus, the propaganda work of Islamic terrorists is being built.

In addition, communication tactics for the promotion of Islamic terrorists through the use of appeals and appeals should be emphasized. Due to its unpopular aggression against Europe and the West, the leader of the Islamic State, Al-Baghdadi, issued an audio appeal calling for the attack on Western media: "Oh, the soldiers of Islam in every place, increase the blow by the blow and make your goals media centers incorrect, where do they conduct their ideological wars"[15]. (TSN, 2017)

Also, according to the French media, who analyzed the propaganda materials of radical Islamists, it became known that terrorists urged their supporters "to gain the trust of the non-believers and to conceal their radical views, and only then to proceed to terrorist attacks" [16].

As you can see, the bulk of calls comes with a hidden message, which means a threat to the peaceful life of mankind and directly mobilize all the forces of radical Islamists to fight. In particular, as Al-Zawahiri's al-Qa'ida leader appealed to the Islamist group "from East Turkestan to Morocco" to respond to aggression and "to stop the struggle between themselves and to

direct all efforts against the United States, Russia, Iran" [17] (Korrespondent, 2015)

So, summing up the research, we can talk about the global danger of Islamic terrorism. First, radical Islam has generated aggressive instruments-currents that gain new audiences, using real weapons as weapons of information. Secondly, the study compared the marketing strategies of early Christianity and today's radical Islamism and found common tactics, but different instruments, since radical Islamism uses modern technology. Third, advocacy work of Islamic terrorists has its fruits. The manifestation of the propaganda of Islamism has two sides, one of which is communication in the media sphere, the other one - real crimes and acts of terrorism that serve as vowel information drives. One can conclude that the information drive with death, combined with its broadcast on all world channels, enhances the effect of propagation and influence on consciousness. As it was noted, the ranks of their militants "Islamic State" is replenished by recruiting foreigners. Fourthly, the study analyzed the tactics of propaganda ideas of radical Islamism according to the criteria: the messages that Islamic terrorists send to the world by their actions; tools used in propaganda; distribution channels; the main speakers of Islamist terrorist groups; measures taken by radical Islamists; communication models in the propagation of radical Islamism. Fifthly, after analyzing the loud territory attacks on human victims, which have served as vowels for information media for the whole world, you can conclude that breaking the symbiotic link of "media terrorist" can only be a utopian total conspiracy of the media to not cover terrorist attacks all over the world that seem more to science fiction than to a scientific approach. Sixth, transnational terrorism, which radical Islamists use a priori, is a win-win variant of the location of their factions, because it is geographically dispersed and allows it to act simultaneously throughout the world. In addition, it greatly increases the chances of terrorists to avoid responsibility and to evade the counterterrorism measures of countries struggling with Islamic terrorism.

Taking into account the above, it can be argued that the study of the tactics of advancing the ideas of radical Islamism through transnational terrorism is of great importance for securing world security, preventing terrorist acts, reducing the number of deaths and violence in the world.

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Approaches to Motivation for Creative Labour

It has been theoretically proved and confirmed by the practice of domestic and foreign enterprises that innovation development is decisive in increasing the economic potential of individual enterprises (especially in the market conditions) and the economies of states in whole. Its providing is impossible without the creative labour of the personnel. Therefore, the issue of motivation for creative labour is especially hot.

Innovation potential of the enterprise is the core of the potential structure, which is included to each of its parts. Innovative component of the human resources potential influences the development of all other components of innovation potential, therefore, the creative labour of the personnel plays a special role in the innovation activity. This article is devoted to one of the issues of the development of the innovative part of the personnel component of the enterprise potential, the motivation of creative labour.

The aim of the paper is to justify the necessity of the creative labour of innovative enterprises, the identifying the market factors of the formation of the needs for the creative labour, the consideration of creative labour in the system of values and human needs, as well as the improvement of the theoretical bases for motivation of creative labour by the enterprise.

The necessity of the creative labour of the personnel of innovation-oriented enterprises presupposes that their employees have to adapt to changes often or permanently in the conditions and objects of the labor, in consumer needs and requests, as well as their features in specific market segments, or they must develop themselves, offer and implement such changes.

In order to achieve this, it is necessary to carry out market analysis, to choose the optimal directions of development, to select high-efficient and low-cost technologies, to improve, to diversify and develop new products, to improve customer service, to develop advertising, to increase personal efficiency and creativity in work, etc.

These are quite difficult tasks that require a creative approach. However, if there are enough human resources in the company motivated for this type of work, then its results bring high usefulness to the employees, increase the efficiency of the company work and enhance its innovative potential in the whole and each of its components.

The need of enterprises in creative labour is formed and changes in time depending on the changes of the internal and external factors of influence. This should be taken into account, because, in accordance with the changes of the needs for the creative labour of personnel, the strength and directions of measures for its motivation should change. Let's consider how changes of

internal and external factors motivate the needs for creative labour of the staff.

Internal factors. The needs for the creative labour of staff depend on the established aim, for which the personnel should adapt all components of the activity. They also increase with the forced replacement of employees of the company, especially, when choosing the most capable workers of creative labour, when conducting the modernization of the enterprise, when choosing the directions of development of market opportunities of the enterprise, when developing, planning and mastering the release of new products or new technologies for their production.

External factors. The work of the company is also influenced by changes in the micro and macro environment of its functioning. All of them form the needs for the creative labour of the personnel of the enterprise through the necessity of adaptation to changes in the macro environment and the adaptation or modification of elements of the micro-environment.

In particular, the modern rate of development of scientific and technological progress forces to adapt to changing conditions, conducting innovative activity, and this can not be ensured without the creative labour of the staff. Similarly, the change of the environmental situation forces to reorient the production to manufacturing the environmental goods, to implement the resource and energy saving technologies, to clean wastes and emissions from pollutants, etc., that also increases the role of creative labour. The appearance of different social strata among the population, which greatly differ by purchasing capacity and, accordingly, by requests, makes significantly diversify the goods. The emergence of new industries in the economy presupposes a revision of the directions of the capital investment for the optimality of their orientation. Frequent changes in the legislation, inherent in our country, force us to reorient ourselves to more profitable directions of development, or, at least, to carry out a timely analysis of such changes to provide the correspondence of the activity to the current legislation. And this list of changes in the macro environment, which form the needs for the creative labour of staff, is not complete yet.

Let's briefly consider such changes in the micro-environment too. The changes in the needs and demands of consumers have a special significance. The correct analysis of the consumer market and the justification of the taken decisions on the change of the nomenclature, improvement of quality or other changes are the key to success in the competitive market, and the costs for motivation of the creative labour in this direction will be paid off. The resulting indices of the company can be significantly influenced by the possibilities of more effective promotion of goods to the market, detected by employees in time, by discovering the more efficient sales channels, by finding the more favorable conditions for financing, etc., that is, the correct analysis of various elements of the microenvironment and the implementation of the recommendations offered as a result of it.

The necessity to adapt to the external conditions of the functioning the company turns the monotonous work of its staff into exciting creative labour (if it is treated in a proper manner). The desire of human to change the usual, traditional things is called passionarity, which requires such traits of character as courage, will, perseverance, purposefulness.

Let's consider the role of creativity in the system of human values. For most people of different countries in the system of values the second place after family is taken by job, then friends, leisure, etc. Among the labor values the first place is occupied by high income, on the second place there are good colleagues work, on the third place there is an interesting job [1]. Then they are followed by (in different countries with different priorities): the correspondence of work to abilities, comfortable working time, benefit for society, long vacation, reliable work place, respected work by society, opportunities of initiative, various achievements, communication with people, responsible work, the absence of excessive pressure, the possibility of career advancement.

Creativity is one of the human needs for achieving the goals of life, which include: [1]: material benefits for an individual and family; power and glory; knowledge and creativity; spiritual perfection.

Human needs are divided into material and spiritual, that is intellectual, aesthetic and social needs [5]. Intelligent needs are the needs of knowledge, cognition of the new things; on the basis of them creative needs are formed. They make knowledge not a goal, but a means of satisfaction of the necessity for creativity.

In the opinion of the authors, to the totality of motives that stimulate a person to creative labour, the following ones are included: personal needs, interests and desires of workers, the nature and content of creative labour; correspondence of tasks to personal abilities; the opportunity and high probability of career growth; providing the development of intellectual, professional, physical, technical, personal, spiritual, moral or social opportunities and abilities; increase of wages, recognition and approval of well done work; relations between initiators, organizers of creative labour, managers and personnel; responsibility and independence in work. Their structure has big differences among workers of all ages.

Creative potential of a person is realized at a certain level of its activity, but it can be performed by both people with advanced abilities (talent), and with average ones. For the creative labour the intuition of a person is important, which is a compressed volume of logical, ethical or sensory information.

People of the age of the greatest sexual activity are more inclined to creative labour. In the opinion of the author, this can be explained by the simultaneous accumulation of knowledge, experience and good health. Z. Freud explains this by the sublimation of sexual energy, that is, the direction

of the attraction energy for more ambitious goals, in particular, creativity, when it is unacceptable for a society.

The boundary between ordinary and creative labor can be determined only by the subject. If its work ceases to be conditioned by economic necessity, and it becomes internally motivated by rational activity, then this is creativity.

As it has already been noted, creative labour is necessary to ensure the growth of the economic potential of the company, but without its proper motivation talented workers may change their jobs, work not in accordance with the purpose of the enterprise or not efficiently enough. Therefore, let's dwell on the peculiarities of the motivation for the creative labour on the part of the enterprise.

Material stimulation can undermine procedural and substantive motivation [3]. If creative labour is internally motivated, that is, interest to the process and content of work is determinant (a person just likes to do it), then, in case, when a person is paid for it constantly, the creative labour will become for him only as a means of earning money. And when such a labour ceases to be paid, it becomes uninteresting for a person, or not as interesting as it was earlier. This does not mean that a person performs the creative activity worse when he is paid. Maybe even vice versa. The point is that the hierarchy and the motivation strength changes.

The people with sufficient earnings and without direct motivation of creative labour are especially inclined to self-motivated creative labour. At the same time, due to creative labour they often seek to feel their competence, move up the ranks, develop their mental or other opportunities, etc. (although all this builds the prospect of a higher level of the earnings in the future).

At the same time, for a person with low income the material motivation is more important. People with low income, who are inclined to creative labour, will do the work, for which they will receive material remuneration (and not necessarily it will be the creative labour), although they can carry it out without material incentives as they feel the prospect of growing salary due to the creative labour.

The procedural-substantive motivation is especially reduced by the expected material remuneration. When the promises of material remuneration are not given, in case of unexpected remuneration, the self-motivation does not fall after finishing the creative labour, and a person does it again with pleasure. If the creative labour was carried out for reward, then the next time without it the person might not want to perform it.

It should be taken into consideration, that verbal rewards (praise) increase self-motivation of men and practically does not affect the self-motivation of women. The reprimand also reduces the internal motivation of creative labour for both men and women. Therefore, only positive methods should be used to motivate creative labour.

Thus, in order to motivate the creative labour, it is expedient to use non-economic methods of motivation more widely. Among them there are moral and psychological (approval, support, recognition of merit, respect and trust), as well as organizational (participation in the affairs of the company, motivation by prospects, delegation of tasks and powers, motivation by expanding the content of work).

In the creative labour the ratio of the difficulty of the task and the employee's abilities is very important. If the difficulty does not correspond to the abilities, then the worker feels boredom, worry or stress. If the difficulty of the task corresponds to the abilities, the worker can completely melt in the subject of activity, fully concentrate on the creative labour, performing it even at leisure, and at the same time feel a peculiar state of joy, inspiration, and exciting from the activity itself. This state is called "flow" [3] or "flow-effect" [4].

If the difficulty of the work and the possibilities of an employee are measured in points from 1 to 10, and the ratio of difficulty to the possibility is indexed as B , then the state of the employee performing the task can be presented in the form of a tab. 1.

Table 1 – The state of a worker performing tasks of different difficulty depending on his ability to creative labour

Value B	Employee condition
$7 \leq B \leq 10$	Stress
$3 \leq B < 7$	Worry
$0,6 \leq B < 3$	Flow
$0,3 \leq B < 0,6$	Boredom
$0,1 \leq B < 0,3$	Stress

In fig. 1 the principal scheme of the dependence of the results of work on the relation between the difficulty of creative labour and the employee's possibilities is proposed. The left part of the scheme (a) should be used if the difficulty of work exceeds the possibilities, the right part (b) should be used if the difficulty of work is lower than the possibilities.

The results of creative labour can be understood as the degree of satisfaction of the worker from creative labour, the degree of growth of the innovative potential of the enterprise or the growth of its profit due to the creative labour of the employee.

The microclimate in the work team is also important for the creative labour. In order to establish the creative microclimate, it is necessary to form groups that are biosocially compatible by three aspects [2]: spiritual and moral, psychological and by compatibility of sociotypes. The first of them, that is, the spiritual and moral aspect of compatibility is related to the moral development of employees, kindness, reliability (responsibility), tactfulness, courtesy and mutual respect. The second one, psychological, is based on the

interaction of three main types of people: leaders, workers that collaborate creatively, well-known, and intermediate types. The third aspect of compatibility, that is, the compatibility of sociotypes, implies that each person has a certain perception of the world and other people caused by nature, and because of this, in the circle of some people (in communication and interaction) a person feels comfortable and free, and in the circle of other people he feels uncomfortable, wary, anxious.

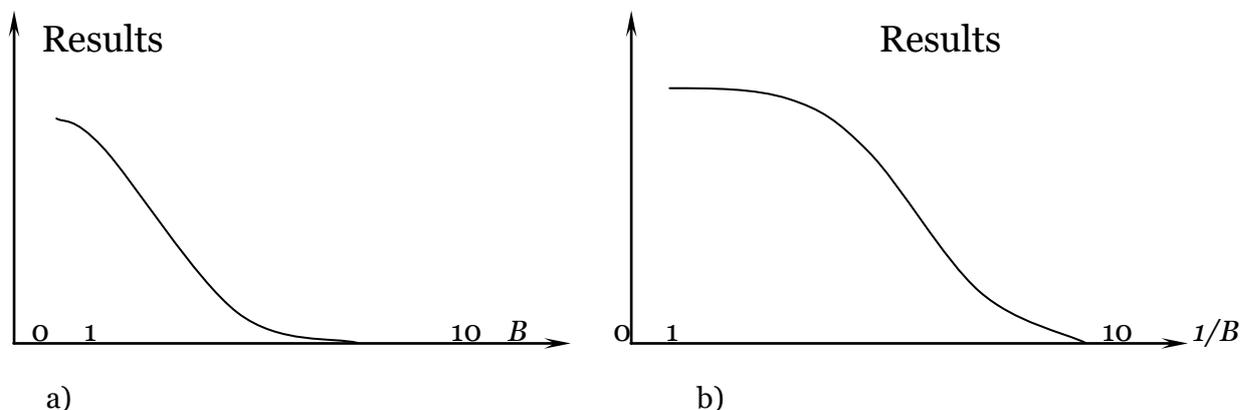


Figure 1 - Dependence of results on the difficulty of creative labour and abilities of the workers

Thus, the author substantiates the need for creative labour of innovative enterprises, identifies market factors of the formation of needs for the creative labour, studies the creative labour in the system of values and needs of the person, and also improves the theoretical bases for the motivation of creative labour in the company.

The economic potential and other indicators of the economic development of the state depend significantly on the creative potential and the activity of the personnel of enterprises. Therefore, further research should be devoted to the improvement of the theoretical foundations of the choice of optimal directions of motivation of innovation activity and the creation of an adequate mechanism for motivating the creative labour at the state level.

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Reform of the Judicial System in Ukraine: Conceptual Foundations and Problems of Practical Implementation

In the context of international commitments, European aspirations and ambitions of Ukraine, in order to strengthen its international authority, internal social and economic growth, strengthening the development of the rule of law, the rule of law and civil society, a number of reforms have been implemented in our state, which also encompassed the judicial branch of power, as an integral part of state power. The basic concept of reform is the inevitable adherence to the principle of separation of state power and the mechanism of containment-counterweight. The principle of separation of branches of power is an integral attribute of the rule of law, as declared by Ukraine. The division of state power into branches is inextricably linked with the development of the state itself, its socio-political processes, socio-economic development and the enrichment of historical experience in the organization of state and legal life, the maintenance of stability and the rule of law in society and the state.

The division of state power into branches should be based on the maximum guarantees of independence of each of the branches, on the basis of interaction, equilibrium and the absence of the advantage of one branch of power over another. A specific feature of the division of state power is that each branch of government is an element of a unified system united for the sake of securing the interests of society and the state; therefore, it is worthwhile to distinguish the autonomy and independence of the branches of power in order to avoid the absoluteization of power by any of the branches. Any reform must be irrevocably built on these conceptual principles and signs. The constitutional principles of the separation of powers in Ukraine are the independence of the judiciary, which is exercised by independent and impartial tribunals. The courts of Ukraine form a unified system of judicial system of our state. The conceptual foundations and content of any reform carried out in the state should be the assertion of human rights and citizenship, as the main duty of the state, declaring itself legal. The main criteria of the rule of law are the priority of human rights in the system of law, the guarantee and reality of the provision of these rights and freedoms, the existence of the institution of civil society, the rule of law.

The Ukrainian judiciary from the very beginning of its creation is in the process of change and reform, in search of new, more effective mechanisms for the protection of human rights. The judicial reform in Ukraine in 2016 aims to provide the separate, an independent judicial branch, capable of protecting the rights, freedoms, legitimate interests of man and citizen, the state and society, as well as raising the level of citizens' trust in the judiciary and strengthening the social role of the court in the state. This is due to the

society's need for access to justice, the existence of a genuine effective mechanism for the protection of human rights, a high level of transparency of judicial procedures, impartiality of court decisions, maximum objectivity in the consideration of a dispute, high professionalism of judges, capable of diligently, professionally and competently to administer justice. The conceptual foundations of judicial reform are envisaged by the Decree of the President of Ukraine "On the Strategy for the Reform of the Judiciary, Judiciary and Related Legal Institutions for 2015-2020" dated May 20, 2015, No. 276/2015 [8]. The said Strategy provides for the priorities of reforming the judiciary - judicial system, judiciary and related legal institutes both at the level of constitutional changes and at the level of implementation of urgent urgent measures that will provide the necessary positive changes in the functioning of the relevant legal institutions. The main areas for the implementation of judicial and legal reform can be defined as follows: provision of professional judges corps; increase in the transparency of court activity and the responsibility of judges; increase of efficiency of justice and improvement of powers of judges of different jurisdictions, instances; ensuring accessibility, openness, transparency of justice; improvement of the adjacent legal institute of the prosecutor's office, its activity; guaranteeing access to free legal aid and strengthening the guarantees of advocacy; reform of the system of executive proceedings, introduction of the institution of private enforcement of court decisions; improvement of procedural support. The strategy of reforming the judicial system, the judiciary and related legal institutes proves the complex nature of the reform and understanding of the inseparable relationship between the judiciary and other legal institutions by the Ukrainian society.

The starting point for the implementation of the said Strategy and judicial reform was the introduction of amendments to the Constitution of Ukraine, the relevant Law of Ukraine "On Amendments to the Constitution of Ukraine (on Justice)" of 02.06.2016 № 1401-VIII [5]. Such changes have become the reason for the adoption of the new Law of Ukraine "On the Judiciary and Status of Judges" No. 1402-VIII [7]. The continuation of the reform was the adoption of the Law of Ukraine "On Amendments to the Commercial Procedural Code of Ukraine, the Civil Procedural Code of Ukraine, the Code of Administrative Proceedings of Ukraine and other legislative acts" dated October 3, 2017, No. 2147-VIII [4]. These legislative acts are currently the most discussed and debatable in scientific and practical circles, since the protection of the rights and legitimate interests of a person, a citizen, and the state as a whole depends on the success and effectiveness of judicial reform in the state.

The reform carried out in Ukraine created a three-party court system headed by the Supreme Court. Under the updated legislation, the Supreme Court forms the highest court in the system of the judicial system of Ukraine, which ensures the consistency and unity of judicial practice in the way and

manner prescribed by the procedural law. It consists of no more than two hundred judges and its structure consists of the Grand Chamber of the Supreme Court, the Administrative Court of Cassation, the Economic Court of Cassation, the Cassation Criminal Court, the Cassation Civil Court.

Both academics and practitioners maintain the view that such a system is more efficient and functional, in particular, it contributes to the observance of the principle of reasonable time for trial by a court which, in the framework of international obligations, provides for Article 6 of the European Convention for the Protection of Human Rights and Fundamental Freedoms which for the first time in accordance with Article 10 (4) of the Civil Procedural Code of Ukraine, has been recognized as a source of law, since the Code contains a direct reference to the application of the Convention by the courts and the practice of the European Court of Human Rights [2]. The European Commission for Democracy through Law (Venice Commission) (paragraphs 45 and 63 of the Opinion of June 15, 2013, No. 722/2013) opposed the four-part liaison judicial system of the current reform in Ukraine. In paragraph 28 of the joint Opinion of the Venice Commission and the Directorate for Co-operation of the Directorate General for Human Rights and Legal Affairs of the Council of Europe of October 11, 2010, No. 588/2010, it was stated that the creation of three different jurisdictions led by three cassation courts, independent of each other, could lead to numerous and often complex conflicts of jurisdiction. Concerning the practical implementation of the reform, among its problems, it can be called hasty and inconsistent. Legal regulation of the transitional type complicates the functioning of the judicial system, creating for today a lot of problematic issues.

Problems of implementing the norms of the Law of Ukraine "On Amendments to the Constitution of Ukraine (on Justice)" of 02.06.2016 No. 1401-VIII [5], concerning the activities of the newly created Supreme Court, is that in fact the state has created a situation in which both the newly created and liquidated courts are acting. Since the liquidated courts (the Supreme Court of Ukraine, the High Specialized Court of Ukraine for the Examination of Civil and Criminal Cases, the Supreme Administrative Court of Ukraine, the Supreme Economic Court of Ukraine) continue to operate within the limits of the powers determined by the procedural law, performing their main function - the administration of justice - before the beginning of work The Supreme Court, and before the effective procedural law governing the procedure for reviewing the Supreme Court proceedings enters into force. This state of affairs leads to the accumulation of cases and the suspension of their cassation proceedings, which actually creates all prerequisites for the burden on the newly created body and newly elected judges. In this area, it is necessary to clearly regulate the effect of a special law and procedural acts, to avoid collisions between them.

For the consideration of certain categories of cases in the system of the court system, there are higher specialized courts, namely, the High Court on Intellectual Property, the Highest Anticorruption Court. Regarding the issue of jurisdiction of the High Court on Intellectual Property, the updated economic procedural law was finally clearly defined on this issue. In accordance with Part 2 of Art. 20 of the Commercial Procedural Code of Ukraine, the Supreme Intellectual Property Court shall consider cases concerning intellectual property rights, in particular:

1) cases in disputes concerning the rights to an invention, utility model, industrial design, trade mark (mark for goods and services), commercial name and other intellectual property rights, including the right of prior use;

2) cases in disputes concerning the accounting, registration of intellectual property rights, invalidation, extension of validity, early termination of patents, certificates, other acts that certify or on the basis of which such rights arise, or which violate such rights or the related law interests;

3) cases of recognition of a trademark well-known;

4) cases in disputes concerning the rights of the author and related rights, including disputes concerning collective management of the author's property rights and related rights;

5) cases in disputes regarding the conclusion, modification, termination and execution of an agreement on the disposal of intellectual property rights, commercial concessions;

6) cases in disputes arising out of relations related to protection against unfair competition in relation to: the misuse of signs or goods of another manufacturer; copy the appearance of the product; collection, disclosure and use of commercial secrets; Appeal against decisions of the Antimonopoly Committee of Ukraine on issues specified by this item [9]. This question has caused many disputes for many years, and finally, it is reflected in the updated legislation. The fact of establishing such an institution in the state as the Supreme Intellectual Property Court is an important step towards the protection of intellectual property rights in Ukraine. The creation of a new High Court on Intellectual Property raised new questions to Ukrainian legislators, domestic practices and science, which include the problematic aspects of the name of the court, the division of competences of the courts, the territorial and institutional structure of the court on intellectual property issues, the professional training of the judges of the said body and many others. Taking into account the positive international experience, the introduction into the judicial system of the Institute for the Protection of Intellectual Property Rights is a rather progressive step, justified and expedient. The activity of such a specialized institute in the system of judicial power, in case of its improvement, will allow the most professional and effective protection of intellectual property rights, subject to improvement of the legal status of judges, procedures for their preparation and selection.

Further improvement in the sphere of ensuring the development of the Institute of judicial protection of intellectual property and improving the legal status of the Supreme Court on intellectual property issues require the following: professional training of a high-quality judiciary corps; provision of participation of forensic experts, specialists in the sphere of intellectual property, since these disputes require not only legal knowledge, but also special scientific and technical; the quantitative composition of the Supreme Intellectual Property Court, as the practice of the number of cases on the protection of intellectual property rights is significant enough to be resolved by 21 judges, this situation will cause a high burden on newly elected judges, and thus the goal will not be achieved. A quick, just consideration of these disputes. The next aspect is the settlement of the appeal and cassation review of cases on intellectual property issues, as the appeal and cassation proceedings are currently foreseen by the same court, its individual chambers, which is not possible; moreover, it needs proper procedural support for the newly created court on intellectual property issues, since today only the Commercial Procedural Code defines the competence of the said court, but this does not completely coincide with the procedural peculiarities provided for by the procedural civil, administrative, criminal legislation.

Regarding the Higher Anti-corruption Court, its competence has not been resolved. The draft Law of Ukraine "On the Supreme Anticorruption Court" states that "the task of the Supreme Anticorruption Court is to administer justice in accordance with the principles and procedures established by the law for the purpose of protecting the individual, society and the state from corruption and related crimes and judicial control over the pre-trial investigation of these crimes, observance of the rights, freedoms and interests of persons in criminal proceedings" [3].

The formation of higher specialized courts for consideration of certain categories of cases in the system of judicial system of Ukraine has become an absolute novelty. These courts operate as courts of the first and appellate courts for consideration of certain categories of cases. It is this position of the legislator that caused many questions and discussions in the scientific circles. Discussions arise as to the observance of the constitutional principle of partisanship in the work of the higher specialized courts. The reason for such a discussion is the discrepancy of Article 17 of the Law of Ukraine "On the Judiciary and Status of Judges" [7] of Article 125 of the Constitution of Ukraine. Since Art. 125 of the Constitution of Ukraine provides that "the judicial system in Ukraine is based on the principles of territoriality and specialization and is determined by law" [10], and in Art. 17 of the Law "On the Judiciary and the Status of Judges" states that "the judicial system is built on the principles of territoriality, specialization and instance" [7]. There are no questions regarding the principles of territoriality and specialization. But the question about the principle of instance is a question, since it is not

provided for by the Basic Law of the state, and moreover, the formation of higher specialized courts, as courts of the first and appellate courts completely contradicts this principle. Therefore, in order to avoid further problems in the practical implementation of these principles in the work of the newly formed courts, amendments to Article 17 of the Law "On the Judiciary and Status of Judges" should be amended.

The judicial reform did not go away the adjacent institute of Advocacy. In this regard, scholars are concerned about the availability of justice in Ukraine. If to pay attention to the issue of representing the interests of individuals in the courts, in connection with innovations in the Civil Procedure Code, namely Article 15, the concept of professional legal assistance appears, the content of which is that representation in court as a form of legal assistance is carried out exclusively by an advocate. On the one hand, this seems to complicate the access of ordinary citizens to justice. However, on the other hand, to provide an effective mechanism for representation in the courts introduced a category of "minor cases". Thus, in accordance with the amendments introduced in 2016, the Constitution of Ukraine is supplemented by Article 1312, which provides that for representation in minor issues, as well as in relation to the representation of minors or minors and persons recognized as incapacitated by the court or whose capacity is limited, to represent the interests of the parties in such cases have the right to persons who have attained the age of eighteen years and who have civil procedural capacity [2].

In this regard, the concept of insignificant cases has been introduced into civil procedural law, in particular Art. 19 of Civil Procedure Code provides that this is: cases in which the value of the claim does not exceed one hundred living wage rates for able-bodied persons; cases of negligible complexity, which are recognized by the court as insignificant, except for cases which are subject to consideration only under the rules of general proceedings, and cases where the value of a claim exceeds five hundred sizes of subsistence minimum for able-bodied persons [2].

During the reform of the judiciary, scientists have always raised the issue of staffing of the judiciary, an adequate system of judiciary governance, and the issue of bringing judges to justice. The results of the search for effective ways to resolve these problematic issues are embodied in the Law of Ukraine "On the High Council of Justice" [1], which is the successor to the High Council of Justice and is a collegiate, independent constitutional body of state power and judiciary governing in Ukraine on a permanent basis to ensure the independence of the judiciary, its functioning on the principles of responsibility, accountability to society, the formation of a virtuous and highly professional body of judges, observance of the norms of the Constitution and laws of Ukraine and professional ethics in the work of judges and prosecutors. The authority of the judicial branch of power depends primarily on its carriers - judges. The staffing and ethical component of the judiciary's

activities are always in the constant field of view of government bodies, the public, legislators and scientists, as well as the European and international community. The process of staffing the judicial system must, of course, be based on constitutional principles of independence, transparency, democracy, equal opportunities, the rule of law and legality, impartiality and objectivity. The establishment of this body is a direct mechanism for guaranteeing and ensuring judicial independence and a guarantee of judicial governance. In the process of personnel provision and selection of judges for the post, an important role for today has been given to the newly established institute - the Public Council of Integrity. The Public Council of Integrity is established with the purpose of assisting the High Qualifications Commission of Judges of Ukraine in determining the suitability of a judge (candidate for a position of a judge) for criteria of professional ethics and integrity for the purposes of qualification assessment. The activity of the council creates all the grounds for maximum transparency in the selection of candidates for the position of judge as well as the representation of the people in the formation of the judiciary corps, as members of the Public Council of Integrity may be representatives of human rights community associations, lawyers, lawyers, journalists who are recognized specialists in have a high professional reputation and meet the criteria of political neutrality and integrity.

In addition to the above mentioned, the executive system experienced a significant impact of judicial reform. In general, execution of a court decision is a direct implementation of the law, which contributes to strengthening the authority of the judiciary. A court decision essentially protects the rights, freedoms and legitimate interests of a person and a citizen, and is the final stage of the trial. The enforcement of a court decision is an integral part of the right to a fair trial, since it is a practical exercise of this right. Justice is recognized as such only if it meets the requirements of justice and ensures an effective renewal of rights, that is, subject to the mandatory execution of a court decision. The introduction of non-state form of implementation of decisions will make it possible to reduce corruption factors during the organization of forced execution, to prevent administrative impact on the implementation process, to significantly reduce the timing of implementation, to effectively increase the motivation of implementation through contractual relations and to introduce real competition in the implementation process. In addition, the introduction of non-state forms of execution will also enable the state to save a significant amount of budget funds spent annually on enforcing enforcement decisions. In order to implement this mechanism, the institution of private enforcement of court decisions is implemented in Ukraine, through the development of the institution of private performers, in particular, due to the gradual establishment of a system of self-government, the mechanism of admission to the profession of a private performer; introduction of a system of control over the activities of private performers and deprivation of permission to carry out

their professional activities, as well as the introduction of professional civil liability insurance of private performers. To do this, already in 2016, the Law of Ukraine "On the bodies and persons executing compulsory execution of court decisions and decisions of other bodies" of 02.06.2016 № 1403-VIII [6], which defined the basis for the organization and activities for the enforcement of judicial decisions and decisions of other bodies (officials) by bodies of the state executive service and private executors, their tasks and legal status.

On the basis of the analysis, one can conclude that the judicial reform carried out in Ukraine, taking into account progressive international experience, has made a great impetus to the development of the European, legal, social state and created an entirely new system of protection of the rights, freedoms and legitimate interests of man and citizen. The reform introduced a fundamentally new approach to resolving disputes on intellectual property issues. The reform of the judiciary is carried out in a comprehensive manner, including the contiguous institutions of the state, such as the advocacy, prosecutor's office, the institution of enforcement of judgments, the institution of judicial self-government, etc. The key disadvantage of the reform is its promptness and inconsistency, which generates a large number of issues of its practical implementation. Today it is necessary to clearly improve the procedural legislation, since the legal status of the newly formed bodies, officials, their powers and competence does not always coincide with the procedural law. From the conducted research it is necessary to make the following proposals:

- introduction of amendments to Article 17 of the Law of Ukraine "On the Judiciary and Status of Judges", from the contents of which exclude the principle of "instance", which is not provided for by the Constitution of Ukraine;

- change the title of the Supreme Intellectual Property Court to - the Intellectual Property Court or the Patent Court;

- resolve issues of appeal review of cases before the Supreme Intellectual Property Court, since the review by the court of its decisions undermines the level of trust in such a court and the objectivity of its decisions;

- to bring to conformity the special legislation and procedural, in order to avoid the same understanding and application.

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5. *On Amendments to the Constitution of Ukraine (Regarding Justice): Law of Ukraine dated 02.06.2016 No. 1401-VIII // Bulletin of the Verkhovna Rada (BBP). - 2016 - No. 28, p.532.*

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7. *On the Judicial System and Status of Judges: Law of Ukraine dated 02.06.2016 No. 1402-VIII. Information from the Verkhovna Rada (BP). 2016. No. 31. st.545.*

8. *On the Strategy for the Reform of the Judiciary, the Judiciary and Related Legal Institutions for 2015-2020: Decree of the President of Ukraine dated May 20, 2015 No. 276/2015.*

9. *The Commercial Procedural Code dated November 6, 1991 No. 1798-XII / The Verkhovna Rada of Ukraine. Information from the Verkhovna Rada of Ukraine (BP). 1992. No. 6. p.56.*

10. *The Constitution of Ukraine: The Law of Ukraine. Information from the Verkhovna Rada of Ukraine. 1996. No. 30. Art. 141.*

The System of Ecological-Economic State Safety Management in Conditions of the Military and Political Instability in Aspect of Rational Water Resources Use

The MPI dictates a global strategy for the state safety so its management must be based on the strategy of regulated instability. The system of rational resources use has to be developed according to new zone determining. It is impossible now to use the same strategy at the most part of Ukraine and the occupied regions. The assessment of nowadays natural resources within ATO zone is a first stage for the strategical actions to minimize negative effects.

A number of well-known Ukrainian scientists (L.H. Melnyk, O.I. Karintseva, S.M. Shevchenko, 2005), (Ragozin M. P., 2002), (O. Melen-Zabramna, S. Shutiak, A. Voytsikhovska, K. Norenko, O. Vasyliuk, O. Nahorna, 2015), as well as other researchers, modern political experts and journalists (Oleksiy Matsuka, 2015) conducted investigations on the problematic of ecological-economic safety state management, water resources protection in the conditions of MPI. The particular direction of research concerns the sphere of law regulation, national and international nature resources regulation in the aspect of state safety. All this forms a huge platform of recommendations, political, economical, ecological forecasts, and legislative proposals. This might be used by state government, modern state safety organizations etc to make environmental losses not so total.

Is to establish guidelines of economic and ecological state safety in line with rational water resources use principles by identifying the problematics of MPI in Ukraine. Our aim is to analyze current legislative basic and to find out the ways to create and to implement the normative basis to cope with the environmental harm in conditions of MPI.

First, we start with determining the level of the military and political instability (MPI) and its influence on the state safety conditions. The political science determines few types of political systems so they might be stable or not stable themselves. The instability of the system is also a separate political process and is combined with inner and outer circumstances.

As Ukraine is one of the transitional political systems so that means the special character of political conflicts flow and the special methods of their treatment. The relative political stability means that the relations between its structure and inner processes and also its outer relations are unchangeable (Parsons T., 1997). The other determination of this stability is possibility of the political system to cope with unexpected situations, which are potentially dangerous for its existence (Ragozin M. P., 2002). The unstable political system not only faces more serious dangers but also is a provocative factor. The political changes are useful for the whole system, but they might destabilize political situation due to the creative group which caused them.

Basis of the ecological and economical safety in water resources sphere is a rational water resources use system functioning. Strong economical models are more stable to the military and political instability as long as this instability remains at the level of destabilization processes but not straight military actions.

The major problematics in the modern water use in Ukraine is a global consumption approach, resulting in environmental problems. The instable situation forms an additional loading of the environment.

There are such straight consequences of military actions as:

1. Huge land pollutions.
2. Chemical enterprises suffering from the shells falling (such as Avdiievka coke-chemical factory), which may cause a serious ecological damage. The other side is an economical aspect as most of these enterprises are of a great financial value and also this touches the employment sector.
3. Stopping of the chemical enterprises work causes a straight damage to water systems as sewerages flow to water objects which are a part of Ukrainian hydro complex.
4. The economical collapses influence coal mining. Non-working mines cause mine flooding and not extorting of water. This causes rise of soil waters and land flooding.
5. Ruination of water cleaning constructions.
6. Stopping of communal water constructions work (Oleksiy Matsuka, 2015).

Straight military actions effects are of state legislation regulation importance. So now we shall analyze the modern legislation in the sphere of MPI, accenting on economical and ecological aspects, starting with Crimea as the first precedent.

The legislative procedures about Crimea have become the first governmental steps to cope with the MPI in Ukraine. This law regulates economical relations in Crimea and Sevastopol during its occupation and after it, anyway for the next 10 years. So this is a special legislative regime for the economical activities which concerns the regulatory, tax and custom relations.

While analyzing this law, we accent on few positions which it regulates, so: the national taxes are not payed at the territory of the Free Economical Zone Crimea (such as charge for the special water resources use). At the same time, the local taxes which are determined in the Ukrainian Tax Code might be payed - such as communal water use taxes and charges (The law of Ukraine, 2014). The local charges are an element of local budget, while the charge for special resources use is a part of the national rational water resources use system. Logically, during the period of occupation the Ukrainian economical system loses control at the system of nature resources

use. As this system is a part of the national ecological politics, we need to provide serious changes to the system of rational nature resources use as a part of economical and ecological safety.

Licenses, issued before creating these law, are operating at the Crimean territory as long as their term ends. This concerns the licenses for the special water resources use also.

The particular area for study is ecological-economic management at the occupied territories of Donetsk and Lugansk regions. The project of the particular law determines politics in the aspect of state safety, accenting on such aims as:

1. Exemption of temporary occupied territories of Donetsk and Lugansk regions and return to the constitutional regime.
2. Defence of laws and interests of physical and legal objects.
3. Providing of Ukrainian independence and territorial integrity (The law of Ukraine, Poject, 2017).

So, the mechanisms of bilateral international cooperation are provided to use. But ecological regulation in these regions is still an opened question.

The law of Ukraine 'About temporary activities while providing anti-terroristic operation' states the moratory for providing any inspections in the economical sphere at the territory of ATO. But there can be not planned inspections if the Cabinet of Ministry states that. This concerns economical activities with a high level of risk. Licenses and other permitting documents which ended while ATO are considered to be continued for the period of ATO. If some enterprise doesn't perform the legislative commitments, it should get a certificate from the Chamber of Commerce and Industry (The law of Ukraine, 2014).

Weakening of the separate part of water resources system causes problematic of the whole hydro system which impose its general problematic. So, we accented that the major problem is an extra consuming approach: modern water resources use system is about solving firstly economical problems and then ecological. So we get a number of second-point questions as:

1. Excessive use of water resources (both in communal and other sectors).
2. Water pollution.
3. Problem of access to water resources.
4. Inadequate water management.

Ignoring these directions will lead deepening of the environmental crisis management (Dubas, 2007). So strengthening of perspective positions due to structural elements of water resources use system must be considered. Let us analyze traditional problems in this fields. In agricultural sphere they are:

1. Insufficient number of centralized water systems and wastewater treatment thereof.

2. Inadequate technical conditions of agricultural water supply systems due to their inconsistency with the standards.

3. An acute need to reduce water losses by taking into account environmental factors and water availability factor (Yatsyk, 1997).

The problems of municipal water consumption are the poor state of sewerage systems; critical condition of drainage systems; lack of consumption limits at the points of entry and lack of pressure regulators (Melnik et al., 2005).

The problem of occupied regions is not functioning of the communal water systems. This concerns water systems the same as other communal enterprises. The example is Lugansk wastage polygon as a platform for gathering, saving and utilization of wastages. The only way to cope with this situation is to gather the necessary current information by the Department of ecology of nature resources with the help of state administrations in Donetsk and Lugansk regions as it happens now (Oleksiy Matsuka, 2015). At the beginning of 2014, there were 525 facilities of decentralized water supply in Luhansk region, 1101 — in Donetsk region, however, the smaller part of these facilities is nowadays outside the control of state epidemiological bodies due to military actions (O. Melen-Zabramna and oth., 2015).

Here are the main tendencies in water resources use during the years of MPI in Donetsk and Lugansk regions:

1. Prowlers who steal cable lines and separate parts of pipes what causes emergency situations on water supply and sewerage networks.

2. Absence of water supply and sewerage in different parts of regions.

3. Limited water supply during artillery bombarding (ex. Slovyansk, first stage of the channel «Siverskyi Donets–Donbas»).

4. Water supply is conducted by hours (ex. Donetsk).

5. Damaging the power lines and need to other temporary schemes of energy supply for filtration plants (ex. Donetsk).

6. Impossibility of providing the proper control of drinking water quality on the territory of military actions in the east (News 5ua, 2014; EspressoTv, 2014).

Here we start with informational providing of the economical and ecological safety in conditions of MPI.

Now we shall focus at sewage water data at Donetsk and Lugansk regions to realize the scale of possible environmental dangers in case of critical destabilizing scenarios for the particular regions. Sewage water disposal is done in Donetsk region by over 270 water consumer enterprises in the amount of over 1400 million m³.

The main industrial water consumers are enterprises of metallurgical industry PJSC «Mariupolskyi Metalurgiynyi Kombinat Imeni Illicha» (Mariupol Illich Steel Mill) and PJSC «MMK «Azovstal» («Azovsteel»), PJSC «Yenakiievskyi Metalurgiynyi Zavod» («Yenakiive Metallurgy Plant»),

branch «Metallurgy Complex» PJSC «Donetskstal» – Metallurgy Plant», PJSC «Makiivkoks» («Makiivcoke») and PJSC «Avdiivskyyi koksokhimichnyi zavod» («Avdiivka Coke and Chemical Plant»). Monitoring of natural water resources state must be provided by Siverskyi Donets Water Basin Committee (SDWBC), Donetsk Regional Center of Hydrometeorology, Sanitary and Epidemiological Service, the corresponding services of public utility «Kompaniya «Voda Donbasu» («Company «Water of Donbas») and other. The main consumers of water resources in Lugansk region are – metallurgy plants of Mariupol, Yenakiieve, Makiivka, Avdiivka, and also coal industry and power industry (O. Melen-Zabramna and oth., 2015). If to compare this virtual map with the map of military activities of the region we might notice that the biggest MPI includes all of the serious water consumers and while they are still polluting environment, the taxes are not enough well considered and distributed.

While the global problem of Ukrainian water consuming sector is a great number of decision-makers, what makes this sphere funding not transparent, the problematics of occupied territories is a weak and not yet developed system of controlling and informational providing. Most of this work is done by now created organizations, volunteer groups etc.

Decentralization is a way for global Ukrainian water system including all its aspects: private water supply, using the alternative water sources, tax regulation. The decentralized approach means decreasing of state regulation. If we come to an idea for this decreasing at occupied regions, the level of informational supply must increase otherwise we shall loose any points of ecological and economic regulation.

The decentralization or lessening the controlling processes might be prevented by institutionalization as a system transformation. In modern MPI situation modeling of the institutional schemes must be based on virtual economical and political forecasts and according to the current economical and political situation.

The modern international politics is concentrated around the problems of international safety because of growth of local and global instability zones. These problems are of great importance for nowadays Ukraine but it is not the only state which faces ecological problems, connected with the PMI. The specific of political strategy of the instable states is trying to keep balance and to use separate strategies about the opposite poles. But we find this not a fundamental politics, but a number of tactical steps.

While military factor is an outer reason of PMI, there are inner reasons of political and military instability such as incapacity of political system in general, fragmentary and partly absent strategy which causes its isolation inside inner political manipulations, short-termed and subjective interests.

As we accented earlier, Ukraine is not the only country which faces military damages to its environment so foreign legislative experience is of great importance for us. The variety of international tools has been developed

by the international organizations and foreign governments. They mostly touch humanitarian law, environmental protection legislation and laws for human rights. The humanitarian law is of limitation of weapon use which causes environmental dangers. This mediocre regulates a water resources protection subject. Let us check up some important international documents in the MPI theme.

1. In 1976 the Convention on the Prohibition of Military or any Other Hostile Use of Environmental Modification Techniques was adopted.

2. In 1977 the Protocol Additional to the Geneva Conventions of 12 August 1949 was adopted. This document was more directed on the victims' protection but touched the environmental issues during military aggression. It prohibited using weapons which could cause the long-term damages to the natural environment.

Although these serious document regulated influence at the environment, it had a number of weak points, exceptionally in the formulation aspects as in use of terms: widespread, long-term and severe damage (Bothe, M., Bruch, C., Diamond, J., and D. Jensen., 2010).

3. Another basic agreement which covers the issues of nature resources protection is Protocol III on Prohibitions or Restrictions on the Use of Incendiary Weapons to the Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects (1980). Paragraph 4 of Article 2 of the Protocol prohibits to make forests or other kinds of plant cover the object of attack by incendiary weapons except when such natural elements are used to cover, conceal or camouflage combatants or other military objectives, or are themselves military objectives.

4. Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare (1925).

5. Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction (1972).

6. Convention on Prohibitions or Restrictions on the Use of Certain Conventional Weapons (1980),

7. Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on their Destruction (1993)

8. Agreement on Comprehensive Test Ban Treaty (1996, not yet in force).

9. The decisions of international courts are also tools of international law in the sphere of natural resources the same as humanitarian sphere (O. Melen-Zabramna and oth., 2015).

As these documents state basic principles of ecological-economic safety management, they apply to all countries. Other way, the international protocols and conventions may bind only to the parties and different states.

The environmental protection politics in conditions of MPI doesn't solve the economical recession problems. Military actions in Ukraine's east and the general MPI situation have a strong influence as for the local residents and the environment, especially water resources. We get pollution because of destructive effects of shell bursts at the territory of ATO. The destruction of the infrastructure connected with water supply and sewerage becomes a danger to the ecosystems of the region which are parts of the global Ukrainian ecosystems. Rational system of water resources use in conditions of MPI is basis of state ecological and economic safety. The problem is that the whole system is weak and military actions just weaken it. The important steps are: informational supply of mostly injected regions, wise legislative policy, cooperation of state and public environmental organizations as a new level of water resources system management.

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Quantitative and Qualitative Indicators of Gender Equality

XXI century, except for the fact that women have become much more economically independent, they taking important steps for development of country, women have a great impact on the country's GDP and welfare for the next generations. According to the indexes and ratings of human development report Georgia is not included in the list of top 50 countries. The United Nations human development report has given indexes and ratings of gender equality. Since 2010, the Gender Inequality Index estimates the unfavorable conditions for women in three areas - reproductive health, empowerment and participation in the labor market. The United Nations human development report 2017 Gender Inequality Index in Georgia was 0.361, Georgia occupies 76 place in 188 countries.

Countries where gender balance maintained in labor economics, GDP have a high rate. It can be measure by Gender Inequality Index. Achievement of gender balance is very important of the country's economic growth.

World Economic Forum published Gender Gap Index, which measures the difference between men and women by participation in the economy, education, health / life safety and political participation. According to the 2017 Gender Gap Index Georgia ranked 94 place in 144 countries by 0.678 points.

According to the above-mentioned indexes Georgia has average rate, it does not mean that We have a good result, because Indexes include such countries where gender balance is not protected. Women empowerment means more effective use of human capital, which reduces gender inequality and enhances productivity and economic growth.

Important steps have been taken in many countries in order to achieve gender equality, but there are still many unresolved issues, it is necessary to use a great potential of women for business and economic development. To empower women, means to use human capital in more effective way, which reduces gender inequality and reinforces productivity and economic growth.

The goal of the article is to define the gender inequality in the country, particularly women's economic activity and involvement in the labour market, and their role in the country's economy. Within the framework of the studies we used the methods of analysis, abstraction and comparison.

For decades, real investments in education have significantly reduced, where Gender inequality index still remains as a widely used phenomenon in the world economy. In the countries, where it is easy for women to combine family care and work with each other, exactly these countries have higher female employment and women`s career growth. (Scandinavian countries). The policy of country, which allows women to be successful, plays an

important role in solving the future problems. It's known that, In Japan, to achieve gender equality on the labour market, increases GDP with 16 %. (Forum, 2014)

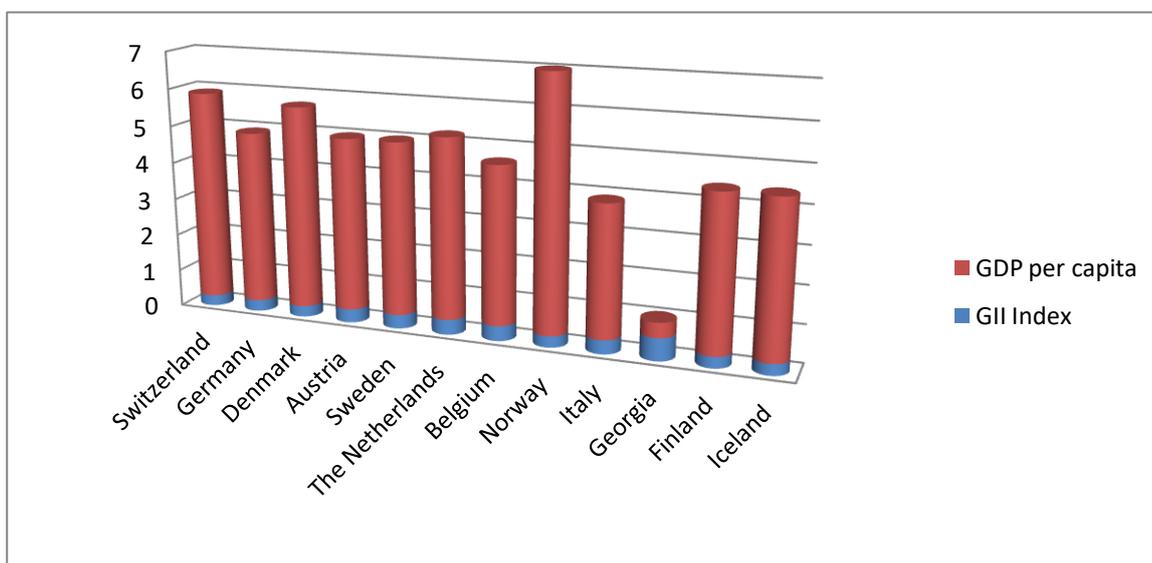
The countries, where in the labor economic gender balance is protected, they have a high rate. For measuring this, gender inequality index (GII) can be used. In the countries, where the index of gender inequality is minimized, the GDP index is high. What assures us even more that, to achieve the gender balance is very important factor for the economic growth of the country. According to GII index Norway has always been among the top three. In Switzerland, GII index – 0.028, and GDP on per capita is 56 815 US Dollars; In Denmark GII Index – 0.048, and GDP is– 45.165 Us Dollars. In Georgia GII Index is – 0.382, and GDP is – 8 222 US Dollars. Of course, It's difficult to say that gender equality is the reason or result for economic growth, but it's the fact that they have a direct relations with each other.

It should be noted that, gender equality is not the only determining factor for the development of economy, but it plays a very important role. Table 1 show that, Georgia falls the listed countries not only from the gender equality point of view, but from the GDP point of view too.

It is known that, that if men and women are equally involved on the labour market, more than 28 \$ trillion or 26% can be added world's annual GDP by 2025 year. (Company, 2015)

“Women mainly are employed in private sectors and they are the main core in creating the economic welfare of the country. The majority of men are employed in public sectors. This is the space where it's going the distribution of citizens' paid taxes in the form of salaries and economic wealth isn't created”. (Pataraiia, 2013)

Appendix 1: Gender inequality Index relation to GDP



*Diagram has been constructed by the authors: (source :Human Development Report 2016; Magazine “Global Finance”: The richest Country In The World 2016).

Half of the world's employed population is women, but in GDP their share is determined only with 37 %. There is much lower number of women on the paid work than on non-refundable work. In the world, 75 % of unpaid workers are women, who are busy with such activities as child care, elderly care, cooking and cleaning. It is known that, unpaid work, which is carried out by the women, nowadays consist of 10 \$ trillion in a year, to say roughly 13 percent equivalent of total GDP. However, such activities, done by the women, aren't counted. Women not only earn more than China and India together, but they globally control at least 64 % of consumer spending. (Ki, 2009)

Despite of the fact that, it's known woman's role in the economic growth of the country and in the success of business, countries and business world don't make important steps in order to eradicate the gender inequality. Nowadays, an important challenge stands in front of the global economy, despite of the fact that separate groups of business, countries, society are watching the women sceptically.

It's interesting to learn about indexes and rating of human development report of united nations of Gender equality. Till 2010 year, In the human development report of united nations it was represented two indexes: Gender and Development Index - GDI and Gender Empoverment Measure - GEM.) Since 2010 year, the mentioned indexes has been replaced by the Gender Inequality Index – GII. As for ratings, their comparison is impossible because of the constant changes of the countries, which are involved in the report.

Gender and development index, as well as human development index, are composed with three equally weighted components – education, health and income. Health is measured with life's expectancy duration, Education – is measured with the level of writing-reading and with the amount of percentage of pupils combined enrolment on the first, second and third level of studying, and income is measured with gross national income in US Dollars on per capita, considering the parity of purchasing power. Scale of index fluctuates from-0 to-1, where 0.81 reflects human's high development level, 0.5-0.79 – average, and less than 0.5 – low.

Gender empowerment measure shows if women can or can't take participation in the process of decision-making, economic and political. Gender empowerment measure reflects the inequality, which is between men and women in accordance with three directions:

- the participation in political processes and the opportunity to make decision, which will be calculated in accordance with the percentage proportion of men and women parliamentarians;

- The participation in economy and the opportunity to make decision, which will be calculated according to two parameters – man and woman legislation, senior officials and managers percentage proportion and

according to the man and woman's percentage proportion between technical/qualified labour force.

- To have economic resources, which will be calculated according to the compensation, earned by the women and men (income is measured in US Dollars with the parity of purchasing power).

For each component, it will be calculated equally distributed percentage of equivalent. Finally, measuring indexes of gender empowerment will be got with the average calculation of equivalent percentage of equally distributed of above mentioned three components. Indexes are distributed – from 0 to 1 on the scale, and the point got there, reflects equally distributed equivalent percentage according to the three components, or according to the mentioned components, the difference in the positions, held by the men and women. Accordingly, point 1 is ideal equality, where equally distributed equivalent coincides with the accepted point.

Since 2010 year, Gender inequality Index – estimates women's unfavourable conditions with three directions – reproductive health, empowerment and participation in the labour market. Index shows the loss of human development caused by the existing inequality between the men and women according to the mentioned direction. Indexes are distributed on the scale from 0 to 1, where 0 indicates to the equal conditions for men and women, and 1 shows that, women live in unfavourable conditions according to these three directions. Index is calculated using data of both gender – primarily, it's going to calculate geometric mean for each direction and separately for men and women; The next step is to unite average direction of men and women using the harmonic mean. Using the harmonic mean, the greater is the difference between the men and women's indexes, the lower is the final point of the index. The following indicators are used during the calculation of the directions:

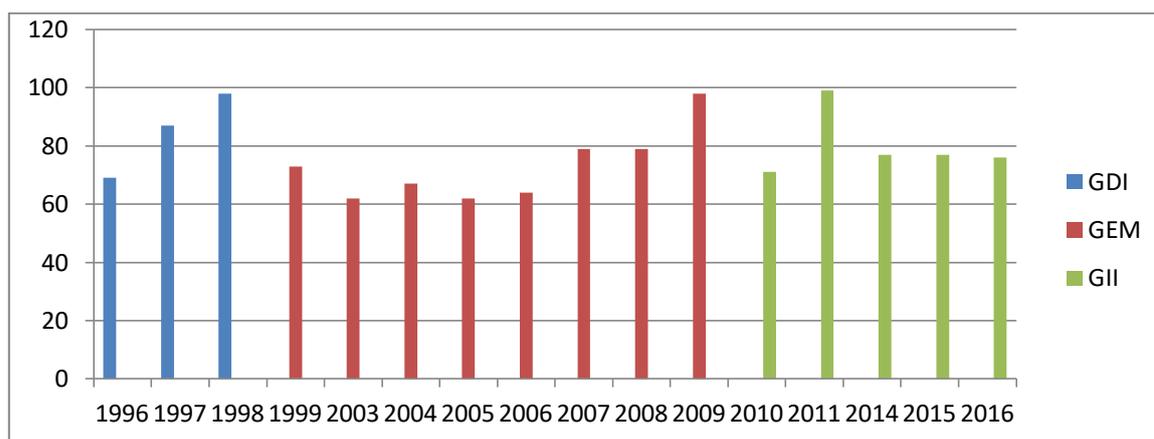
- Health; Maternal Mortality rate, adolescent birth rate;
- Empowerment; The ratio of both gender in parliament;
- Achievements on the second and third level of education;
- Involvement in the labour market.

According to the Gender and development index and gender empowerment measure, there was an important inequality in Georgia and there still is from the women's participation point of view in economic, political spheres and in the decision making processes. As for the gender empowerment measure, for the current period, according to the only available data (1997 year), the indicator is low – 0.355, what means that, according to the Human Development Annual Reports only 35.5 % of women achieved to be involved in political and economic processes/decision making processes of the equally distributed equivalent between men and women. The situation was improved but it is not radically changed in 1999-2005 years – gender empowerment measure index was increased till 0.414 in 2003 year, in 2005 year the index was 0.408 point – what means that, for this period, the

difference between the achieved index by the women and equally distributed equivalent between men and women was almost 60 %.

Gender inequality index according to 2010 year report, the index of Georgia was lower than average – 0.597 point, and according to 2011 year report, it is greatly improved – till 0.418 point (according to the scale of gender inequality index, 0 reflects the equal conditions of men and women, and 1 - full inequality. However, despite of improved index, Georgia is still significantly lower than any of its neighbour country – Armenia (0.318 point), Russia (0.276 point), except for Turkey (0.359 point). Also, it should be noted that, in contrast to the gender empowerment measure, which was measuring the women`s empowerment according to the several components, Gender inequality index is an attempt, to measure the gender inequality according to the various components – empowerment, health and according to the involvement in the labour market. As we`ve already mentioned above, final point is accepted with calculating average output of several rows. According to the directions, in order to estimate the situation in Georgia, we can get more information through the component parts and not with the average point of index.

Appendix 2. Georgian ratings of Gender and development index (GDI), Gender empowerment measure (GEM) and Gender inequality index (GII) according to the data of human development report of UN.



**Diagram is constructed by the authors. (source:; United Nations Development Program: Human Development report. 2017)*

According to 2015 year report of human development of UN, Gender inequality index in 2014 year in Georgia was 0.382, according to this index – Georgia has 77 place between 155 countries. Parliamentary mandates 11.3 % are held by women, and adult women`s 89.7 % gets a secondary education, men`s index is – 92.7 %. 41 women die from the problems related to pregnancy for each 100 00 baby`s birth. Childbirth rate in adults is 46.8 %, age varies from 15 to 19. Women`s involvement in labour market 56.7 %, and men`s involvement is – 75.1 %.

According to 2017 year report of human development, gender inequality index in 2016 year in Georgia was 0.361, according to this index - Georgia has 76 place between 188 countries. (program, 2017).

In May of 2005 year, World economic Forum published the report “women`s empowerment: To measure the Gender Gap” for the first time, and in 2006 year, it was first developed Gender Gap index, which was calculated for 115 countries. Gender Gap Index estimates the distinction between men and women according to the participation in economy, according to the involvement of education, health/life safety and political involvement. Gender Gap Index is based on the principle, to reveal the existing difference in this or that country according to the mentioned criteria between men and women and not the current situation of the countries women. Also, Gender Gap index estimates the countries, according to the achieved results under the mentioned criteria and not in accordance with the pursued policy.

Gender Gap Index measures, if there is the difference between the positions held by the men and women with respect to the designated criteria. The aim of Gender Gap Index is to reveal how near is the country to the gender equality. In order to achieve this aim, each criterion includes several indicators. Points and ratings except for the aggregate index, is calculated for all criteria and indicators, what reflects clearly the current situation in accordance with four directions. Also, Gender Gap Index is calculated based on as quantitative as qualitative data.

Gender Gap Index components are:

- Participation in Economy and opportunities;
- Availability to education;
- Health and life expectancy;
- Political involvement;

According to Gender Gap indexes of World Economy forum, the inequality in Georgia between men and women is the greatest according to the criteria of political involvement. Also, there is a great inequality according to the economic criteria, and according to the education and health indicators – inequality is minimum – indicators vary from 0.923 to 1. Georgian ratings, the points of 2006-2015 years, according to the criteria, shows that, the situation from the gender equality point of view, according to the four criteria, is not significantly changed in Georgia. But it should be noted that, ratings, especially on the basis of small improvement/worsening of index criteria ratings, it`s impossible to debate on the current progress in the country. For this, the best example is the rating of education index, in accordance with it Georgia has 28th place, and in 2011 year, it is on the 67th place. Of course, it doesn`t mean that in Georgia, gender inequality was changing dramatically in respect to education during this period – but, the represented criteria measures the inequality on the availability of education, which itself is measured with the level of writing-&-reading and with the enlisting on the first, second and third level of studying.

Superficial comparison of ratings and points of Gender Gap Index can cause the inaccurate conclusions. Ratings reflect the current situation of the country in respect to another country, what itself doesn't mean good or bad situation – simply, it's the way of comparison with other countries. The same remark refers to the average point of countries, involved in the report – according to 2015 year global report, neither country has achieved full gender equality according to the criteria of index. The best situation is in Scandinavian countries, where 80 % of Gender Gap is eradicated, but most of the countries, involved in the report, include developing countries, accordingly, higher rate than average point as for example, economic criteria of Georgian Gender Gap Index is, doesn't explicitly indicate on the current gender equality in Georgia. According to 2014 year Gender Gap index, Georgia has 85 place between 142 countries, according to 0.685 index, and according to 2015 year date, Georgia is on the 82nd place with 0.687 point between 145 countries. According To 2017 year report Gender inequality index in 2016 was 0.678. According to this index – Georgia has 94 place between 144 countries.(But this does not mean that the rating of Georgia has deteriorated. This is due to a change in the number of countries)

The point of Georgia of the criteria of access to education of Gender gap index is significantly higher than world's average and according to the component indicators don't indicate on the gender inequality, which is in Georgia. Access to education under gender gap index is measured with the knowledge of reading-&-writing and with the enrolment on the first, second and third level of education.

Total point of access to education varies from 0.981 to 1 according to the existing reports. According to 2016 year report, the point of Georgia is 1, what shows that the ratio of total indexes of men/women is 50%/-to-50%.(it's measured the percentage ratio of the enrolled pupils on the first, second and third level of education and not from the existing numbers of girls and boys, how many percentage gets education). Of Course, such change of rating doesn't indicate on the sharp worsening of the situation, but it reflects the attitude of point changing towards the data distribution of the countries, involved in the report. According to the education criteria Gender gap is nearly eliminated with respect to the average of the countries, involved in the report.

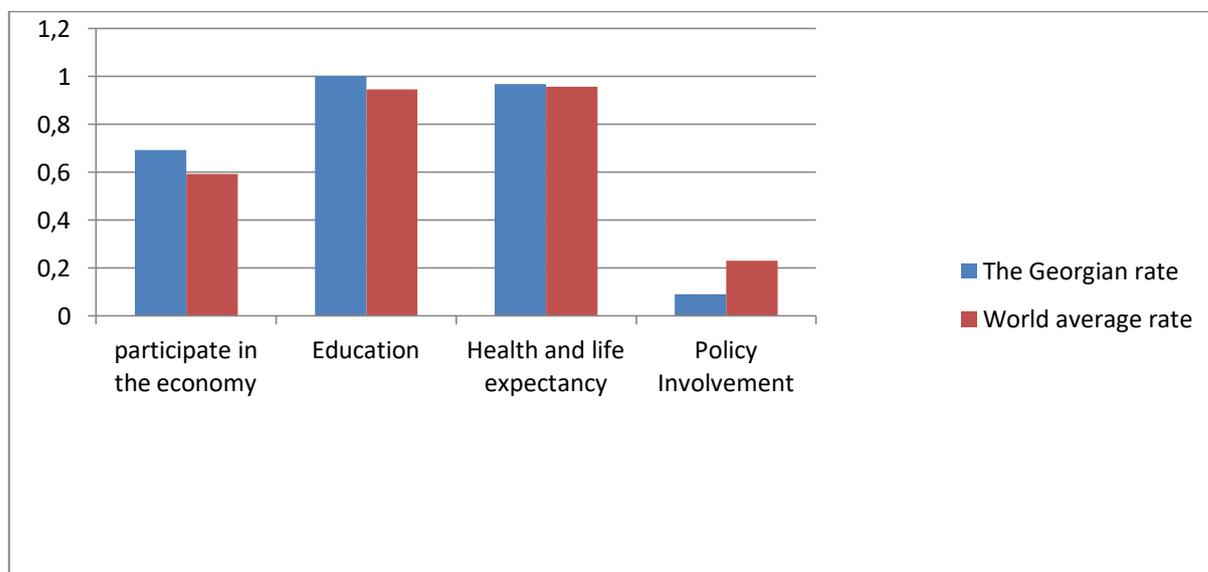
The point of Georgia, according to the health and safety criteria in contrast of 2006 year index, which consisted of 0.923 point, according to 2011 year report has greatly improved till 0.928 point. 2011 year point shows that, according to this criteria there is ratio 48.5 % / 51.5 % between the men and women's positions, what itself shows that, Gender gap is nearly eliminated. On the other hand, the difference conclusion can be done as a result of description of component indicators of health and life safety: Gender gap, which is in the total point of index, is caused with the ratio point of genders

during the birth, which is less than 1. Health and life expectancy is equal to 1 according to all reports.

But the data of ratio indicators of genders during the birth, shows that in Georgia, it can be the phenomenon of “disappeared girls” or according to gender the practice of selective abortions, and the result of it is that in 2010 year on each 100 girls – 108 boys were born, and in 2011 year – 110. According to the national statistics service of Georgia, in 2008 year there was a significant difference between the amount of born girls and boys – on each 100 girls – 127 boys were born. According to 2015 year data – on each 100 girls – 105 boys were born.

2015 year indexes of Gender gap is the following: Health and life expectancy; place – 120, with 0.967 point; ratio of genders during the birth, (woman/man): place 138, with 0.93 point. Health and life expectancy: place 1, with 1.06 point. (Woman – 68, man – 62);

Appendix 3: Gender Gap Index 2016



*Diagram is constructed by the authors; (Source: Global Gender Gap Index 2017, World Economic Forum).

According to the Gender gap index in Georgia, the worst situation is from the political empowerment point of view – as the index of Georgia indicates, in accordance with its component indicators, in Georgia women are not involved in political processes. The component indicators of political empowerment are: women in parliament, women on the positions of ministers, and woman`s, as the first person of the country, governance years. Besides this, the indexes of Georgia is lower than the average of the countries, involved in the report, which since 2006 year has been improving, at the same time, from the women`s political empowerment point of view, the indexes of Georgia is getting worse. According to 2006 year report, the point of Georgia consists of 0.104 and it reduces annually. In the report of 2011 year, the point

consists of 0.039 point, what means that considering the three component indicators, the men`s and women`s positions according to the political empowerment is distributed on the following way: 4% women and 96 % men. The average point of the world is also lower according to the criteria of political empowerment – it is less than 0.2 according to all report.

However, it should be noted that, the average index of the world is increased while in Georgia it`s reduced.

According to all report, women in parliament is lower than average index of the countries, involved in the report – point varies from 0.05 to 0.10, and the rating of Georgia – from 86 to 124. The number of women in parliament, according to 2006-2008 year reports of gender gap index consists of 9 %, according to 2009 year report – 10 %, and according to 2010-2011 years reports – 7%. From the indicators of criteria of political empowerment, women on the position of ministers, is higher than average index of the countries, involved in 2006-2009 years report, but it is lower according to 2010-2011 years. According to 2006 year report, the point of Georgia consists of 0.29 and according to 2011 year report – it`s reduced till 0.06. Accordingly, the rating of Georgia, – is moved to 118th place from 27th place, according to the same reports.

In percentage – this index is expressed on the following way – according to 2006 year report, 22 % of ministers` positions were held by women, what was reduced till 6 % according to 2011 year report.

According to gender equality indexes of UN Human development report and according to the gender gap index of world economic forum, in Georgia there is no Gender gap in accordance with the access to education, and health/life safety criteria, while in accordance with economic involvement and opportunities, the positions held by the men and women are significantly different. According to the indexes and ratings of human development report of UN (Gender empowerment measure, gender and gender development index, gender inequality index), Georgia is not included in the list of top 50 countries, according to any rating of UN. According to the above-mentioned indexes Georgia has average rate, it does not mean that We have a good result, because Indexes include such countries where gender balance is not protected. Women empowerment means more effective use of human capital, which reduces gender inequality and enhances productivity and economic growth.

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Problem Issues of Implementation of the Judicial Reform in Ukraine

Few people can dare to deny that judicial reform is the most important or, at least, one of the most important. Without an honest court there is no justice for the ordinary person, nor the protection of property rights for an investor, nor defense from arbitrariness of an official, or a monopolist. Without an honest court there is no sense of safety and security that is basic for a person.

It seems that it is the key to unlocking fundamental changes for the better in the country. The considerable attention to the questions of administrative legal proceedings was given by such scientists as N.Salishcheva, V. Sorokin, B.Lazarev, Y. Kozlov, Y. Starylov. New trends are reflected in the writings of V. Averyanov, A. Selivanov, V. Stefanyuk, Y.Pedko, I. Borodin, O.Kuzmenko, V.G. Perepelyuk, M.M. Tyshchenko and others. The adoption of the Law of Ukraine "On the Judiciary and Status of Judges" of June 2, 2016 is one of the key stages of the normative provision of the judicial reform, which opens the way for the creation of qualitatively new model of functioning of the judiciary in accordance with public expectations and European standards and satisfaction of the public request for a fair trial, which was one of the main requirements of the Revolution of Dignity [3].

The law improves the procedure of the qualification assessment of all judges, which was initiated in accordance with the Law of Ukraine "On ensuring the right to a fair trial". In particular, the assessment will be carried out according to the criteria of competence (professional, personal, social, etc.), professional ethics and integrity. Qualification assessment on the criterion of professional competence will be conducted taking into account the principles of individuality and specialization.

The law provides for the transition to a triangular judicial system and formation within six months after the entry into force of the new Supreme Court, which includes the Grand Chamber, the function of which is unification of judicial practice and the resolution of jurisdictional disputes, and four cassation courts, the function of which is to deal with the consideration of cases in a cassation procedure.

To solve these problems, as well as in response to the request for restructuring of the judicial branch of power, three basic laws were adopted within the framework of judicial reform:

1. On restoring trust in the judiciary in Ukraine;
2. On the purification of power;
3. On ensuring the right to a fair trial [4,5].

These laws on the judiciary have not yet been fully implemented and many of its aspects are still under discussion, but they helped to launch judicial reform in Ukraine.

Therefore, it is possible to determine that changes that have already occurred in a result of the adoption of these laws:

- the complete rearrangement of structure of qualification and disciplinary bodies, namely, the High Qualification Commission and the High Council of Justice was conducted;
- judges got the right to elect the heads of courts, which is crucial for the independence of the judiciary;
- certain steps were taken to punish judges who committed crimes or made illegal decisions regarding the activists of EuroMaydan;
- the process of recertification of judges has begun;
- it is possible to take video of court hearings without the need of the permission of the presiding judge;
- the list of disciplinary sanctions that could be applied to judges was expanded.

Although these laws have produced a number of positive changes, they are not enough for constant structural and effective progress in the issue of judicial reform.

The question is about the formation of the body of judges, namely the selection of judges to the qualification commission and the disciplinary commission of judges. The defined requirements provide the availability of legal education, any legal work experience, and passing the qualification exam. Here is also one more danger: who appoints and who dismisses. That people who appoint and dismiss are just independent judges. The most worrying is the question of how the body of judges is being formed over judges, that is, the qualification commission and the disciplinary commission. It all depends on them. And how much will the judge's behavior be free if it is appointed and dismissed by the president. The judge will always depend on a person who dismisses (and this is the president). It would be desirable for it to be a collegial body, and it would be better to work out a formula for forming it with the presence of public organizations. Post-revolutionary attempts at reforming the judicial system not only fail to meet the demands of civil society – it has also created challenges threatening to ruin the positive achievements described above. In practice, the mechanisms developed to select candidates for a judge and reappointment of judges proved to be ineffective. Laws adopted to combat corruption (for example, the Laws “On restoring trust in the judiciary” and “On ensuring the right to a fair trial”) provide for the review of general jurisdiction judges for alleged disciplinary offenses and their dismissal in the event of a violation of the oath. However, only a few judges were dismissed from the moment the law was adopted.

The process of recertification of all judges provided for by the law "On a fair trial" has a lack of public control, because citizens and public organizations have no access to the questionnaires of judges. Consequently, the chances are low and there is no guarantee that a citizen's complaint would have an impact on a specific decision on the reappointment of judges. In

addition, the only sanction which is provided for by the examination is merely the referral of the judge to retraining. Judges who are accustomed to working in a corrupt environment and having the benefits of it are not ready to adapt to other standards. The Ukrainian courts still have judges with a corrupt mentality. Therefore, the number of judges is being investigated by the National Anti-Corruption Bureau, it applies to cases where criminal decisions were made by the engaged judges.

That is, the problem is urgent and acute, because officials of the court, in the person of judges, who are accused of violating the Constitution, are simultaneously responsible for restoring justice in the country.

Summarizing, we should note that we expect a real reform of the courts, giving it true independence and clearing of corrupt personnel. The importance of this reform is that it is only be able to restore trust in the judicial system as an independent one, and only if it succeeds, we will be able to start the long process of overcoming legal nihilism not only among the elites but also among the main part of society.

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Enhancing Individual Engagement and Innovation

Variable business conditions also require flexibility in corporate strategy and behaviour oriented not only to react to the changes of the environment, but also to foresee them or actively create them. Purposeful use of corporate culture, influence and systematic building is one of the most effective means of business owners and managers to manage it successfully in order to achieve goals the targets.

Organizational culture as an important subsystem of an organization becomes a determinant of its effectiveness (Pružinský, 1999). Through the functions which it performs within the organization, it influences behaviour of people inside the organization, as well as it behaviour towards the environment. The performance of the organization is influenced by the power of organizational culture and its content. A strong culture has its advantages and disadvantages for the performance of the organization. The advantages of a strong organizational culture from an organizational perspective and its performance are mainly all in sharing common values and goals, reconciling workers' perceptions and thinking, and guiding people's behaviour. This greatly increases worker satisfaction by using common standards, and behaviour patterns significantly reduce their insecurity in the organization. The disadvantages of a strong organizational culture for an organization are the organization's past experience (the organization needs to feel the need for new strategies, the need for changes, otherwise it will adversely affect in its economic performance), preventing thinking in alternatives, resistance to changes. The advantage or disadvantage of a strong organizational culture stems primarily from its content. If organizational culture is strong and consistent with the strategy, and supports strategy implementation, it also supports organizational performance. If an organizational culture is strong but its content are in conflicts with a company strategy, it becomes an obstacle to implementing the strategy, which also has a negative impact on its performance. In such cases, the organization chooses the following:

1. Either changes the strategy to match the organizational culture, or
2. Changes the organizational culture to match the content of the strategy (Sedlák, 2007).

Although the first method is not very demanding, it is almost unreal due to the rapidly changing organizational conditions and in order to preserve its existence. This option comes into play if one could find an alternative strategy that would respect such culture of the organization at the required pace of growth. The second way to solve the problem in which the change of organizational culture is adapted to the content of the strategy is the most demanding way. This requires, in particular, a high level of commitment and persistence of management, in particular to coordinate the change of the

content of the culture with other changes in the organizational structure, systems and processes. We also need to accept corporate intentions, strategy, company mission, customer approach, and support for strategically appropriate patterns and standards of behaviour. In addition to changes to the management system, changes in the values, attitudes and behavioral standards are also necessary, ie changes in the so- mentally programmed (results of the ILOI Institute study). If the organization will "forgive" them, it may happens that although techniques to make changes were technically The first comprehensive concept of management understanding came into being in the later 19th century. They were a period of rapid development of industrial production. There were enough natural resources, but lack of qualified labour. There was a need for rational production management. Classical management began to form, which was understood by management as a separate science. Its development has affected its 3 currents:

- Scientific management
- Bureaucratic management
- Administrative management (www.euroekonom.sk)

Scientific Management - Its representatives have sought to increase the efficiency of work using scientific methods. The main representatives are Frederic W. Taylor, Henry L. Gantt, Harrington Emerson, Gilberth's husband, Henry Ford (so-called Fordism), Tomas Bata (so-called "Batizmus"), and Toyota in Tokyo. A common indicator of the representatives of the scientific management was the effort to rationalize work, to work on certain forms of standardization, planning and organizing joint work. The use of scientific management also has negative aspects, such as excessive emphasis on specialization, which has led to workers' rejection, monotony and poor quality (www.euroekonom.sk)

FREDERIC W. TAYLOR (1856 - 1912)

He is considered to be the founder of scientific management; he has a very good control over the technical aspect of industrial production. He advocated the idea of replacing subjective, individual estimates in work organization by scientifically based procedures. Management has the job of creating the right job opportunities and the right wage system which increase productivity. Managers should be guided by four principles:

- Scientifically study each task and to create the best method for its execution, i.e. to create a real science of management,
- Carefully select workers and instruct them to use these methods, i.e. scientifically select workers,
- To educate and control workers, i.e. to scientifically prepare and improve workers,
- To separate work from responsibility; management is responsible for planning, using scientific principles; the labourer is responsible for carrying

out the work, i.e. the closest cooperation between management and workers (www.euroekonom.sk).

He addressed the issue of increasing efficiency, not only by reducing costs, but also increasing profit, but also by increasing wages as motivation to increase labour productivity. He measured the performance of the best worker and thus created the daily performance standards of the worker - he called it time studios. He formulated the following principles:

- Allocation of high daily performance - Every worker has had to meet a well-defined and difficult daytime job,
- Normalization of conditions - every worker was given the job for the whole day and had to have all the conditions and utilities,
- High reward for successful work,
- Penalty for unfulfilled performance (www.euroekonom.sk).

The gist summarizes the following: accuracy instead of steady habits, harmony instead of contradictions, cooperation instead of individual practices, maximum productivity instead of minimal, instilling each worker to maximum performance and ensuring proper pay. He separated training, planning, and concentrating management in the planning department. He separated the worker from the mental work and left him only physical work. He emphasized the planning and control required by specialized management. He attributed a great role to the quality of senior staff. He recommended choosing such leaders to maximize the number of these character traits, qualities: intelligence, education, special and professional skills, skill and strength, tenacity, solidity, honesty, sound judgment and good health. Taylor's scientific management can be summed up briefly into the following causal dependence: The simpler the operation can be assigned to a single worker, the higher degree of specialization and the more precisely the workflow can be defined, the learning time is the shorter, the fewer the non-productions originates, and it means high performance. This assumption, however, has not been confirmed by Taylor - strict specialization leads to monotonous work, and it becomes a reason for dissatisfaction and a reduction in work performance. (Www.euroekonom.sk)

HENRY L. GANTT (1861-1919)

He was Taylor's colleague in the steel company. Its contribution lies in the development of methods and procedures of daily planning of work operations. These methods and approaches are followed by remuneration and premiums for exceeding planned performance. Rewarded was not only the worker for the over-standard job, but also his leader. He wanted to force leaders to devote more attention to the workers and to encourage them to perform better. He is the author of the well-known "Gantt Chart", which shows the relationship between the production process.

HARRINGTON EMERSON (1853 - 1931)

He relied by his recommendations on how to eliminate losses in production and increase efficiency. He introduced 12 principles of work efficiency:

- Clearly define the objectives of the managed activities,
- Use common sense and critically evaluate decision situations,
- Use the consultants and the experience of others,
- Ensure work discipline and morality,
- Ensure fair remuneration, appropriate working conditions,
- Have a reliable registry of the costs and results of the work,
- Properly select, place, plan and organize workers' activities,
- Create the right conditions for work,
- Motivate every worker,
- Standardize the performance of work operations

(www.euroekonom.sk)

FRANK B. GILBRETH (1868-1924)

He was involved in consultations in the area of the rationalization of work. He tried to increase the performance of the worker. Its basic goals included the introduction of the only best way for every job that meant working with the smallest number of movements, excluding of the fatigue, maximum acceleration and simplification. He called this his theory a "motion study". His goal was to reduce the number of work movements required to a minimum and thus achieve maximum performance.

HENRY FORD

He used standardization and mass production. He divided the work operations into the simplest tasks that an unskilled worker could do. Its principles in the automotive industry are:

- Workers and parts must be aligned as required by technology, and each component in production must perform the shortest way possible,
- Use conveyors for moving the workpieces,
- Conveyor determines the pace of work.

Ford used intra production transportation to influence the work of the workers, to use space in the factory and the time needed to supply the material to produce the final product. This ensures the continuity of production and continuity of operations.

Its basic knowledge can be formulated into 3 principles:

- Mass production,
- Technical standardization (unification of dimensions and shapes),
- Belt production (www.euroekonom.sk).

MAX WEBER (1864-1920)

Defined 3 types of organizations:

- Traditional - created by repeating, by inheritance,
- Leadership - created by the power of personality,
- Bureaucratic - created by a special division of power.

The most detailed was the **bureaucratic** organization. It is a system based on firm standards, rules and obligations. Only such organization guarantees an efficient organizational structure and is the most powerful management tool. There are clearly defined duties and entitlements associated with a particular function in the organizational structure. Large organizations will work more rationally if specialized tasks, rules and regulations are precisely defined and uniformly accepted so that workers know what is expected of them. Based on this, he formulated 6 principles of bureaucratic organization:

- Division of labour based on specialization with a strict definition of the duties of each article of the organization,
- Precisely defined hierarchy of rights and obligations where a worker is not only responsible for his / her work results but also for the results of his / her subordinates,
- Organization's activity follows the set of rules and its functioning is based on this system,
- Leaders manage their subordinates by objective rules, impersonally against all persons; leniency and personal attitude is not allowed,
- It is necessary to respect the rules of compliance of the qualifications of people and the demands of the places they represent; workers must have a secure job at work according to their success or years of service; they must be loyal to the organization,
- Creating the conditions of the order, the stability of functioning (www.euroekonom.sk).

Administrative management - as a third direction in classical management, it was based on managers who are supposed to manage the organization from within. The main representatives were Henry Fayol and Chester Barnard.

HENRY FAYOL (1841 - 1925)

He studied the organization and its non-productive parts. It recommends division of labour horizontal (by type of activities) as well as vertical (according to the degrees of management). Management of the organization he understood as the overall alignment of 6 basic types of activities at the same horizontal level:

- Technical activity (production),
- Business (purchase, sale, exchange of goods),

- Financial activity (acquisition and recovery of capital),
- Protection (property insurance and protection of persons),
- Accounting (accounting, statistics),
- Management (planning, organization, commissioning, coordination, control – i.e. management functions) (www.euroekonom.sk).

It focuses mainly on managers activities, unlike Taylor's attention to the work of labourers. The main place of Fayol's theory is in the development of 5 management functions and 14 principles of successful management.

5 management functions (administrations):

- Planning - to set future targets and achieving them,
- Organization - to secure of human and material resources,
- Commanding - to assign tasks to subordinates,
- Coordination - reconciliation of workers' activities,
- Control - verification of compliance between plan and reality, adoption of conclusions.

He considered planning as the main function of management. The Planning Tool is a program of activities that is based on:

- on company resources (raw materials, capital, employees, sales opportunities, etc.)
- the nature and significance of the activities carried out by the organization,
- future options (depending on technical, business, financial conditions, but they are subject to changes and therefore cannot be precisely determined).

14 Principles of Successful Management Activity (emphasized especially the first 4):

- To ensure the division of labour,
- To balance the powers and responsibilities of executives,
- Ensure discipline,
- To use the principle of one manager, each employee receives orders from one manager,
- To ensure consistency of management, each goal should have one plan,
- Ensure that the individual interests of employees are subject to the common interests of the organization,
- To fairly reward,
- To observe the principles of centralization, coherent management and control,
- The unambiguous hierarchical line of superiors and subordinates,
- To maintain order,
- The proper conduct of the leaders against the subordinates,
- To maintain the stability of the staff in their functions,
- To increase the staffing initiative to improve the work organization,
- promote joint work and cooperation in groups.

A major role is attributed to the training of workers. This role is shared between 4 institutions - school, workshop, family and state (Mihalčová, 2006)

CHERSTER. BARNARD (1887 - 1961)

He saw the organization as a unified system that consciously combined activities. In order for an enterprise to function, it needs three basic components: communication, ability to serve, and basic goals. His main contribution is the theory of authority. The authority does not depend on the person, who issues the orders, but on those who receive the orders and on their willingness to do so. Employees are willing to accept commands when they understand, see the goals of the organization, feel that their activities are in line with their needs, and are able to fulfil orders physically and mentally. He dealt mainly with the following areas:

(a) Types of organization and for them the characteristic modes of internal coordination,

b) Questions of motivation, where he distinguishing between 4 types of incentives (material, intangible, improving working conditions, mental),

c) An analysis of the effectiveness of the formal and informal management organization,

d) Authority in the organization and its communication (www.managementmania.com).

What are actually innovative tools of motivation? Let's first discuss the verbal connection. Innovation as such brings the change, a new beginning, something else or unconventional. In principle, however, we call innovation something new that has not been here yet.

In our understanding of innovative motivation tools, we look at tools from different point of view. In principle, the basis for motivation is a standard and innovation is its modern superstructure. As an example, the classical financial motivation of years used by the company is changed and the motivation is suddenly complemented by something else - non-financial. Other, we can call it an innovative tool of motivation.

For example: a company with several years of tradition in the market for cleaning services employs mainly basic cleaning workers. Employees working in this company have been motivated by a financial bonus for their quality services, and have become accustomed to this. Now, the company is adding an innovative tool, so that those who spend the least amount of cleanliness will receive cultural vouchers for the whole family. In this example, we can see that such a simple, now widely used motivation for innovation is available for the worker (www.euroekonom.sk).

As opposed to this, a large company, an organization that offers cultural programs or vouchers on a standard basis as part of a program of comfort and care for its employees. It is this organization that uses entirely different innovative tools of motivation. For example, a banking company typically offers employees benefits, but the manager decides to compete to make the

workflow more efficient. Who makes process more efficient and quicker will obtain a holiday voucher. From the two above examples, it turns out that what is an innovative tool of motivation in one corporate culture may not apply in another. At the same time, however, we also distinguish motivations based on results-oriented or process orientations. Perhaps the easiest way to judge this phenomenon is to use the more and more applied Kaizen method. The term Kaizen explains Masaaki as "the most important concept of Japanese management - the key to Japanese economic success and competitiveness. Kaizen means improvement." (Springer, 1999).

Why Kaizen? For a longer period of time, we see how the elements of this strategy are becoming more and more familiar with the approach and strategies of society around the world. At the same time, Kaizen provides an innovator insight into motivation itself. Innovator insight in motivations targeted through the process and not targeted just to the result. It also makes more rational motivators as we were accustomed in our latitudes.

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Research by the Gallup Institute shows that 29% of workers are genuinely committed to work. Professor Gerard Seits and his colleague Dan Crim of the Reichard Ivey School of Business bring several hints in ten working groups on how senior managers work to achieve high employee engagement.

What is engagement and what is it?

The worker performs his work with full passion. Stakeholders are a significant source of competitive advantage.

How to achieve engagement?

According to Seitsa and Crima, they called it the initial letters of their tenth "Ten C".

Join: Leaders must show that they have the value of employees. Engagement is a direct reflection of how employees feel their relationship to their superiors.

2. Promoting career growth: Leaders should offer meaningful and interesting work that contributes to the growth of their careers.

Clarity: leaders must communicate with a clear vision. Success in life and in organizations is largely determined by setting clear goals, why they are important, and how to achieve them.

4th report: Leaders must tell staff what they expect from them and provide feedback on how they work.

Congratulations: Good managers use every opportunity to recognize and recognize good work.

Contribute to the sense of sense: people need to know that they make a significant contribution to the success of the organization. Good managers help them to see and feel how they contribute to the organizational outcomes of the organization's future.

Delegate control: Employees appreciate whether they are involved in the content and organization of their work. Leaders should create opportunities to enable them. Participating in decision-making often reduces stress, creates the necessary confidence and culture, where people feel co-ownership of problems and their solutions.

Collaboration: research shows that when employees work in a team and have the confidence and support of other team members, their joint performances are greater than the sum of individual performances.

Creating credibility: Leaders should insist on the company's high ethical standing.

Creating trust: good managers help build mutual trust. They themselves should be a personal example of high ethical and performance standards.

This is the leadership of the people listed at ten points.

Employees have a competitive advantage. Engaged workers are mainly managers, not managers (www.managementmania.com).

Legal Regulation of Forecasting In the Scientific Area

At any stage of development of a national economy, such domain as science makes a sizable contribution to its priming. That is exactly why science is a priority sphere of development of our state, which is reflected in passage of important regulatory legal acts governing scientific activities, implementation of programs for development of scientific activities in Ukraine and the like. Effectiveness of laws and regulatory legal acts largely depends not only on perfection of the mechanism for their translation into life but also on how properly their influence on social relations is forecast, what tasks are taken as a basis for a specific legal provision of a regulatory legal act. Thereby, in the course of developing a regulatory and legal framework governing scientific activities it is necessary to perform detailed forecasting of behavioral growth of scientific entities, identify possibilities of using in science appropriate means to achieve the goals set for science, employ individual methods of studying phenomena in social life that affect the development of scientific activities in the state. Attainment of a high level of using forecasting in scientific activities represents a necessary step towards effective and principle-free development of scientific work in the state able to prevent the weightiest problems in this area, anticipate specific events in the development of science and scientific activities and choose the best methods and means to achieve the target goal.

The essential features of forecasting in the scientific are as follows: 1) this is a certain process characterized by a sequence of action and purposefulness; 2) this is certain mental, analytical work of a separate group of people who, based on assessment and analysis of information using relevant methods of scientific research into phenomena in society, logical techniques, regularities and trends, select the best option; 3) this process is aimed at analyzing and assessing relevant phenomena in the scientific area, which somehow or other influence further development of the entire scientific area; 4) forecasting is advisory rather than mandatory when developing and passing regulatory legal acts in the scientific area; 5) this process is applied to phenomena able both to arise and not arise in the future, but they are considered as necessary elements for analysis of scientific activities in the state; 6) the forecasting process is intended for a certain time period, both short-term and long-term; 7) forecasting is meant to obtain a certain result – positive and negative. In case of a positive result, it is essential that bodies or entities thereunto duly authorized enshrine an appropriate mechanism in a relevant regulatory legal act or in a certain action program. Obtaining a negative result from forecasting of scientific activities based on certain data, intelligence, statistical information and the like induces forecasting entities to look for other ways to improve scientific activities in the

state, revise established traditions of science development in Ukraine; 8) forecasting results are usually taken into consideration when preparing and adopting regulatory legal acts, action programs, work plans in the scientific area of Ukraine, preparing draft laws intended to improve the regulatory and legal framework governing the activities of the scientific area in Ukraine.

Examining forecasting in the scientific note that this is a fairly hard and lengthy mental process of man aimed at obtaining a certain result. In legal literature, scholars approach defining the purpose and significance of forecasting in rather different ways. Thus, for example, V.P. Mezhevoy, studying the forecasting process in intelligence gathering, notes that forecasting is also used to develop an adequate action program and make managerial decisions ensuring achievement of best results when performing assigned tasks [1, p. 128]. We agree with such an idea, since really forecasting involves not only defining the state of a certain phenomenon in social life, describing its strengths and weaknesses but also providing specific recommendations as to the possibility of making certain managerial decisions, including those in the scientific area. We believe that this is because forecasting provides for the real state of a social phenomenon based on the regularities of its current and possible development in society, matches the goals the state sets itself to the means it has.

Other scholars additionally put an emphasis on the particular importance of forecasting. Thus, according to V.H. Demyanyshyn, due to forecasting such key tasks are handled as analysis and assessment of processes and trends, identification of overriding problems of development; determination of the nature of development of these processes and trends in future and anticipation of new situations and problems; identification of possible development alternatives; substantiation of the optimal development option in order to make a rational decision. Development of forecasts is necessary in cases when it is virtually impossible to arrive at a specific decision at a given stage of management, since it depends on many objective and subjective factors [2, p. 393]. The scientific area is pretty wide and embraces a significant range of diverse social relations that concern both issues of scientific development proper and training of personnel for implementation of scientific activities, definition of the conceptual foundations for development of individual branches of scientific work, improvement of the regulatory and legal framework and so on. Therefore, we entertain V.H. Demyanyshyn's view that exactly due to through forecasting it is possible to achieve a certain order in the relations governing the scientific area, in that forecasting provides an opportunity not only to touch upon challenging issues but also give recommendations for their resolution at the lowest cost and with the least effort needed to overcome them. H.M. Dobrov also advances a similar opinion and notes using the example of technology development that when forecasting the development of individual specific technology areas it is necessary to have data on such types of documents as

process specifications, engineering level charts, operation documents, many-sided equipment characteristics etc. However, the principle of “minimum information with its maximum beneficial use” should be maintained. To select the most effective forecasting material, it is necessary to assess the significance of a technological achievement in the past, at the time of its emergence, and the dynamics of development in one direction or another [3, p. 129]. Indeed, such a combination of objective and subjective factors is one of the essential prerequisites for effective forecasting the impact of legal regulation on the development of scientific activities in Ukraine.

Nevertheless, unfortunately, it is not always possible to achieve the above conditions in the current realities of life, since quite often the individual performing forecasting lacks both financial and appropriate logistical capacities to obtain the data, which he/she can use in analyzing and assessing an appropriate legal impact in the scientific area and therefore in obtaining an accurate forecast close to the real indicators of the scientific area development. Today there is a tendency to reduce the amount of expenses for science and technology, consequently work relating to development of strategic forecasts and research development plans also becomes accordingly less extensive, which indisputably impairs the effectiveness of administrative-legal regulation in this area. Forecasting in scientific activities is associated with science funding in the state, selection of relevant personnel to complete strategic tasks in the domain of science, and availability of required scientific and methodological support for scientific and empirical research.

In conclusion, note that forecasting in legal regulation in Ukraine is a fairly complex and necessary phenomenon in ensuring sustainable social development of the state, which is important for any area. The scientific area is no exception featuring a totality of diverse social relations, continuous improvement of national legislation governing scientific activities, active development of scientific and technological advance and introduction of scientific knowledge and scientific research into practical activities of man, activities of enterprises, institutions and organizations. Forecasting of individual focus areas of scientific programs is an important step towards their effective implementation and achievement of the most expected result due to their adoption. Owing to forecasting, it is possible to anticipate all possible consequences that can arise in case of adoption of an appropriate management act or implementation of a given scientific development program, therefore, it is important to legislatively support the forecasting process committing relevant financial, personnel and staff and material and technical resources for that end.

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The Descent from the Father under the Islamic Law

The Islamic (Muslim) law is only a part of the legal system of the Muslim countries. The legal regulations there are established not only by the legislation, but also by the legal customs.

The Islamic law is part of the Islamic religion. “It is focused not on the individual, but on the family, which is different to the western family since it is associated only with the figure of the father“. This law is applied differently not only in the different countries of Islam, but even in one and the same country it is applied in different ways. That is because „theoretically there is not only one Islam existing, just like there is not only one Christianity“. Besides, the possibilities envisaged in theory are applied “actually in different ways (often restrictively)“. There is another issue about Islam that also needs to be taken into account: in order to carry out a research on certain issues of the Islamic law it is necessary to have available specific accessible data about the laws and their application, and the access to such data is not easy at all.

One of the most important aspects in contemporary Islamic law is the regulation of the personal status and family relations. Kinship, moreover kinship by blood, is of primary importance. The biological (genetic) descent is at the basis of kinship, nevertheless social relationship has not lost its role either. Establishing the descent from the mother is in any case easier than establishing the descent from the father.

There are three methods of establishing paternity under the Islamic law : if the child was born in marriage – with the presumption for paternity of mother’s husband; with the acknowledgement (or confirmation) of paternity; with the presence of undisputable evidence that a certain person is the father of a child.

The presumption for paternity is applied in the cases when the child was born during the marriage, as well as within certain periods of time after the termination of the marriage, the death of the husband or the nullifying of the marriage (declaring the marriage null and void). In view of that, the Islamic legislation assigns a special importance on the issue of the maximum and minimum period of pregnancy.¹

As a rule, the minimum period is six months, and the maximum – one year. In that case, paternity is acknowledged automatically, by force of the law. By exception and while observing certain conditions, that period may be longer than one year (according to the Civil Code of the Republic of Afghanistan), but then paternity is established only if it is acknowledged by the heirs of the man, who died after having been divorced with his wife, and there was a longer period passed as of the time of the divorce, including – up

¹ See Tsmaj, V. V. Cited works, p. 223-224.

to two, or even up to four years, or without any time limit at all. Determining in this case is not period itself, but the initial moment of time when that period starts running. Under the Sunni doctrine, that period should be calculated as of the time of concluding the matrimonial contract, while, under the Shia doctrine (adopted in Jordan) – as of the time of starting of the matrimonial relations in the marriage. There is a mixed type applied in some countries: the period starts running as of the date of signing the matrimonial contract, and as of the time when the fulfillment of the matrimonial duties becomes possible, i.e., when it could actually start (in Syria, Morocco and Iran).²

The father may disavow paternity. There are two methods for that.³

Under the first method, the husband may disavow if he was present at the birth of the child or after he learned about the childbirth, in case he had not attended it.

With the second method, the husband pronounces a curse in the presence of a judge, who immediately separates the spouses.

In any case, the disavowal is to be done before the court.

The consequence issuing from the disavowal of paternity by the father is the deprivation of the child of child support and inheritance.

Furthermore, paternity is not acknowledged if the issue is decided without any hearing by the court, when the wife has not entered into matrimonial relations with her husband since the time of concluding the marriage, if the child was born later than one year since the absence of the husband, or since his death, or since the divorce with him.

In the cases, when there is some unlawfulness in the matrimonial contract, paternity is established; however the minimum and maximum periods are respectively six and nine months.

When there are any disputes arising, whatsoever, concerning paternity, it is sufficient to have evidence about the descent from the father: the witness testimony of the midwife or the doctor (according to the Hanafi madhab); the testimony of two witnesses (according to the Maliki madhab); the testimony of four witnesses – men and women (under the Shafi'i madhab).

When the father acknowledges his child himself, it is necessary to observe the following conditions: the child should not be a child of another man; the child should be of such age that the father could actually be the real father of the child; the father should prove that the child was legitimate and was born in wedlock; when the child is at the age when he or she can bear liability for his or her actions, that child's consent will be necessary for the acknowledgement of paternity (with the exception of the countries adhering to the Shia madhad, where such a consent is not necessary).

² See Tsmaj, V. V. Cited works, p. 225.

³ See Tsmaj, V. V. Cited works, p. 225.

The establishing of the descent from the father is related to child support, upbringing and custody of the child, moreover, as of the time of the birth of the child, or even as of the time of establishing the pregnancy of the mother.⁴

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⁴ See Tsmaj, V. V. Cited works, p. 226.

PART IV

**TECHNICAL SCIENCES,
PHYSICS AND BIOLOGY
SCIENCES**

*Innovations in Science: the Challenges of
Our Time*

**Accent Graphics Communications & Publishing
2018**

Characterising the Phytochemical, Antioxidant and Inhibition Properties of The Apricot Pomace Extract (*Prunus armeniaca* L.)

Many plant-based bioactive compounds have gained research interest due to their numerous benefits in various fields such as the pharmaceutical, textile, and chemical industries. Residual disposal from agricultural and forestry materials is often a problem in industries. By-products of plant food processing represent a major disposal problem for the industry concerned, but they are also promising sources of compounds which may be used because of their favourable technological or nutritional properties. Many chemically active substances are found in plant raw materials [1-6]. Many studies have been carried out on some plants which resulted in development of natural "green" products. However, scientific information on component composition of various plants, particularly those that are less widely used in medicine or food, industry is still scarce. So, it is an interesting and useful task to find new sources for highlighting naturally active compounds and to obtain various products [3-7]. One of the types of plant raw materials of industrial importance, is the waste of processing fruit and berry crops. The use of agricultural and food by-products is an economical solution for chemical industry. However, large amounts of fruit waste are discarded yearly at processing plants. This not only wastes a potentially valuable resource but also aggravates an already serious disposal problem.

As one of these sources, we can use products of apricot processing – pomaces. Apricot fruits (*Prunus armeniaca* L.) are valued and highly consumed fruits all over the world, both for their flavour and for nutritional qualities. Ukraine is one of the major apricot producers in the world with the approximate annual yield of 160 000 tonnes/year fresh fruit, seed and kernel, respectively. About 20% of the harvest is waste from processing of this raw material. The successful utilization of this natural waste may also provide an option for resource recovery. The efforts to pinpoint the active ingredient present in plant extract that may potentiate the inhibitive effect are rare though. The pomace of apricot can be used as corrosion inhibitors that formed self-assembled monolayers (SAM). Over the recent years, the use of naturally occurring substances of plant origin, otherwise tagged as «green corrosion inhibitors» has received much more attention because they are incredible sources of natural organic compounds, which are environmentally acceptable, inexpensive, readily available and renewable sources of materials. Thus, evaluation the corrosion inhibition effect of apricot pomace extract (APE) as green vapour phase corrosion inhibitor of mild steel and also investigation the constituents that provide its inhibitive action is a topical issue.

According to the obtained chromatographic-mass spectral analysis data, the composition of propan-2-olextract of dry pomace of apricot contains 38 individual components present in an amount of more than 0.54%. The composition of volatile substances of the extract was studied by means of

method of chromatography-and-mass spectrometry methods, using a FINIGAN FOCUS gas chromatograph. About 10 μ l of the apricot pomace extract sonicated with n-hexane were analyzed by GC-MS using Shimadzu Model GC-17A equipped with flame ionization detection (FID) and a CBP-5 capillary fused silica column (25 m, 0.25 mm i.d., 0.22 μ m film thickness). The oven temperature was held at 50°C for 2 min then programmed at 10°C/min to 250°C, held for 20 min. Other operating conditions were following: carrier gas, He (99.99%), inlet pressure 76 kPa, with a linear velocity of 20 cm/s; injector temperature, 250°C; detector temperature, 310°C; split ratio, 1:25. The components were identified by comparing the peak retention times in the chromatogram and the complete mass-spectra of individual components with the corresponding results for pure compounds in the NIST-5 Mass Spectral Library.

In the GC-MS analysis, 39 phytochemical compounds were identified in the apricot pomace extract (Table 1). The main components are aldehydes: hexanal (1.32%), (E)-2-hexanal (3.10%), (Z)-2-heptenal (3.65%), heptanal (2.18%), 2-phenylacetaldehyde (1.29%), β -cyclocitral (5.17%), (E,E)-2,4-decadienal (3.65%), also ketones: 2-hexanone (1.03%), 3-hexanone (0.54%). The class of alcohols is presented by (Z)-3-hexenol (0.76%), (E)-2-hexenol (1.87%), hexanol (5.67%). In a minor amount, the extract contains esters, such as (E)-2-hexenyl acetate (2.78%), (Z)-3-hexenyl butanoate (1.51 %), hexyl hexanoate (2.12 %).

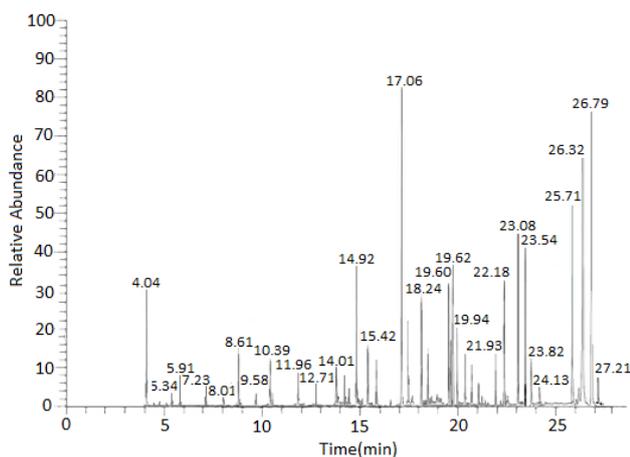


Figure 1. GC/MS spectral chromatogram of apricot pomace extract (APE)

Also, the kernel of the fruit contains many acids, this class is represented by octadecanoic acid (6.02%), (9Z,12Z)-octadeca-9,12-dienoic acid (4.2%), hexadecanoic acid (5.4%), (9Z)-Octadec-9-enoic acid (6.1%), (9Z,12Z,15Z)-9,12,15-Octadecatrienoic acid (0.63%). The extract of apricot pomace contains an increased content of terpene alcohols: linalool (3.06%), α -terpineol (5.98%), nerol (3.02%), geraniol (8.54%), isoborneol (1.03%), nerolidol (8.54%), farnesol (1.38%) and others.

Table 1. Component composition of volatile substances of extracts squeezes of apricot

Retention time, min	Name of the compound	Molecular weight, g/mole	Weight ratio, %
4.04	hexanol	102	5.67
5.34	(Z)-3-hexenol	100	0.76
5.91	(E)-2-hexenol	100	1.87
7.23	2-hexanone	100	1.03
8.01	3-hexanone	100	0.54
8.61	(Z)-2-heptenal	112	3.65
9.58	hexanal	100	1.32
10.06	benzaldehyde	106	1.94
10.39	(E)-2-hexanal	98	3.10
11.96	heptanal	114	2.18
12.71	2-phenylacetaldehyde	120	1.29
14.01	(E)-2-hexenyl acetate	142	2.78
14.37	5-butyloxolan-2-one (γ -octalactone)	142	2.03
14.43	endo-1,7,7-Trimethyl- bicyclo[2.2.1]heptan-2-ol (isoborneol)	154	1.03
14.92	2,6,6-trimethylcyclohexene-1-carbaldehyde	152	5.17
15.42	(2E,4E)-deca-2,4-dienal	152	3.65
15.86	(Z)-3,7-dimethyl-2,6-octadien-1-ol	154	3.02
16.74	(9Z,12Z,15Z)-9,12,15-Octadecatrienoic acid	278	0.63
17.06	(2E)-3,7-Dimethyl-2,6-octadien-1-ol	154	8.54
17.29	(9Z,12Z)-octadeca-9,12-dienoic acid	280	4.20
18.24	hexadecanoicacid	256	5.40
18.32	3,7-dimethylocta-1,6-dien-3-ol	154	3.06
18.94	1-tetradecanoic acid	228	-
19.60	octadecanoic acid (stearic acid)	284	6.02
19.62	(9Z)-octadec-9-enoic acid	182	6.10
19.94	5-hexyloxolan-2-one (γ -decalactone)	170	3.65
20.67	(7aR)-5,6,7,7a-Tetrahydro-4,4,7a-trimethyl-2(4H)-benzofuranone	180	2.05
20.91	5-Pentyl-5-pentanolide (δ -decalactone)	170	2.87
21.09	(Z)-3-hexenyl butanoate	170	1.51
21.23	(9Z)-hexadec-9-enoic acid	254	-
21.93	hexyl hexanoate	200	2.12
22.18	(1R,2S,6S,7S,8S)-8-isopropyl-1,3-dimethyltricyclo[4.4.0.0]dec-3-ene (α -copaene)	204	4.02
23.08	3-Cyclohexen-1-ol, 4-methyl-1-(1-methylethyl) (4-terpineol)	154	4.98
23.54	2-(4-Methylcyclohex-3-en-1-yl)propan-2-ol (α -terpineol)	154	5.98
23.82	(3E)-4-(2,6,6-Trimethylcyclohex-1-en-1-yl)but-3-en-2-one	192	1.97
24.13	4-(2,6,6-Trimethylcyclohexa-1,3-dienyl)butan-2-one	194	0.98
25.71	3,7-Dimethyl-2,6-octadien-1-yl acetate	170	6.10
26.32	Dihydro-5-octyl-2(3H)-furanone	198	7.65
26.79	3,7,11-Trimethyl-1,6,10-dodecatrien-3-ol	222	8.54
27.21	(2E,6E)-3,7,11-trimethyldodeca-2,6,10-trien-1-ol	222	1.38

These compounds represented over 18% of the total volatiles in apricot pomace. The results of the quantitative ratio show that, among the identified aldehydes, the major compounds are (Z)-2-heptenal, 2-Phenylacetaldehyde, hexanol, (E)-2-hexanal, β -cyclocitral, nerol. All individual chemical

compounds are known as inhibitors for several metals. Thus, in the system studied, the adsorption of these compounds on the surface of the metal is assumed to be mostly responsible for the inhibition of the corrosion reaction. However, the mutual effects of the phytochemicals components of the plants may contribute to its inhibition properties.

The antioxidant activity of the extracts was analyzed in several methods, because evaluation of antioxidant properties of plants cannot be carried out accurately by single universal method. The total antioxidant activity was measured by phosphomolybdate method. The phosphomolybdenum assay indicates the TAC of a sample analyte by the conversion of Mo (VI) to Mo (V), where the maximum absorbance of the green phosphomolybdenum complex can be measured at 695 nm.

Table 2. Summary of various antioxidant capacities

Total antioxidant activity	Reducing power				
	Concentration, mg/ml				
107,72±4,2	0.5	1.0	1.5	2.0	2.5
		0,10±0,04	0,21±0,07	0,36±0,04	1,42±0,11

This assay is simple and inadequate of other antioxidant measurement employed. Also, it is a quantitative one, since the antioxidant activity is expressed as the number of equivalent of ascorbic acid (mg/g plant extract). The total antioxidant content was found to be 107,72±4,2 in 2-propanol apricot pomace extract. The antioxidant activity of APE was evaluated by measuring the ability of reducers (phenolic compounds) to convert a Fe³⁺/ferricyanide complex to ferrous form by measuring the color change from yellow to 'Perl Prussianblue' at 700 nm. Compounds with a reducing power show that they are electron donors that have the ability to reduce oxidized intermediates of the processes of lipid peroxidation, they can act as primary and secondary antioxidants. It was found that the reducing powers of extracts also increased with the increase of their concentrations (Table 2). Results were expressed as a mean ± standard deviation (SD) of 3 replicate measurements, with ascorbic acid as a reference reducing agent. The above studies, during which the antioxidant activity of the extracts of the apricot pomace was established, make it possible to recommend this plant as a means for correcting the functional state of the free radical oxidation system.

Inhibitor effectiveness of the apricot pomace extract as a vapor phase inhibitor of atmospheric corrosion of steel was evaluated with the method of accelerated tests under condition of condensation of moisture [1-8]. Fig. 2 represents inhibition efficiency (IE,%) values obtained from the weight loss in conditions of periodic condensation of moisture after period of film-forming in the presence of different concentrations of apricot pomace extract. Clearly, inhibition efficiency increases with an increase of the inhibitor concentration,

i.e. the corrosion inhibition enhances with the inhibitor concentration (Fig. 2). The increase of the inhibition efficiency in the presence of the SAM shows more APE molecules were adsorbed on the steel surface at the higher concentration of APE. At 80 mg l^{-1} , the maximum IE is 92.60% for apricot pomace extract, which indicates that all compounds act as moderate corrosion inhibitors for steel. SEM images of the surface after accelerated trials are shown in Fig. 2. As shown in Fig. 2, the steel sample appeared to be smooth and without any visible traces of corrosion products, due to the formation of a protective inhibitor layer on the metallic surface, which retarded the dissolution process.

In analyzing the influence of VIAC films on the rate of the partial electrode processes of anodic oxidation of c steel and cathodic reduction of the molecular atmospheric oxygen in a $0.5 \text{ M Na}_2\text{SO}_4$ solution with and without protective films, it was discovered that, independently of the fact whether the VIAC films are present or absent on the steel surface, the rate of the cathodic processes is much higher than the rate of anodic processes (Fig. 3).

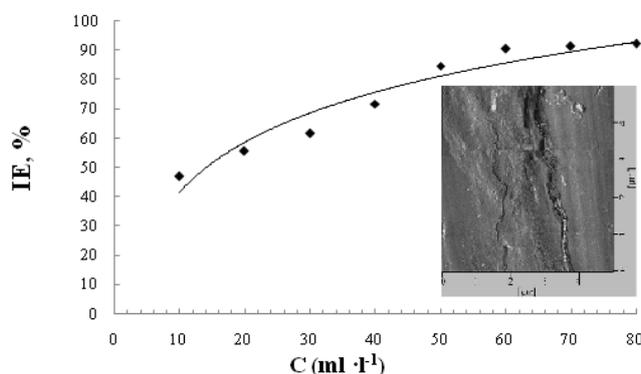


Figure 2. Relationship between inhibition efficiency and concentration of inhibitor in the conditions of periodic condensation of moisture for 21 days (weight loss method, pre-treatment immersion time 48 h).

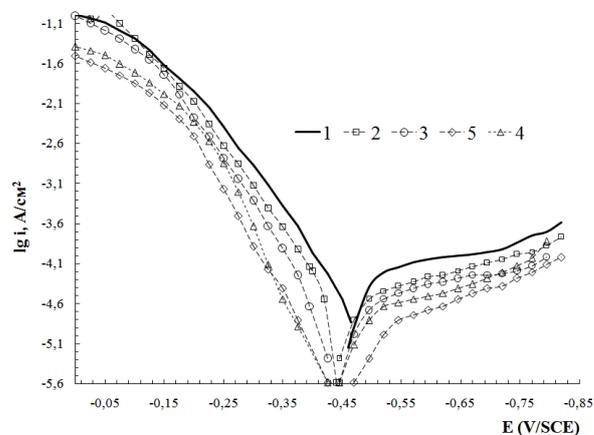


Figure 3. Potentiodynamic polarization curves of mild steel in $0.5 \text{ M Na}_2\text{SO}_4$ without (1) and with film formed after 12 (2) 24 (2); 48 (4) and 72 (5) h in the vapor phase of the extract apricot pomace.

These dependences of the current density on the electrode potentials indicate the presence of fairly complicated multistage processes under the conditions of cathodic and anodic polarization of steel. Both the cathodic slopes and the anodic slopes do not change obviously, which indicates that the mechanism of the corrosion reaction does not change and the corrosion reaction is inhibited by a simple adsorption mode.

Quantum theoretical calculations have been used by many researchers to establish the adsorption process and mechanistic information on corrosion and inhibition process [8-10]. Therefore, it is expedient to study theoretically adsorption ability of a main substance, both physical and chemical, using

quantum chemical calculations. The results of quantum-chemical calculations of the energy parameters of molecules are presented in Tables 2. The HOMO energy (E_{HOMO}) is often associated with the electron donating ability of the molecule, whereas the E_{LUMO} indicates the ability of the molecule to accept electron [9-10]. Therefore, high values of the E_{HOMO} indicate an increased tendency of the inhibitor to donate electron to the vacant d orbital of Fe in mild steel. Namely the HOMO regions for the molecules are the sites at which electrophiles attack and represent the active centers with the utmost ability to interact with the metal surface atoms. The highest E_{HOMO} values are obtained for 2-Phenylacetaldehyde.

Table 3. Calculated quantum chemical properties of the major effective components of apricot pomaces extract

Molecule	E_{HOMO} (eV)	E_{LUMO} (eV)	$\Delta\varepsilon_{\text{H-L}}$ (eV)
Hexanal	-10.771	0.864	-11.63
2-Phenylacetaldehyde	-9.908	0.125	-10.03
Nonanal	-10.761	0.864	-11.62
Butanal	-10.666	0.757	-11.42

Our calculations show that investigated molecules has the lowest E_{LUMO} , so it has the greatest ability to interact with the metal surface. The ranking of the molecules according to their ability to accept electrons from mild steel is: 2-Phenylacetaldehyde, Butanal, Nonanal, Hexanal. The separation energy is parameter which determines the reactivity of a molecule towards a metallic surface and is a very important stability index. As $\Delta\varepsilon$ decreases, the reactivity of the molecule increases leading to increase adsorption on the metal surface and hence high inhibition efficiency, since the energy to remove an electron from the last occupied molecular orbital will be low [8, 10, 10]. The inhibition efficiency of 2-propanol apricot pomace extract is attributed to joint adsorption of some of its phytochemical constituents. Therefore, the use of 2-propanol extract of pomaces the apricot as an inhibitor for the corrosion of mild steel from corrosion under the conditions of periodic moisture condensation is recommended. In this study, it was shown that the apricot pomaces extract is effective inhibitor of corrosion of mild steel exposed for the temporary protection of mild steel. The presence aldehydes, and terpene alcohols in the apricot pomace extracts was confirmed in this study. This paper showed that the apricot pomace extract as good source in antioxidant compounds from of natural origin with potential usage as cosmetic, pharmaceutical or anticorrosion ingredients. The quantum-chemical calculations were carried out to predict the adsorption activity of the main components of extract pomaces the apricot.

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Innovations in the Processes of Cleaning and Disinfection for Dairy Industry Equipment

Development of agro-industrial sector, provision of population with quality food products is one of the tasks for the formation of Ukraine as a successful state. Significant perspectives exist in the dairy industry development. High quality of dairy products, excellent taste quality and safety for consumers are a prerequisite for successful market promotion of milk products in the modern conditions.

Safety is the absence of harmful chemical and biological impurities, including pathogenic microorganisms and poisonous substances. Microbiological stability is the potential for storage of products without deterioration [1].

Production of dairy, which corresponds to standard, depends on many factors: the quality of raw materials, processing technology and sanitary conditions of technological equipment [2 – 6]. Proper sanitary condition of production facilities and equipment, of storage sites are the important factors for the production of quality products.

Application of the principle of circulating CIP cleaning (Clean in Place) has become the main trend in the effective and economical solution to the problem of washing and disinfection of technological equipment [1]. Washing and disinfection of internal surfaces due to their inaccessibility are the biggest problems.

The high quality blends that the domestic and overseas markets offer are very expensive. Available at the price of the mixtures have a number of shortcomings.

Therefore, the innovative approach to the solution of this problem was to create a cheap mixture for washing and disinfection of the interior surfaces of the dairy industry with the satisfactory properties.

Dairy pollutions have certain features that determine the specificity of sanitization [2, 3]. That is why the usual rinsing with water and even washing with detergents are insufficient [2, 3, 7, 8].

Contaminants that remain on the surface of the equipment are divided into three groups:

- It is contamination remaining from contact with the surface of cold milk - a milk film. The main components of it are fats and proteins.
- Pollutants, which remain after heating the milk to 80°C. This is mainly soft precipitate, consisting of calcium phosphate and denatured protein;
- Impurities which remain after heat treatment of milk at temperatures above 80°C. They consist of a complex of serum proteins and inorganic substances, and have high durability. Their durability increases with increasing temperature [9].

Detergents are used to remove contaminations from equipment surfaces.

Detergents - a single chemical substance or complex mixture of chemicals that enhance effect of each other, and a surface-active compounds (surfactants), and substances which reduce foaming. It is expedient to use complex mixtures, because they have a wide action spectrum and a better cleaning effect [10, 11].

Detergents should have the following properties: they should not have harmful effects on human health; should provide the necessary purity of equipment; mustn't to impair the quality of milk and dairy products; should not cause corrosion of equipment; to be well soluble in water; well washed off from equipment surfaces.

Proteins, lipids and inorganic substances in combination with proteins are the basic components of pollutants. Therefore, it is necessary that pH of washing solutions must be more or less 7 (acidic or alkaline).

Proteins and fats are hydrolyzed in a strongly alkaline medium, and complexes of inorganic compounds are dissolved and removed from the surface equipment via acids [2, 3].

Detergents are used in the solution form. They must meet the following characteristics: low surface tension, good wetting, certain foaming and emulsifying properties, to promote swelling capacity of proteins, well washed off from a surface equipment, to remove completely milk protein and insoluble calcium salts, to emulsify the remnants of fat, do not to have a toxic effect, and do not be corrosive to equipment [12, 13].

The operating principle of the detergent is that it wets the equipment surface and then dissolves dirt and moves it into a cleaning solution, forming solubilisate. Detergents have to keep the pollutions in dissolved state. In addition, the detergent should to prevent the re-sedimentation and re-contamination on the equipment [11]. Alkalinity regulator with active chlorine donor should be a part of the detergents.

The presence of surfactants - active and complexing components - provides the dissolution of inorganic compounds, prevents the formation of precipitates and protects rubber and plastic parts of milking machines from the aggressive impact and destruction of alkali [7, 11].

The presence of nitric acid and phosphoric acid as part of detergent solutions provides an active action. Moreover, complexing and low-foam nonionic surfactants are included at the composition of these mixtures.

These mixtures should have a good washing ability regarding to inorganic pollutants. The pH of the acidic solution should be approximately 1,6 [3, 11, 13].

For the effectiveness of washing it is necessary to observe the rule: the required amount of detergent must comply with pollution area. Otherwise the probability of sedimentation with all the negative consequences exists.

When studying the mixtures for washing milking machines that Ukrainian and world markets offer, we have identified the main priorities - quality, safety and low cost.

Manufacturers do not indicate the concentrations of components of mixtures through commercial secrecy [14 - 19]. The authors investigated these mixtures and found their high cost and a number of disadvantages associated with toxicity, sharp and unpleasant odors: «Ultra acid» (France) - acids treated with an inhibitor, re-deposition inhibitors, surfactants, foam control substances; «CircoSuper SFM» (Germany), "Intal" (firm "Rostok-Agro.H", the city of Dnipro) - acidic agents.

Mixtures made in France, Estonia, Sweden and Germany have excellent washing ability, but a high price, which greatly increases the cost of raw materials.

Acid detergents used in CIP sinks for pre-treatment of process equipment are known and presented [20]. They contain predominantly organic acids C₆-C₁₂ with the obligatory addition of oxidizing agents containing hydrogen peroxide, peroxyacetic acid and their mixtures

Inorganic acids such as phosphate, nitrate, sulfate and organic - dairy, acetic, oxyacetic, citric, glutamic, glutane and gluconic acids may be included in the composition. As indicated, the amount of acid in the pre-treatment solution is from 0.25% by weight and does not exceed 10% by weight. But the mixture with an acid content of 0.5 to 1.5% by weight is most recommended. The amount of oxidizer in the pre-treatment solution is from 0.01% by weight and does not exceed 1% by weight. Acceptable amounts of oxidizing agent - from 0.01 to 0.50% by weight (0.3% by weight is most appropriate).

The optimum amounts of an oxidant in relation to any acid source, as a rule, are from 1: 1 to 1:10, from 1: 3 to 1: 7, or from 1:20 to 1:50. Solutions of 0.25 to 10% by weight of phosphate acid with a content of 50-500 ppm (from 0.005 to 0.5% by weight) of hydrogen peroxide are the most suitable

The patent focuses on the cleaning technique. But during the analysis of all the above acid solutions, the general shortcomings such as significant cost, the presence of sharp odors, greatly impairs the possibility of their use in production and in most cases makes it impossible to use tap water with permissible hardness and requires the use of distilled water due to the possible formation of sediment have been detected.

In addition, such disinfection requires strict adherence to the concentration limits, because when it is underestimated and the exposure reduced, the complete extinction of bacterial cells may not be realized. At too high concentrations of a disinfectant solution corrosion of technological equipment, as well as the release of poisonous substances harmful to human health, are possible.

Detergent consisting of an acid composition of the composition: phosphate acid 30.0-50.0%, acid-proof sequester 2.0-15.0%, stabilizer 0.1-2.0%, peroxide 2.0-20, 0%, water up to 100.0% is also known [21]. Composition: phosphate acid (81% solution) 49.4%, Dequest 2010 (50% phosphonate) 0.5%, 0.2% dipicillic acid, 6.0% acetic acid glacial (99.6% sol),

peroxide hydrogen (35% sol) 8.6%, water up to 100.0% is recommended in the patent.

A significant number of components, respectively, more complicated techniques of preparation and high cost are the disadvantages of such a mixture. The greatest disadvantage is the need to use in the preparation of concentrated acid solutions, especially those with an extremely sharp odor.

It is also known acidic compositions with antimicrobial effects, presented in [22]. An acidic preparations using are recommended.

The variants are proposed:

a) one or more acids selected from formic, acetic, propionic, gluconic, milk, citric, glycolic, phosphate, alkanesulfonic, nitrate and sulfate acids;

b) an alkenecarboxylic acid or an alkynecarboxylic acid having from 8 to 14 carbon atoms and at least one double or triple bond in the alkene or alkynous chain.

At the same time, the corresponding carbon chains may contain ether, alcohol, aldehyde, and keto groups. The remainder of the composition of up to 100% by weight is water and/or auxiliary substances and/or active substances for cleaning and/or disinfection of solid surfaces. For example, in the conclusions it is stated that undecylic acid should be added to phosphate acid.

A disadvantage of the aforementioned acid composition is the wide range of acids proposed, which are quite expensive. This greatly increases the cost of the composition and the complexity of the preparation.

A major disadvantage is the use of phosphate acid, because it only requires the distilled water using both in the preparation of the mixture and in the washing of process equipment after acidic treatment, since water with minimal hardness can cause the formation of a precipitate.

Acidic mixture, recommended in [23] is similar. The chemical content of the base composition is as follows: from 1 to 80% by weight of phosphate acid; from 0.1 to 40% by weight of organic carboxylic acid; from 0.1 to 40% by weight of a solvent containing hydrocarbon ether or hydrocarbon alcohol; from 0.1 to 40% by weight sequestrants; from 0.1 to 40% by weight of an ethereal amine composition.

On the basis of this composition, various variations of acid mixtures for the removal of carbohydrate and protein deposits were developed and recommended.

A significant number of expensive components, complexity in preparation and the presence of phosphate acid, which necessitates the use of distilled water both during the preparation of the composition and in the process of washing, are the main drawbacks.

By the description of the mixture [24] for cleaning dairy and confectionery equipment with an acidic reaction composition is capable of removing milk deposits protected with a film of coagulated milk protein. The

composition of a concentrate that can be diluted to the desired concentration is recommended in the invention.

Chemical composition of the proposed acidic concentrates for obtaining in a solution of pH from 1.0 to 1.3: from 10% to 30% of organic acid stronger than acetic, and weaker than mineral acid (citric, lactic, formic, chloroacetic, dichloroacetic, etc.), from 3% to 10% of phosphate acid, from 3% to 10% of alkali metal sulfate, from 2% to 10% of the wetting agent compatible with the above-mentioned acid-reactive ingredients and up to 100% of water.

A significant number of components in presented mixture is a disadvantage of the proposed acidic detergent. This mixture has a significant cost. The use of phosphate acid requires the use of only distilled water during the preparation of the product and in the process of its use.

All this significantly limits the possibility of its use in farms and washing the technological equipment of the dairy industry.

First we created the recommended solutions.

But by experimental investigations of their basic physical and chemical properties, a number of shortcomings were found such as a sharp smell; inappropriate pH; limited shelf life resulting in the formation of sediments; the inability of using in the preparation and washing of tap water, even the average hardness.

Solutions of excellent quality and which do not have the listed disadvantages are usually very expensive.

Therefore, the purpose of the first part of our work was to create a cheap acid detergent for effective cleaning and disinfection of the interior surfaces of the dairy industry technological equipment in Clean in Place mode (CIP).

The task of developing the formulation of an effective acid detergent for the dissolution of deposits after treatment with alkaline solution and disinfection of technological equipment of the dairy industry was the basis of our work.

During the creation of the acidic solution recipe it has been accounted that the hydrochloric acid is a precursor at certain concentrations.

Therefore, the method of preparation of acid mixture on the base of publicly available and permitted the 13% percentage of hydrochloric acid solution was invented [25]. The cost of 1 liter of acidic solution is 5 UAH (€ 0.19 USD).

The purpose of the second part of our work was to optimize the conditions for the use of cheap acidic mixture, prepared by the authors [26], for efficient washing and disinfection of the interior surfaces of technological equipment of the dairy industry in CIP- mode (Clean in Place).

The relevance of the work consists in the possible practical solution of the problem of washing and disinfection of the internal surfaces of the dairy industry technological equipment in the automatic mode.

Table 1

No Sample	Weight of Sample m_1 , g	Weight of sample with milk film m_2 , g	Weight of milk film m_3 , g	Weight of sample after treatment with an acid mixture m_4 , g	The percentage of weight loss, %	Notes
Milk film, treated with concentrated solution						
1	16,54785	18,31320	1,76535	16,54760	0,002	
2	6,03555	6,06115	0,02560	5,67275	6,00	significant corrosion
3	2,92530	2,94005	0,01475	2,53035	13,50	significant corrosion
Milk film, treated with solution (1:1)						
1	16,53760	16,78325	0,24565	16,53735	0,002	
2	6,37210	6,38355	0,01145	6,34300	0,45	
3	2,99910	3,01605	0,01695	2,87070	4,30	Significant corrosion
Milk film, treated with solution (1:2)						
1	16,53345	16,87560	0,34215	16,53310	0,002	
2	6,19640	6,21110	0,01470	6,16400	0,50	
3	2,93400	2,94930	0,01530	2,88285	1,70	Significant corrosion
Milk film, treated with solution (1:3)						
1	16,52950	16,74400	0,21450	16,52925	0,002	
2	5,84075	5,86520	0,02445	5,81445	0,45	
3	2,98875	3,02280	0,03405	2,97435	0,48	
Milk film, treated with solution (1:4)						
1	16,52625	16,72480	0,19855	16,52580	0,002	
2	6,05300	6,08600	0,03300	6,03210	0,35	
3	2,91245	2,93610	0,02365	2,91205	0,014	Remainder
Milk film, treated with solution (1:5)						
1	16,52480	16,87945	0,35465	16,52445	0,002	
2	5,81440	5,84545	0,03105	5,83260	0,30	Remainder
3	2,93945	2,97720	0,03775	2,93735	0,07	Remainder
Milk film, treated with solution (1:6)						
1	16,52444	16,78300	0,25856	16,52420	0,001	
2	6,07935	6,11390	0,03455	6,07300	0,10	Remainder
3	2,88258	2,91120	0,02855	2,88645	-0,10	Significant remainder

Source: Author's experimental research

The main benefits are safety when used; the absence of unpleasant odors; the possibility of using tap water; availability of raw materials; ease of preparation; low cost; the possibility of using both large dairy enterprises and small farms.

The object of the research was to study the washing effect of the acidic mixture in the case of dilution by water in a wide range of concentrations and temperature changes to the permitted values. The subject of our research was acidic detergent, developed at the Department of Chemistry of the Poltava National Technical Yuri Kondratyuk University [26].

Determining the optimal concentration and the minimum temperature at which the washing effect is maintained was the main task of our work.

In the course of work, a series of experiments on optimization of conditions for the removal of fresh (1 day) and obsolete (1 week) milk contaminants ("milk stone") was performed.

Dairy films were applied to pre-washed, dried and weighed samples of different stamps of stainless steel. The material of the Samples number 1 is food steel; the materials of the samples number 2 and number 3 are non-food steel.

The samples were placed in glasses, filled with acidic detergent and statically held at appropriate temperatures for a specified time. Samples with milk films were treated by acid mixtures of various concentrations. Concentrated solution was primary. Other solutions were prepared from the primary concentrate by dilution with distilled water in ratios of 1:1, 1:2, 1:3, 1:4, 1:5 and 1:6.

The first series of experiments was carried out at a temperature of 85°C and a holding time of 30 minutes [1, 3]. After exposure, the samples were rinsed with distilled water, dried and weighed on the analytical scales.

All stages of experimental research were carried out without preliminary treatment with alkaline solution.

This experiment was taken as a control for further investigations.

The results of experimental studies are presented in Table 1.

From the obtained results, we concluded that the optimal concentration is the solution diluted in 5 times.

In the next part of the experimental studies, the samples were treated at a lower temperature (70°C) and with a shorter processing time (25 min). The results are presented in Table 2.

Table 2

No Sample	Weight of Sample m_1 , g	Weight of sample with milk film m_2 , g	Weight of milk film m_3 , g	Weight of sample after treatment with an acid mixture m_4 , g	The percentage of weight loss, %	Notes
Dairy film is fresh (1 day), which was treated with solution (1:4)						
1	16,80935	17,09680	0,28745	16,80920	0,001	
2	2,97405	3,00185	0,0278	2,96845	0,190	
3	6,03255	6,06440	0,03185	6,02160	0,180	

Source: Author's experimental research

Dilution in 5 times is sufficiently effective at a lower temperature for samples from stainless steel.

The next series of experiments we conducted on the basis of previous experiments.

Therefore, obsolete (1 week) milk contaminations were removed by solutions diluted in 4 and 5 times at a temperature of 70°C for 25 minutes.

The results of experimental investigations are presented in Table 3.

Table 3

No Sample	Weight of Sample m_1 , g	Weight of sample with milk film m_2 , g	Weight of milk film m_3 , g	Weight of sample after treatment with an acid mixture m_4 , g	The percentage of weight loss, %	Notes
Dairy film obsolete (1 week) which was treated with solution (1:3)						
1	16,47495	16,72360	0,24865	16,47470	0,002	
2	6,16400	6,18715	0,02315	6,15945	0,070	
3	2,88645	2,90530	0,01885	2,88415	0,080	
Dairy film obsolete (1 week) which was treated with solution (1:4)						
1	16,47470	16,67590	0,20120	16,47450	0,001	
2	6,34300	6,37235	0,02935	6,34315	0,002	Remainder
3	2,96845	3,00070	0,03225	2,96635	0,070	

Source: Author's experimental research

When comparing the experimental results, it is obvious that both solutions diluted in 4 and 5 time are optimal for removing the obsolete milk film from stainless steel samples.

Conclusions:

1. The acidic composition formulae for cleaning and disinfection of milking units and milk processing equipment in automatic mode (Clean in Place) have been invented.

2. The main benefits of the proposed acidic mixture are safety when used; the absence of unpleasant odors; the possibility of using tap water; availability of raw materials; ease of preparation; low cost; the possibility of using both large dairy enterprises and small farms.

3. An acidic mixture for cleaning and disinfection of milking machines by CIP method was investigated.

4. The optimal modes of efficient use of acid detergent have been developed and proposed.

5. It was found that for the complete cleaning of a fresh milk film (1 day), the optimal dilution of the acid mixture is 1: 4, and the obsolete milk film (1 week) are both solutions (diluted in 4 and 5 times) without preliminary treatment with alkaline solution.

6. If necessary, the treatment temperature can be reduced to 70°C.

7. Since the experiment was carried out without the prior use of an alkaline solution, the efficiency of the acid solution created for the complete

cleaning of the milk film under static conditions has been experimentally proved.

8. It is advisable to optimize the conditions of use of acid mixture after preliminary treatment with an alkaline solution.

9. The presence of corrosion of non-food steel in concentrated and dilute acid solution was confirmed. This proves the obligatory use of the food grade steel in the manufacture of technological equipment for the food industry especially for dairy

10. The obtained acidic solution provides the opportunity to solve the problems of cleaning and disinfection of technological equipment of dairy industry in CIP mode, as well as at different stages of production regardless of the complexity of technological processes.

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Computer-Aided Designing and Manufacturing of Fashion Goods

Modern enterprises for development in conditions of competition should produce high quality products, low cost, in less time. To do this, they use the capabilities of computer technology, its memory, rapid execution of calculations, and the ability to manipulate graphic information. It allows automating and interconnecting the tasks of designing, producing and managing the enterprise.

The leading modern sewing enterprises are equipped with systems of computer-aided designing (CAD) clothing, many middle and small enterprises are in the stage of introduction or selection of CAD system. Consequently, the majority of young qualified sewing industry specialists will work at enterprises equipped with CAD, and a large part - at workplaces equipped with computer equipment. For success in the labor market, future fashion designers need to focus on the main theoretical issues of using computer technology in the clothing industry.

Information technology is a technology for managing and processing data using computers.

Information technology in the fashion industry is used to create new models, manage certain types of equipment, as well as to manage the life cycle of products - from the acceptance of fabrics to the sale of ready-to-wear clothes.

In the fashion industry, the following types of automated process control systems are used (Yezhova, 2014):

- CAD systems;
- computerized and automated equipment for cutting, manufacturing and wet-heat treatment of sewing products;
- systems of automated collection, transformation and exchange of information between divisions of a sewing enterprise.

The CAD system is an organizational and technical system that carries out automated design, consists of personnel and means of automation of designing and interacts with units of the project organization. The CAD system provides for the following types of security: organizational, methodological, mathematical, informational, software, and hardware.

The fashion CAD is characterized by complexity of the object, almost complete lack of formalization of the main approaches and design methods, the need to store a large amount of source information and continuously update it. In this regard, the first progress in the implementation of information technologies was achieved in those areas where the most formal operations are carried out. These are the compilation of the technological sequence and schemes of distribution of labor, the normalization of the time

of technological operations, the accounting of the movement of materials, the layout and normalization of material consumption.

Automated design systems were developed and applied before the term "CAD" came into existence. In 1955-59 at the Massachusetts Institute of Technology (MIT), under the guidance of Ross, a system of programming APT (Automatically Programmed Tools), which made it possible to prepare programs for numerically controlled machine tools was developed (Gruver, & Zimmer, 1987). The first automated cutting installation was created in the United States. In 1967, Joseph Gerber presented the cutting machine Gerber Cutter System 70. Today, this installation is in the exposition of the National Museum of American History in Washington. The installation was intended for cutting the flooring of the fabric with a special knife without prior placement. The digitizer and digital coding software for layouts, designing layouts, and creating control programs for a cutting device were created. In 1968 Gerber Garment Technology was officially established. In 1969, the world's first Gerber Cutter automated cutter was patented. In 1970, the first cutting machine was installed at John Meyer enterprise, in Connecticut state. Today Gerber Technologies is one of the leading manufacturers of complex automated production systems. It is known first of all for equipment and software for automated laying and cutting of textile materials. Equipment from Gerber Technology for laying and cutting works in 130 countries, including Ukraine (Gerber technology, 2018).

In the period from 1975 to 1985, in cooperation with specialists from Bulgaria, Hungary, the German Democratic Republic, Poland, Romania, Czechoslovakia, the Central Research Institute of the Clothing Industry (Moscow) was established, tested in production and agreed upon The uniform technique for designing clothes (EMKO SEV) (1988). Recommendations for the designing of clothes in 9 volumes are designed for the creation of models using computers. The theoretically substantiated and practically verified formulas for calculations of structural segments; digital indication of dimensional features and constructive points; application of circle arcs for constructing curvilinear sections were its peculiarities, which allowed to adapt the system of design to the use of information technology. This method of design is relevant to this day. With minor changes it is used in the traditional "manual", as well as in the automated design of clothing. In particular, the basis of most algorithms for calculating and constructing basic structures in the CAD AutoKroy laid down an updated version of EMKO SEV.

In Ukraine, the practical implementation of CAD was preceded by theoretical studies in the 70-80s of the 20th century by scientists: Professor N.D. Kuznetsova (Kuznetsova, 1979), Professor A.L. Slavinskaya (Slavinskaya, 1986), Professor A.T. Sushan (Sushan, 1986).

In the post-Soviet space, the introduction of CAD in the fashion industry began after the International exhibition of equipment "Inlegmash-88" (Moscow). CAD systems from the foreign firms Investronika (Spain), Lectra-

sistems (France), Gerber (USA) were demonstrated at the exhibition. These systems were created on a modular basis, that is, they were completed with separate subsystems-modules, each of which was intended to perform individual tasks. Each module could work autonomously or in conjunction with other modules. Such a principle of constructing fashion CAD is relevant for today.

In 1988, the first in the USSR CAD for the light industry was created by the experts of the Mathematical modeling and optimum design department of the Institute of machine building problems of the Academy of sciences of Ukraine, and the Design bureau of automated control systems for textile and light industry in Moscow. The system was developed on the basis of the computer-calculating machine ARM SM-4. Specialists of the Institute have developed the software for designing layouts (CAD). In 1988, the system was awarded the "Golden Medal" of the VDNH USSR. It became a prototype for CAD Gracia (Grazia CAD. High computer technology for apparel manufacture, 2018) and Comtense (Comtense. Apparel CAD/CAM System, 2018).

In 1988 at the experimental machine-building plant (Zhukovsky, Russia) the production of automated flooring and cutting complexes under licenses of foreign firms began. The first complexes consisted of the following modules:

- CAD patterns and layouts by Invesmark type under the license of Investronika;
- automated flooring machine "Kometa" under the license of the German company Bullmer,
- automated cutting unit "Sputnik" under the license of the German firm Investronika.

Wide introduction of CAD was possible after the appearance in the 90 years of the XX century computers IBM PC. Since the early 90's of the twentieth century there has been a rapid increase in the number of CAD-implemented clothing. By 1996, in the CIS countries, there were installed 20 automated flooring and cutting complexes and more than 40 CAD in the enterprises of light and automobile industry. At the same time, numerous scientific and production teams began to create their own CAD, adapted to the needs of the domestic producer: Abris, AvtoKroy (AutoKroy. Clothes CAD System, 2018), Assol (Assol CAD/CAM, 2018), Grazia (Grazia CAD. High computer technology for apparel manufacture, 2018), Comtense (Comtense. Apparel CAD/CAM System, 2018), Silhouette, Julivi (Julivi system, 2018) and others.

In recent years, CAD systems have been significantly improved: three-dimensional design modules have appeared, the interface has become more convenient.

The first CAD systems cost tens of thousands of dollars, so they were only available to powerful lucrative businesses. Since the 90s of the twentieth century, with the creation of Intel processor Pentium, the distribution of

computer equipment at affordable prices and the creation of budget (affordable) subsystems of CAD began to solve a limited range of design tasks. This has led to the fact that all powerful, most middle and large part of small clothing companies today use CAD to create new clothing patterns. Developers of CAD budget segment create modules specifically for enterprises of individual production, offer flexible payment and leasing systems. The market for services for the development of custom-made models and designs of clothing on the Internet, using various CADs, is currently developing.

Modern CAD clothes allow you to automate most of the procedures for developing a new model: creating a sketch, designing, modeling, and compiling design, technological and economic documents. And while information technologies are applied at all stages of the production cycle of the sewing enterprise, the base module of CAD systems consider the subsystems of pattern creating and fashion designing.

CAD (computer-aided designing) - a software package designed to create drawings, design and partly technological documentation.

CAM (computer-aided manufacturing) - a system for automated planning, management, manufacturing and control of production operations. In machine building, CAM systems are used at all stages of manufacturing - from the technological component of the project to manufacturing on machines with numerical control. In the fashion industry, the use of automated sewing lines is still limited. Therefore, under CAM-systems of clothing more often understood programs for technological preparation of production.

CAE - (computer-aided engineering) - software for engineering calculations as a product design, as well as its performance, reliability, modeling of real operating conditions.

PDM (product data management) - a system module that manages the storage, movement of information, provides access to users, and so on. The current project consists of a large number of output data, calculations, shredders, and other files. In this regard, PDM is an essential component of modern clothing design systems.

CAD provides for the following types of support: organizational, methodological, mathematical, informational, software, linguistic, technical.

Organizational support CAD is a means and methods for the organization, operation, improvement and development CAD. Organizational support includes orders, regulations, staffing, responsibilities, plans, controls, and reporting.

Methodical support of CAD is a collection of documents, which reflect the composition, rules for the selection and operation of automation of designing. These are rules, instructions, examples, descriptions, specifications and other documentation for using CAD. Methodical support reflects the capabilities of the system and how it is used in the design process. In the

process of gaining operational experience, developers and users develop and supplement methodological support.

Mathematical support of CAD includes mathematical models of design objects, methods, algorithms and formulas for the implementation of design procedures. Elements of the mathematical provision of CAD - formulas in cut-out systems, which the user enters. Much of the mathematical support is the foundation for software creation. The contours of the patterned parts of the garments are complex and consist of sections of straight lines and curved lines. Mathematical support of CAD consists of a set of methods, formulas, and techniques that allow formalizing the requirements for this line and conducting a harmonic curve under predefined conditions (passing through points that are tangent to a certain line, intersects a certain line at a given angle, etc.).

Information support of CAD is the entire amount of information required for automated design. Information support includes arrays and databases, as well as ways to classify, organize, search and store information.

Information for automated design of clothing is divided into the following groups:

- reference information (standards, dimensional typology of population, reference books, information about properties of materials, recommended technological assumptions, information about available equipment and devices, etc.);

- information about prototypes (trends in this range, models of competitors, own models-analogues, previously created designs of the main and derivative details);

- designing techniques (cut-off systems and recommended increments, schemes of construction of derivative parts from the main, application and substrate materials, recommendations for modeling, chart gradation patterns, etc.);

- requirements for a particular model (range and scope, consumer's biosocial characteristics, technical and economic indicators).

CAD software is a set of computer programs that provide solutions to the tasks of designing and managing peripherals.

Linguistic support of CAD provides a set of languages used to describe automated design procedures. Linguistic support includes programming languages, user communication with a computer, a language for conducting descriptions of design objects (databases, technical documentation, etc.).

Technical support of CAD is a set of interconnected and interacting hardware designed for automated design.

Technical support CAD includes groups of tools: software data processing; preparation and data entry; data output; data storage; data transfer. Software processing tools are represented by processors and memory devices. Data storage devices are internal and external magnetic and

optical disk drives, solid state drives, flash drives, USB flash drives, and more. Data transfer tools are required to communicate between devices located at a certain distance and connected to a connected network.

Means of preparation and data entry, as well as data extraction are necessary for communicating with a computer. The most common means of entering information is a keyboard and a computer mouse, and means of output - a monitor and printer. Specific for CAD clothing preparation, input and output data will be discussed in more detail.

For the creation of images of finished garments, as well as materials texture, *digital cameras* are used. Digital camera is a device for capturing an optical image on a special media - a memory card.

Rays of light fall on the photosensitive matrix through the lens. The camera program writes the matrix signal to a memory card as a .jpeg, .tiff, or .raw raster file. One can use a digital camera and a special software called "photodigitizer" to enter the finished patterns into the computer. The patterns lay on a plane with a special mark and photograph. The picture is copied to the computer. The program recognizes contours of patterns, inscriptions, lines, inscriptions, and also eliminates contour distortions. Such technology is used by such developers of CAD clothes as Assol on the basis of the program "Photodigitizer" (Andreeva, Romanyuk, & Andreeva, 2001), as well as Optitex (Optitex, 2018). The iDigit photo digitizer is also featured on the Ukrainian market. iDigit is compatible with all major CAD/CAM software via Dxf export (iDigit. The fastest & easiest way of digitizing, 2018). Compatible systems include Gerber, Assyst, Lectra, Optitex, Gemini, StyleCAD, Polypattern, AutoCAD, Adobe Illustrator, SolidWorks, Corel Draw, PAD system and many more.

For placement in computer networks dynamic 3D images with the possibility of turning images of clothing patterns are used, in particular, the method of interactive bulk photo. To create an interactive 3D photo in the 3D Mamagi system (Mamagi, 2018), use the camera and the automatic swivel table connected to the computer. yutra The object is taken in a certain position, then the automatic table is rotated to a given angle, the shooting is repeated, etc. The result is a set of photos of the model from different angles. The images are processed using a special control program, resulting in an interactive three-dimensional photograph. It can be rotated, viewed from different sides, used for presentations, catalogs.

To insert text documents, thumbnails or templates into a computer smaller than the A3 format, a *scanner* is used. Scanner is an electronic optical device for entering graphic images and text into a computer. In the fashion industry, predominantly flatbed scanners are used. The light emitted by the source falls to a certain point on the document that needs to be digitized and reflected from it. The optical system focuses light on a photocell, which transforms the light signal into an electronic one. The special program

receives and analyzes the signal from the scanner, converting it to a graphic or text file.

Graphic tablets are used to create sketches of fashion patterns. Graphic Tablet is a device for creating and editing handwritten images while simultaneously entering an image into a computer. Features of a graphic tablet - the presence of a sensitive surface and a special pen. The designer drives a pen on a tablet, the controller converts the information to the coordinates of the points and passes it to the computer. The movement of the cursor on the monitor repeats the movement of the pen on the screen of the tablet. In addition to the coordinates of the pen, modern tablets recognize and transmit to the computer also the inclination and the pressure of the pen on the work surface. This allows you to get thumbnails that are more like manual ones. A computer mouse may be added to the tablet. Interactive display boards let you see the image on the tablet screen.

Digitizer - a device for entering into the computer information describing the previously created pattern. The workstation of the digitizer consists of a desktop and a special cursor manipulator. The operator establishes detail on a special table and an eye consecutively clicks the cursor at the points first circuit details, then control and other points (direction warp, crease lines, etc.). As the data input digitized outline details appear on the screen.

Bodyscanner is a three-dimensional human body scan system for getting the most complete information about the body surface or mannequin. The bodyscanner is part of the subsystem of recognition of the image of the customer. Bodyscanners are manufactured by industrialized countries: USA, France, Germany, Japan. In the US and Europe, large supermarkets are equipped with such a device. The person to be measured comes to the booth. With the help of rays, her body scans, the image enters the computer. With the help of special software, a three-dimensional image is formed that can be rotated and analyzed. Scan duration is 12 ... 30 seconds. The amount of dimensions obtained in this way by the dimensions and characteristics of the surface of the human body is virtually unlimited.

Human Solutions body scanners (Human Solutions, 2018) have two, three, or four laser columns. Each column has one or two camera-scanners installed. The more cameras, the higher the accuracy of the measurement.

The use of the scanner for designing clothes compared with the measurement of a centimeter tape has many advantages: contactless measurement method is more precise, more informative, fast, does not cause discomfort measured. The result of measurements does not depend on the qualification and experience of the cutter.

The obtained digital model can be used for:

- creating a virtual mannequin;
- conducting research on the surface of the body, in particular - obtaining a set of virtual cross sections of the body surface;
- creating a 3D fashion sketch;

- virtual exhibition;
- definition of dimensional features;
- getting the design of the garment patterns, etc. (Yezhova, 2015)

The possibilities of using the body scanners to design clothes today are not fully realized. Traditional cutting systems were used to construct 20 ... 40 dimensional features. The amount of information that the designer receives with the help of a scanner is extremely large. Scientists are working on the development of design methods that effectively use digital information on the human body surface, transforming it into pieces of clothing details. In particular, in the monograph (Kuz'michev, 2012), all aspects of the use of bodyscanners for the analysis and design of clothing and "figure-clothes" systems are considered.

The introduction of CAD clothing allows (Yezhova, 2013):

- to improve the quality of design documentation;
- to reduce labor costs at the design stage;
- to improve the quality of planting products in the figure;
- to eliminate repeat layout;
- to reduce the cost of materials at the expense of optimal layouts.

In addition, the introduction of CAD in the enterprise increases the prestige of work on it, which results in the attraction of highly skilled personnel. This, in turn, ensures trademark prestige and increased demand for products.

The process of creating templates in most systems is based on the use of cutting systems, that is, the creation of a two-dimensional (flat) model image. But since clothing is a voluminous object, it is impossible to obtain quality patterns without information about the surface on which the product is worn. This causes the necessity and urgency of creating a clothing design method based on a three-dimensional database of the surface of the figure and clothing.

In this regard, one can distinguish the following trends in the development of CAD clothing.

1. Creation of 3D virtual dummies and sketches for visualization of the created models of clothes, conducting of virtual tests and model impressions.
2. Development of three-dimensional design systems for flat products.
3. Creation of polymer mass of three-dimensional models, without cutting and sewing.

The team of the Assol Center, which since 1999 has the status of an authorized developer, Autodesk, created a system of parametric construction of 3D models and a span of patterns - Assol 3D Parametric (Innovacionnaja tehnologija razrabotki odezhdy Assol 3D Parametric, 2009).

A promising direction for automation of the fashion industry can be the use of 3D printing. *3D printer* is a device for obtaining a bulk solid object on a digital 3D model by layer-based creation. There are several ways to "grow" the layers of the object, the most common laser and jet. When laser melting, the

laser blends powder from a metal or plastic layer on a layer in accordance with the contours of the part. With an inkjet method, the dispensing head highlights drops of a warmed polymer, which quickly clog and clump together. Today, models printed on a 3D printer can only be found on fashion shows and competitions. 3D printing technology is not used in the production of clothing for everyday wear because of the high cost and low hygienic properties of the products obtained. However, as the technology evolves, the size of the printed structural elements of the products may decrease as the size of the fibers approaches. In the near future, the commercial application of such technology should be expected.

The Internet has already created a number of services for the exchange of 3D models, among which the most powerful is Sketchfab. This site allows designers to share their 3D models for viewing or recording. As of the end of 2014, the Sketchfab collection was worth 200,000, and by the beginning of 2018, more than 2 million 3D files. The platform has a section called Fashion & Style (Sketchfab. Models/ Fashion & style, 2018), which houses 3D models of clothing, footwear, hats, accessories, jewelry and more.

The success of a sewing company depends not only on the ability to create fashionable, beautiful clothing, but also on the ability to sell it. One of the innovations in the area of selling clothes became *virtual fitting room*. A virtual fitting room is a widescreen display that scans the person facing them using sensors and webcams and displays a digital copy of it on the screen.

The buyer selects the model from the catalog on the touch screen and sees reflection dressed in selected clothing. The customer can come back and inspect themselves in clothes from different angles, like in front of the mirror. One can save the photo of the selected angle and send it by e-mail, or place it in the social network. The development of software for the formation of realistic images in virtual equipment is one of the areas of scientific research (Holte, 2017). In 2011, the London Westfield Stratford department store, the world's first 3D technology, appeared. Today, virtual fitting rooms are available in major shopping centers of the world's leading countries.

Consequently, the modern computer technologies allow to create and manufacture high-quality clothing, as well as to promote its sale to customers. This necessitates the formation of information and communication competence for future specialists in the fashion industry, as well as teachers of technological and professional education of the sewing profile.

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Computer-Aided Designing and Manufacturing of Fashion Goods

Continuous development and progress of mankind are possible only with the constant occurrence and implementation of innovative solutions and fundamental research.

Historical analysis of the process of the emergence, formation and development of various technologies suggests that in the basis of any innovative inventions or, more likely, new models of technology, there are objective preconditions caused by social progress, or, more often, military confrontation between opposite states or state unions.

A significant role is played by the subjective factor too, namely, the presence of ingenious passionate personalities, which provide a new qualitative impetus to the development of innovative technologies precisely at a time when there is a need.

The main goal of this article is to determine the periods, cycles of occurrence, formation and degradation of technologies on specific examples in the historical and temporal dimension.

When writing this article, the author used the following methods of theoretical research: historical analysis, comparison, systematization and interpretation of facts.

Scientific and technological progress in any field of industrial production in a certain period, the time span is expressed in organizational and innovative changes that can best be characterized by such analytical instrument as S-like curve. Analyzing its elements is considered best on concrete examples of the origin and development of innovations in one or another field.

It seems expedient to note the significant contribution made in the research of this topic by the head of the consulting company McKinsey, Richard Foster, who in 1986 published in the United States his scientific work entitled: «Innovation: The Attacker's Advantage». His scientific work was based on research by T.Pitters and R.Outerman, authors of the study "In Search of Effective Governance" and devoted to the strategy of innovative solutions in business.

According to R. Foster, the emergence of innovation has a certain repeatable pattern that arises as a result of the efforts of geniuses and market competition. And the logical S-curve best describes this phenomenon.

Charts in the form of the S-like curve reflecting the stages of formation and development of innovations

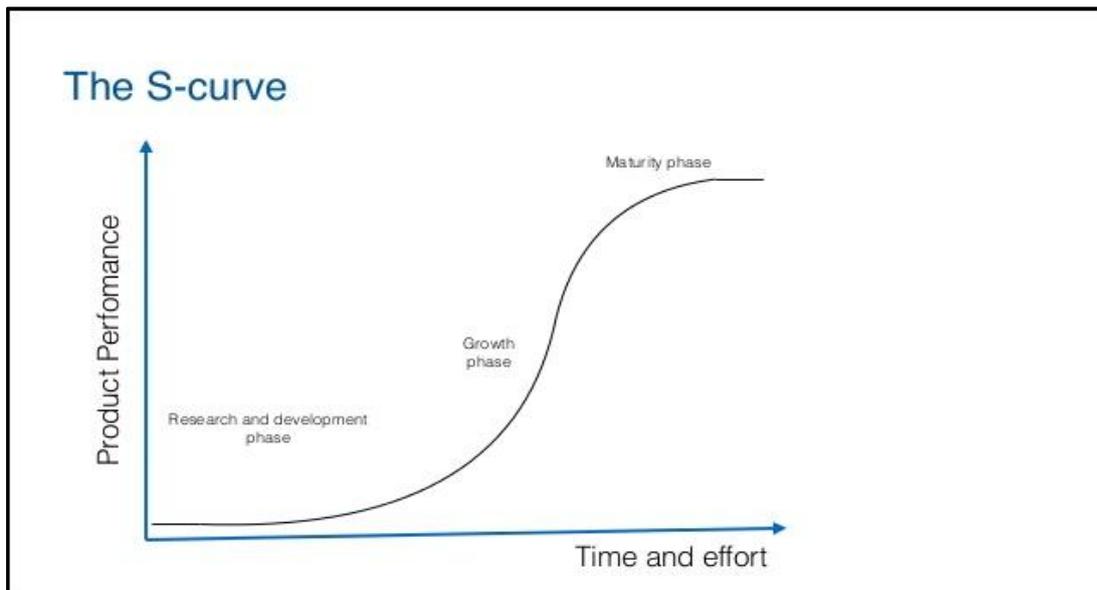


fig 1.

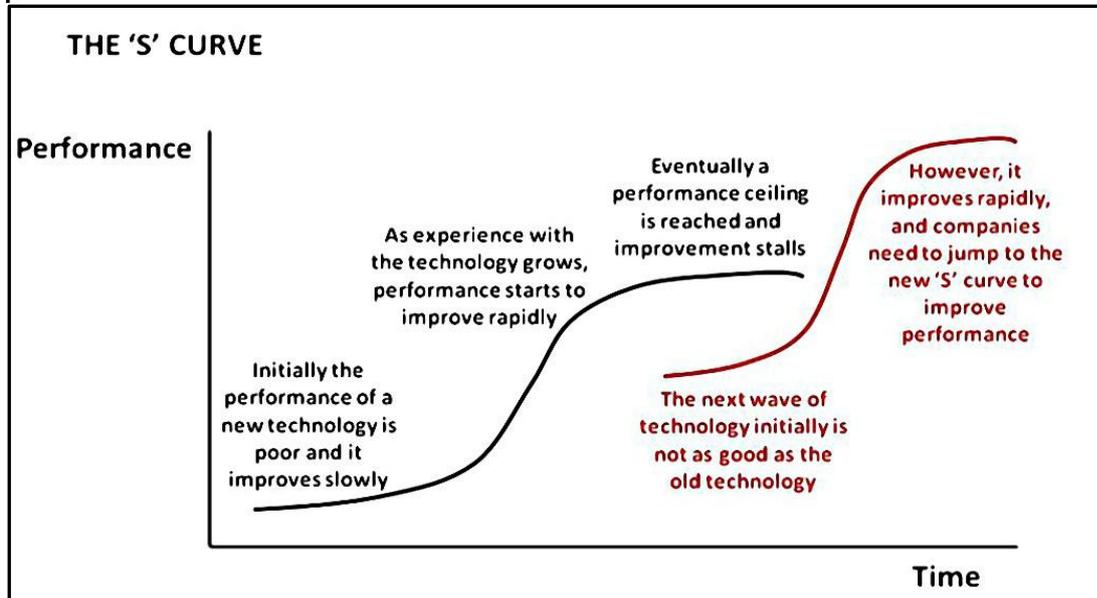


fig 2.

Fig 1. and Fig 2. - General view of logical S-shaped curves

As can be seen in the diagrams of the s-curve above, the development process of any innovative technology consists of the following phases:

1) Research and development phase. At this stage, innovation has a very limited distribution, the demand for new products and technologies has either not yet been formed, or is limited to a very narrow segment, and useful properties (key technological parameters) vary very little, since there is virtually no competition from other developers of similar products and technologies, and the proposal is formed, as a rule, by small innovative

enterprises with limited opportunities for the development of products and technologies;

2) Growth phase, during which there is a sharp increase in the qualitative and quantitative characteristics of the product or technology, certain defects in the product are identified, the so-called "childhood diseases" of industrial designs and products that are eliminated by more and more quality production; on the market there are new competing enterprises producing similar products / technologies - the industry includes large and medium-sized businesses, significant funds are attracted for the development of products and technologies, which affects their substantial improvement in their useful properties;

3) Maturity phase, during which the potential for the development of the idea underlying the innovation process is exhausted, and the useful properties remain practically unchanged. By this time, the market is already formed and saturated with this product / technology: the need in this product / technology is reduced, competing producers have determined their market shares and their redistribution is carried out by mergers and acquisitions of competitors; investors are gradually losing interest in the development of a product or technology, since profitability in the industry is reduced to the level of non-innovative businesses.

With this s-shaped graph, it is possible to clearly identify the life cycle of any technology or technological-industrial model from its invention to degradation.

Within the limits of this article it is proposed to investigate the history of the origin, formation and decline of screw and jet aviation in the form of s-curve on concrete examples, certain samples of aviation technology, which were produced in different time periods in a time interval of approximately 30-40 years, from the moment of appearance the first model of aviation equipment and up-to-date examples of aviation engineering, using only one indicator - an indicator of speed of the presented models planes, because it is a decisive indicator which brightly demonstrates development of combat fighter aviation.

History of the formation and development of screw aviation in the form of a graphical S-shaped curve on specific examples.

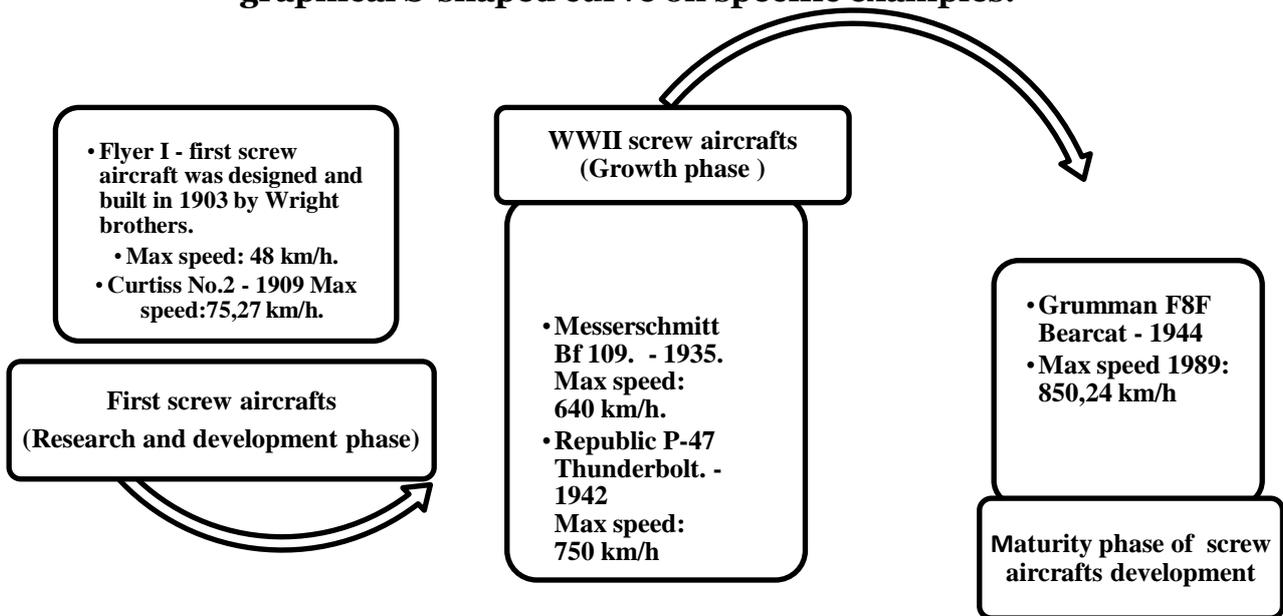


fig.3

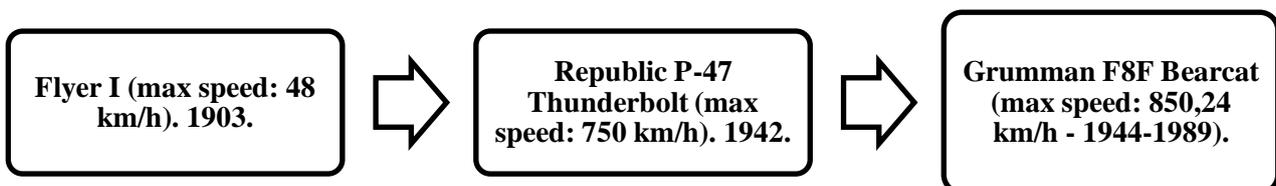


fig. 4

So, analyzing the history of the development of screw aviation (fig.3 and fig.4) using the graph of the s-like curve, it should be noted that the speed of the aircraft Republic P-47 Thunderbolt (which was taken into operation in 1942), which was taken into operation 39 years later than was raised in the air first aircraft in history - Flyer I (1903 issue), **were approximately 16 times higher** than the speed of the Flyer I.

However, the maximum speed reached by the screw aircraft, which was taken into operation during the Second World War, was 850 km / h, namely, on August 21, 1989 Lyle Shelton on the "Rare Bear" plane - a modified version of the Grumman F8F Bearcat aircraft - had installed officially registered speed record for this class of flying vehicles, confirmed by the International Aviation Federation. He flew a distance of 3 km in Las Vegas, Nevada, USA at a speed of 850,24 km / h.

Thus, its speed increase **is only 100 km / h, or approximately 1.1 times** higher than the predecessor Republic P-47 Thunderbolt. The difference is quite tangible: **16 and 1.1 times.**

As can be seen from the examples presented, the development of a screw combat fighter aircrafts, reached its peak at the end of the Second World War in 1944. But in 1944, the war has not yet ended, there is an urgent need for innovative solutions, and the output has been found - the era of jet aircraft started, the new s-like curve is launched, thanks to Werner von Brown and other prominent innovators who were inventors of a new types of aircrafts.

History of the formation and development of jet aviation in the form of a graphical S-shaped curve on specific examples

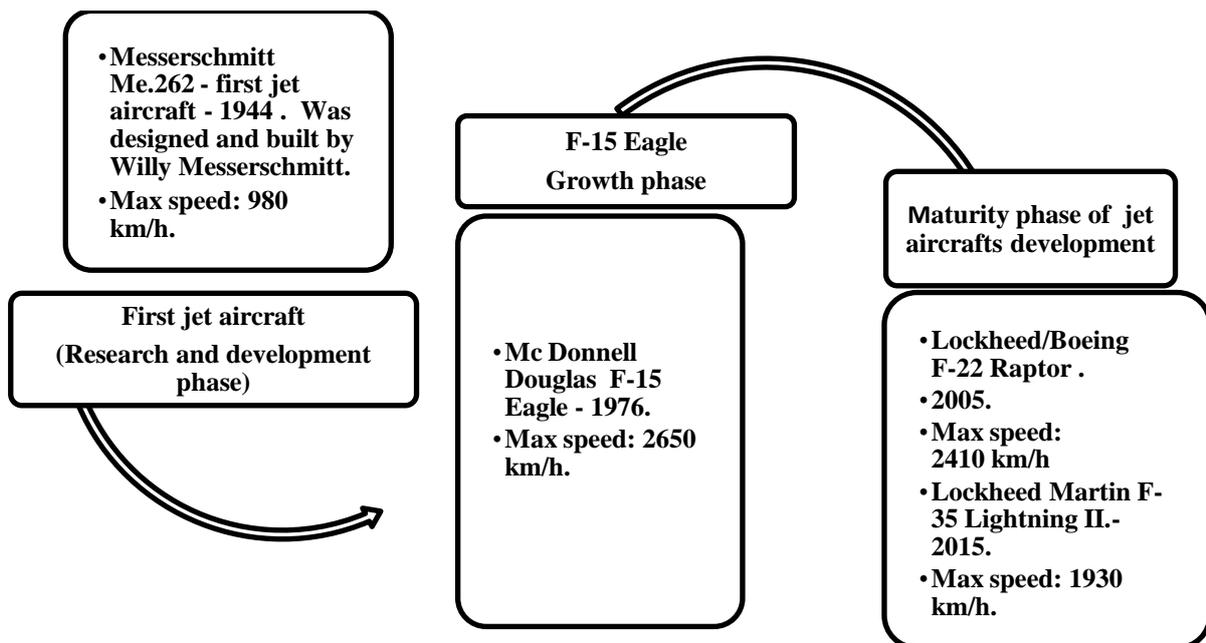


fig. 5

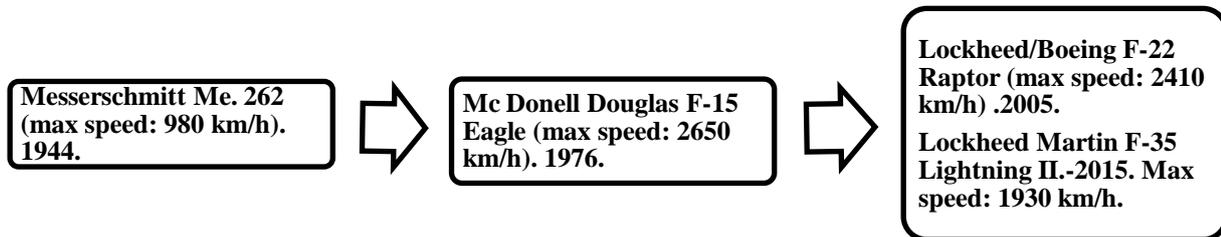


fig. 6

On the graph of the s-like curve - fig. 5, and in the consolidated table - fig. 6, it is also possible to clearly track the emergence, formation and development of jet aircraft, and its degradation.

In particular, the speed of the Mc Donell Douglas F-15 Eagle (this jet plane was taken in operation in 1976) is 2650 km / h and **270 per cent higher** than the Messerschmitt Me-262 speed (this jet plane was taken in operation in 1944) which has speed 980 km / h and speed of the Lockheed / Boeing F-22 Raptor (was taken in operation 2005) is 2410 km / h and is **only 91 percent** of the speed of its predecessor, which is the senior in the family of reactive fighter aviation on the 29 years. The worst-case scenario is at Lockheed Martin F-35 Lightning II (year of manufacture - 2015), with a maximum speed of only **about 73 percent of the jet aircraft speed** which was released 39 years earlier, namely Mc Donell Douglas F-15 Eagle.

It should be noted that, according to the Australian analytical center Air Power Australia, the F-35 fighter does not meet the requirements of the technological level of development and indicators of the tactical and technical characteristics of modern fifth-generation fighter aircraft due to the impossibility of flying at supersonic altitude without the use of afterburner, low traction, low survivability and maneuverability .

That is, analyzing above rates of speed it is possible to conclude that the time of jet aircraft also comes to an end, this technology is already in the maturity phase, as in its time screw aircraft and there is an urgent need for the emergence of new fundamentally differently from existing types of aircraft.

Concept of the global digital platform for interaction between the corporate and scientific sectors

It should be noted that in the above-mentioned examples of the "life" cycle of the emergence, formation, development and fall of technologies, expressed in terms of the S-curve, it is possible to conduct an analysis and to determine that is currently there a certain stagnation in almost every field of scientific and technological development.

The previous technological cycles have already been completed, the new ones have not started, which leads to the gradual degradation and destruction of both the scientific and industrial base, even in developed countries with a traditionally high level of scientific culture.

What are the causes of this problematic situation and what are the possible ways of stimulating scientific and technological progress, "launching" a new stage of innovation development by the S-shaped curve.

It is believed that the main reasons for the decline of scientific and technological progress are:

1. Excessive control by the scientific-pedagogical and organizational-bureaucratic apparatus of the Higher educational establishments regarding the scientific work of young scientists, specialists in one or another field of science and technology, which leads to such negative phenomena as the spread of plagiarism, the illegal use of intellectual property, the inducement to unjustified co-authorship of young scientists etc.
2. Lack of appropriate motivation for scholars, both material and immaterial: the existing system of state and non-state grants and awards is rather complex and lengthy for ordinary scholars who do not have the skills of bureaucratic work on the registration of a large number of documents, application forms, etc.
3. Lack of appropriate level of communication between, individual scientists, scientific communities and potential customers of scientific works, first of all from the corporate sector, which has the opportunity to create the necessary material base for scientific research and to pay the work of scientists.
4. Reducing the level of competition, primarily on the state and corporate levels, from the late 80s of the 20th century, in connection with the end of the Cold War and the formation of hegemony of Western scientific and technological culture. In addition, the deterrent factor in the development of science and technology in the years after the Second World War is the presence of weapons of mass destruction in a fairly large number of states with intellectual and material resources and a certain history of the development and formation of scientific and technological cultures.
5. Minimum of new start-ups in the field of innovative technologies (except IT sphere) due to the lack of an effective mechanism for attracting material resources for scientific research, primarily of a fundamental nature.

In order to address the above-mentioned issues and stimulate innovation development, both individual states and humanity as a whole, taking into account new opportunities and perspectives provided by modern telecommunication means, in particular the Internet, it is proposed to create a global digital platform (hereinafter - the Platform) in order to provide the possibility for individual scientists to implement their achievements and scientific developments in one or another field in the corporate research environment, both public and private. The creation of such a platform will provide direct contact between scientists in any part of the world, which has are have effective suggestions and research developments in which public and private corporations are interested and who have the necessary material resources to conduct both fundamental and applied researches. In addition, the above-mentioned Platform will provide the possibility of building a communication network within the framework of a paradigm: an individual scientist (or a group of scientists) - a design bureau - a test site - a production, with every element of this paradigm can function both in virtual, digital format, and in material form, but located in the most favorable natural and geographical conditions. For example: an individual scientist (a group of scientists) from New Zealand - a design department in Germany - a testing ground and production facilities in Australia etc.

Conclusions

Thus, the article outlines the features of the emergence, formation and development of innovative technologies showed by the example of the history of the development of individual models of propeller and jet aircraft.

This process was reflected in the graphical form of the s-like curve, which most fully and objectively represents the stages of formation, development and degradation of some innovative technical models, the stages of the above s-like curve are examined in detail and disclosed.

In addition, author in his article, proposes to create a global digital platform for interaction between the corporate sector and individual scientists, as well as associations of scientists whose main goal is to unite scientific thought in both regional and global dimensions, and to create the driving force for launching new innovative technical solutions and industrial designs.

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Benefit of Vessel Traffic Service (Example of Belgium VTS Service)

The modern world cannot exist without the transportation of large quantities of goods and people around the globe. For centuries shipping has been the major means of transportation to support world trade. Over the years this huge amount of transportation has only increased. Not only have the quantity of goods that are being transported increased over the years, the complexity of traffic has increased as well, for instance with the introduction of high-speed vessels.

After the World War II, it became clear that beacons and lights weren't sufficient aids to navigation to enable full consumption of port facilities in case of poor visibility and increasing traffic density. So increased quantity and complexity of traffic, combined with the necessity to optimise traffic streams and logistics in harbours and port areas require a form of traffic control. In maritime transportation, traffic control is carried out by Vessel Traffic Services (VTS) . (According to IALA manual 2012)

It is well known that, in the past, a lot of accidents happened in the sea. The table 1 given below contains the list of major accidents on the sea:

Table 1. Major oil spills

Vessel Name	Year and Place	Amount of Oil
Torrey Canyon	1967 /English Channel	120,000 MT
Amoco Cadiz	1973/ France	223,000 MT
Atlantic Empress	1979 /Tobago	287,000 MT
Castillo de Bellver	1983/South Africa	252,000 MT
Exxon Valdez	1989/Alaska	37,000 MT
ABT Summer	1991/Angola	260,000 MT
Braer	1993/Shetland Isles	85,000 MT
Prestige	2002 / Spain	77,000 MT

Source: Own compilation

For example: In the 1960s and 1970s, major shipping disasters including Torrey Canyon, MetulaandAmoco Cadiz made the public keenly aware of the environmental damage that a shipping accident could cause. The concern that such disasters might happen in port approaches and port areas further expanded the use of radar surveillance and vessel traffic management. For this regard, in 1968, International Maritime Consultative Organization (IMCO) passed a recommendation entitled: A.158 - 'Port Advisory Services'¹,

¹ International Maritime Consultative Organization (IMCO): A.158 - 'Port Advisory Services'

it has been recommended particularly in oil terminals and ports where maritime dangerous goods are loaded and unloaded. In 1985 the International Maritime Organization (IMO) adopted Resolution, A.578 (14)-‘Guidelines for Vessel Traffic Services’².

The realities of modern shipping, with larger and less manoeuvrable ships, traffic congestion in ports and waterways, hazardous cargoes and the potential for environmental damage lead to the conclusion that sophisticated measures have been taken to reduce risks. Establishing a Vessel Traffic Service (VTS) was and is still a significant response to that demand. When established, implemented and operated within the context of international laws, conventions and maritime practices and, with the cooperation of vessel operators, a VTS can contribute substantially to the safety and efficiency of maritime traffic, protection of the environment as well as security within the port area. The purpose of VTS as implemented in maritime countries is to reduce the probability of shipping accidents as well.

Review of Belgium VTS Service

As stated in IMO Resolution A. 857(20), the purpose of VTS is to improve maritime navigation safety and efficiency as well as the protection of marine environment from accidents (e.g. collisions, groundings, oil spills) and the adjacent shore area, work sites and offshore installation from possible adverse effects of maritime traffic in a given area. Also, further benefits of VTS towards safety are the simplification of identification and monitoring of vessels, strategic planning of vessel movements and provision of navigational information and navigational assistance. Hence, the implementation of VTS makes ports area safer for vessels which are intending to enter and make use of the port.

The port of Antwerp, in Belgium, is a port in the heart of Europe accessible to capsize ships. The port of Antwerp stands at the upper end of the tidal estuary of the Scheldt. The estuary is navigable by ships of more than 1000.000 Gross Tons as far as 80 km inland. Antwerp’s docks are connected to the hinterland by rail, waterway and road. As a result, the port of Antwerp has become one of Europe’s largest sea ports, ranking second behind Rotterdam. In 2017, the Port of Antwerp handled 223,606,610 MT³ of trade and offered liner services to 800 different maritime destinations. (Data from Port of Antwerp)

Antwerp is already the biggest port area in the world. Over the centuries, the area grew to exactly 13.057 hectares, or about 20.000 football fields. In this area, the Port Authority gives land, warehouses, covering and quays in concession to private enterprises to develop their commercial

² Resolution A.578(14) of The International Maritime Organisation, Guidelines for Vessel Traffic Services

³ <https://www.portofantwerp.com/en/news/port-antwerp-scores-5th-record-year-row>

activities. The Port Authority manages the utility lines, pipes and wind turbines with other parties.

A safe and smooth transfer of traffic in the port area is also vitally important of course. The docks need to be deep enough, the quay walls strong enough, the roads have to be in good order, the locks need to be big enough and freight trains need to be able to get to every terminal. On the table 3 which is given below we can see some technical parameters of the port:

Table 3. Technical Parameters of the Port of Antwerp⁴

Area Right bank 7,239 HA Area Left bank 5,818 HA Total area port area 13,057 HA	Number of locks in use 6 Number of bridges 21 Number of docks 30 Number of buoys on the Scheldt 266 Number of bolders 6,383
Length roads 409 km Length rails 1,061 km Length pipes 350 km Length quays 157 km	

The inland location means that the port of Antwerp enjoys a more central location in Europe than the majority of North Sea ports. As we have already seen the first major difference between the Poti Port and the Port of Antwerp is location, first one is seaport and second one is inland port. The map 1 given below presents outline of the port⁵.

Map 1. The Port of Antwerp



Source: SRN

⁴ www.portofantwerp.com

⁵ www.vts-scheldt.be

There is a great difference between Georgia and Belgium VTS centres. In Belgium the VTS exists more than thirty years. Vessel Traffic Services (VTS) for the Flemish Coast and sea harbours covers an area of 150 kilometres: from the Belgian – French border via river Scheldt to the Kallo lock (Antwerp). It takes a vessel approximately eight hours to cross this area, dependent on the tidal movements and the speed of the vessel. The map 2 given below reflects the working area of cross-border RADAR chain.

Map 2. The working area of the cross-border RADAR chain



Source: Agency Maritime Services and Cost Shipping Assistance Division

In order to be able to assist vessel traffic in the Scheldt area more effectively, a common cross-border RADAR chain was built together with Netherland. This Scheldt RADAR chain makes it possible to provide VTS to ensure safe and efficient navigation.

The current Scheldt RADAR chain consists of five manned traffic control centres. The manned traffic control centres are based in Zeebrugge (Flemish), Vlissingen (Netherlands), Terneuzen (Netherlands), Hansweert (Netherlands) and Zandvliet (Flemish). The VTS includes twenty RADAR antennas and one off-shore radar station “Oostdyckbank” as well. The following subsystems are part of Scheldt RADAR chain too: radar tracking, information system and data bases, VHF costal radio network, 3 RDF stations and costal AIS system.

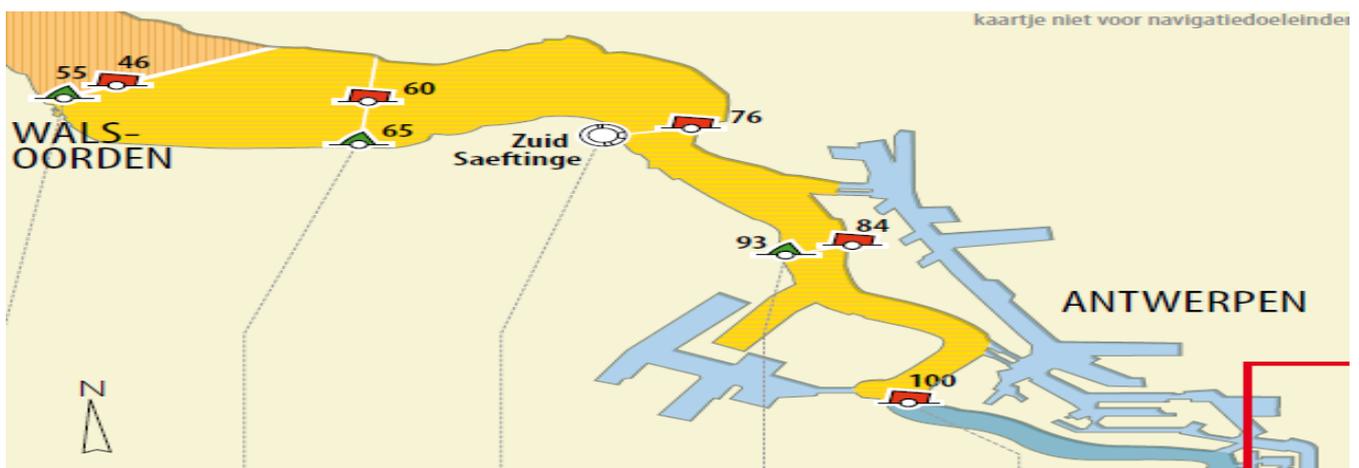
The Central Broker system was built here as well. This system is hub model that exchanges information in an intelligent way. According to the European directives, all information and communication between the different parties must take place as efficiently as possible.

The Central Broken System was built here as well. This system is a hub model that exchanges information in an intelligent way. According to the European directives, all information and communication between the different parties must take place as efficiently as possible. This is achieved by means of chain systems in which a voyage is regarded as a single indivisible

process, with the Central Broker System as the central pivot. The provided data are distributed and processed in the different system, namely the port information systems, the pilot information system and the information processing system.

I like to compare Zandvliet (Flemish) VTS centre situated in the port of Antwerp to Georgia VTS centre. It covers about thirteen nautical miles and expanded from buoy No55- No 46 to buoy No100 (as it shown on the map 3) and only 10 percent from this area is fit for navigation. There are two main pilot stations and anchorages in the Scheldt RADAR Network but neither within Zandvliet (Flemish) VTS centred area.

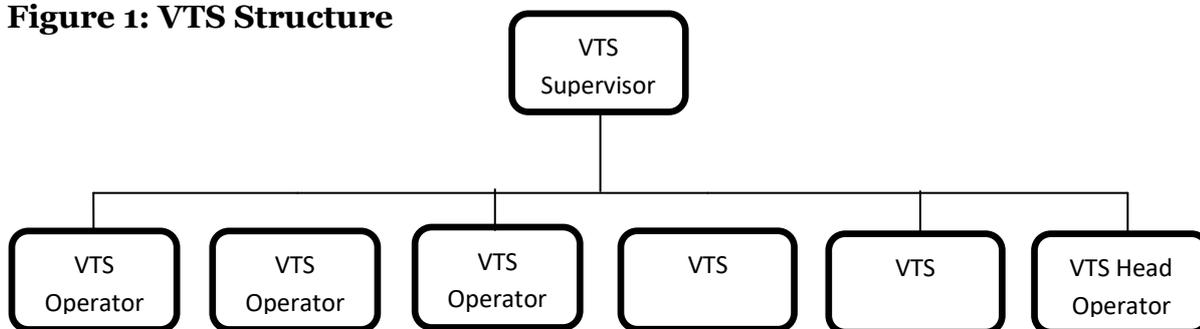
Map 3. Zandvliet (Flemish) VTS centred area⁶.



Source: SRN

Zandvliet VTS team works during the 24 hours a day and seven members are always available on the VTS bridge. One VTS supervisor and 6 VTS operators. Figure 1 shows presents organizational structure of Zandvliet VTS centre.

Figure 1: VTS Structure



Source: Zandvliet VTS Centre

Zandvliet VTS staff guides vessels from the sea to the ports and back together with Dutch colleagues to ensure the safe and efficient transit of

⁶ <https://www.vts-scheldt.net/>

shipping transit in its working area. In order to do their duty, the complete Zandvliet VTS centre is properly equipped with all the necessary tools and from 2003 Zandvliet VTS was connected to the Central Broker System.

As we mentioned above the VTS centre here contains twenty-one RADAR stations of which nine stations belong to the Zandvliet VTS centre. By using those stations, they are able to observe their working area continuously and take necessary actions in case of necessity to prevent accident. AIS here is integrated into the radar system, which uses e.g. the received position, speed and course in the tracking system.

There is a tool specially developed for the Scheldt radar chain which is called IVS information system. This last mentioned is built to get information from port they use the Port of Antwerp. This system takes care of the follow-up and administrative processing of vessel's voyage data within the river Scheldt region.

For communication they use VHF stations. Operators are required to listen channel 12, which is "traffic centre Zandvliet" and "Scheldt information" – channel 85 continually during the watch keeping.

In case of poor visibility, the Zandvliet VTS centre works the following: they have four small areas with separate VHF channels:

- Radar Waarde on VHF channel 19;
- Radar Saeftighe in VHF channel 21;
- Radar Zandvliet on VHF channel 04;
- Radar Kruisschans on VHF channel 66;

And the other two VHF channels (12 & 85) continue their services as well. VTS for the river Scheldt Region is in charge, like in Georgia and for communication Dutch and English are used.

All this processes are regulated by international and national legislations. Such as IMO resolutions; SOLAS 74; EU Regulations Directives; International Association of Lighthouse Authority (IALA) Recommendation V-103 and national law: Shipping regulation within western Scheldt area; Policy Regulation Concerning Sea Scheldt; VTS direct law; Port of Antwerp Police Regulation; To train Vessel Traffic Service operators Belgium together with the Netherlands own a VTS simulator in Kallo, as one of the sub-systems of the Scheldt Radar Chain. Simulator offers console workstations that are an exact copy of the operational systems and make use of realistic traffic information. If somebody likes to become VTS operator, he / she is required to pass initial exams and in case of positive results he/she have to take a nine months course and after graduation of this course they have to pass exam and the certificate of VTS centre operator will be granted.

Conclusion and Recommendations

Thus as we have already seen VTS is implemented in the ports due to safety, security and economic reasons. Since the movements of cargoes by sea are increased it gives ships opportunity to navigate safely and efficiently. We can say that this is navigational aid in the port area for those reasons.

As we saw VTS has economic impact as well. Besides VTS service is not free of charge, also it makes ports more protected and safely for navigation. And this maybe is port advantage and port is attractive from ship-owner side itself. Nobody wants to lose his cargo and ship; they prefer to pay more and do their work effectively. So those ports which have VTS are prioritized and have much more inbound and outbound vessel as well, which is reflected on its economic circumstances.

Besides the above mentioned, the VTS is one of the important system in context of environmental issue. Nowadays much more attention is dedicated just for that issue. How much is port environmentally friendly “Green Port”. There are a lot of shipping disasters related to this problem. One of them is for instance: “Torry Canyon” disaster which made environmental disaster. If we want to avoid such kind of bad events, implementation the VTS is the best way.

In order to have productive VTS centre, we have to continually try to get all innovation in this field, implement and regularly control its work. Besides we have to care regarding personal qualification and trainee, find the way to send on the special training which will help them to understand and realize new innovations in that aspect and after use in their everyday work. All together: qualified personnel, latest innovations and equipment will give us productive and flexible VTS centre. For example: the VTS authority of Belgium / Netherlands are going to implement the admittance policy for safe and efficient inward and outbound traffic on the Scheldt area in order to make system more flexible in case of tidal changes.

Thus VTS plays a key role in making the information available to the right place at the right place. IT helps ports to be “Green”, more safe and makes ports competitive. Actually main users of VTS are vessels. It will not be bad if besides VTS personnel the ship masters and officers of the watch should have sufficient knowledge about VTS and its services as well, in order to increase quality of service. That’s why IALA is working towards a compulsory training for officers in charge of a navigational watch regarding VTS. IALA wants to implement this in the STCW. For example: A ship master immediately begins to find excuses when he receives a message commences with the message marker “information” and telling that his vessel is navigating out of traffic separation scheme. However, instead of this reaction he should be cooperative and should answer as “understandable”, then evaluate the situation when he should receive this kind of message for the safety of his vessel. The root cause of this behaviour is their wrong impression

concerning VTS is not serving them but monitoring and reporting their inappropriate actions. In other words, this situation can be defined as the lack of “interaction” that arises from the vessel which takes part in the definition of VTS.

Finally, more technology, knowledge, experience, reliability, personnel quality and service improvement, the more services provided by VTS improve too. One of the provisions is informing the ship masters continuously about progress and definition of services in order to benefit from them. In addition, a voluntary VTS user certificate training may be considered for ship masters and officers of the watch.

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INNOVATIONS IN SCIENCE: THE CHALLENGES OF OUR TIME

Collective monograph

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