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MANAGEMENT OF THE 21ST CENTURY:

GLOBALIZATION CHALLENGES. ISSUE 2

Collective monograph

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PREFACE

Globalization, as the establishment of the world integrity, is manifested, above all, in the formation of a single socio-economic, political, cultural and informational space.

The growing intensification of the interdependence of peoples and states is extended to all spheres of public life. Globalization and regionalization have become the determinative processes of the world development, the main vectors of the present. As new trends in modern post-industrial development, they lead to the emergence of new requirements for management in the 21st century, which is increasingly influenced by processes of globalization and integration, involving the consideration of regional peculiarities in the process of effective implementation of global management. However, the peculiar to the beginning of the third millennium dependence of the dynamics of society development on the quality of management activities determines the need for a solid rethinking and critical analysis of the fundamental concepts and categories of management sphere.

Traditional management, as a mechanism in its various models, forms, systems, has exhausted itself, since it does not contribute to solving the globalization problems of the development of civilization, which caused the objective need for formulation of the recent paradigm of management of the 21st century – management, the essence of which is to resist the processes of self-destruction; to create conditions for the harmonization of open self-regulatory systems: of a person, an organization, a society; to create conditions for the realization of creative potential of each person; to form and implement the management mechanism at all levels for any open socio-economic system.

These and other problems determined the need for further research in the field of modern management, which led to the integration of the results in the second issue of the joint monograph «Management of the 21st century: globalization challenges. Issue 2».

The joint monograph presents the trends in the theory of management that are developed on the basis of the analysis of scientific-theoretical and methodological works of scientists and practitioners and create opportunities for the practical use of the accumulated experience, determine the content of management, and awareness of them is supposed to become the basis for the choice of focuses for further research aimed at improving the theory of management. In the joint monograph, much attention is paid to the practical tasks connected with the formation of organizational and economic mechanism of corporate management in the context of globalization, the development of methods, principles, models of management, taking into account modern scientific approaches and consolidated informatization of business processes of modern enterprises.

The monograph presents the results of the research and scientific attitude of authors from different countries to innovative aspects of management: management

of organization as a socio-economic system, innovation, investment and information management in the system of a modern enterprise, personnel management in a modern organization, branch and regional aspects of modern management, public administration, agrarian management, tourism business management, international business management, risk management, management of security and competitiveness of the enterprise, marketing management, modern approaches to management of higher education.

The authors covered a wide range of problems – from the formation of conceptual foundations of the management of the potential for development of the state to the applied aspects of management of its individual subsystems.

The monograph consists of four parts, each of which is quite independent in terms of problem area. The structure of the monograph, presented by four parts: development of modern paradigm of management: globalization and national aspects; management of modern socio-economic systems: a sectoral and regional approach; current national and global fundamentals of social and economic systems' development; the legal, sociocultural and educational aspects of society management, helps to focus on the conceptual problems of the formation and development of the socio-economic and socio-ecological component as well as problems of ensuring the process of practical application of the developed management models.

The advantage of the joint monograph is the systemacity and consistency of the structure, the simplicity and accessibility of the material presentation, the presence of examples and illustrations.

The results of the research works presented in the joint monograph have a scientific and practical importance.

We believe that the monograph will become one more step towards a scientific solution of the problems in the context of formation of the effective management system under complicated globalization conditions.

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CONTENT

PART 1. DEVELOPMENT OF MODERN PARADIGM OF MANAGEMENT IN UKRAINE GLOBALIZATION AND NATIONAL ASPECTS

THE PECULIARITIES OF ENSURING DEMOGRAPHIC SECURITY OF THE COUNTRY

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Over the last decade, both in the scientific literature and in speeches of public figures and practitioners around the world the terminology has been used more often, directly or indirectly connected with the notion of demographic security. At the same time, some states are actively involved in activities aimed at developing programs and measures that regulate the principles and ways to ensure demographic security.

Under the present conditions, the urgency of studying the issues of demographic security is caused by several reasons:

first of all, in most countries there is a growing role of demographic component and increasing its influence (most often negative) on the social-economic development of the society;

as a result, governments of various countries have to solve objectively a wide range of demographic problems, which have reached the status of national threats. Thus, an urgent need arises to consider the peculiarities of demographic security;

hence, the demographic situation of any country generally reflects its social-economic wellbeing, formed by both past and present social processes. It is evident that ensuring demographic and in the broad sense national security can only be based on the objective assessment of the current situation.

Analyzing the essence of the notion of demographic security, especially its ontological component is not less important.

Most scholars confirm that demographic security is one of the kinds of the country's security, and its regions. Along with it there are economic, military, and social securities. Demographic security interacts with other sectors of social-economic relations and it cannot be considered only as a field of auxiliary interests of the state, which has only a utilitarian value to solve geopolitical tasks.

Thus, according to Rybakovskyi L., demographic security can be represented as a state of demographic processes, which is sufficient for the population reproduction without the considerable influence of external factor and providing human resources to achieve geopolitical interests of the state [11].

Other authors share the opinion that demographic security is the functioning and

developing of the population in its age-sex and ethnic parameters, its correlation with the national interests, consisting in ensuring its integrity, independence, sovereignty and the preservation of the existing geopolitical status [7, p. 15].

Steshenko V.S. notes that demographic security is such a state demo-reproductive processes that does not have real or potential negative effects on the country's development [12, p. 54].

According to Gorbulin V.P. and Kachynskyi A.B., demographic security is the protection of life and the processes of natural continuous reproduction of people. Demographic security requires consistent implementation by the state and society of social-economic, political, legal, moral-psychological and other measures to preserve and improve the people's health [3, p. 23].

In official documents the definition of demographic security is given only in the "Methods of calculating the level of economic security of Ukraine", in which demographic security is mentioned as one of the components of economic security of Ukraine and it is treated as protection of the state, society and the labor market from demographic threats, which ensures the development of Ukraine taking into account the totality of balanced demographic interests of the state, society, and the individual in accordance with the constitutional rights of the citizens of Ukraine [9].

It is necessary to take into account that demographic security purposes, being the priority for the society, yet co-exist with others, which are also important – the objectives of social, economic, political, security, performing system forming function that contributes to forming the priorities of ensuring the national security.

Besides, demographic security has independent significance, as it is connected with one of the most fundamental aspects of human activity – procreation, and therefore life continuation. Only in case of supporting health, longevity, reproductive activity of the population it is possible to solve successfully social-historical tasks [1, p. 241].

On the basis of generalization it was found that demographic security of the state is affected by the following factors: historical peculiarities; geographic position and economic situation; resource base; internal and external relations in the country; education, health protection; the position and processes taking place in other countries. Thus, the level of demographic security reflects the state of the society's resistance to various unfavorable factors hindering its development. According to this approach, reducing the country's population is the indicator of danger showing the drawbacks of organizational-state mechanism of ensuring the population's vital activity, causing the threat to the country's status. Therefore, demographic processes (birth-rate, mortality-rate, migration, etc.) in the society, have, if not purely social, but precisely social-economic character.

So, in the author's opinion demographic security is a category penetrating all the sectors, segments, sectors of the human population vital activity. Therefore, it is impossible to imagine it outside of any of the national security sub-groups (Fig. 1).

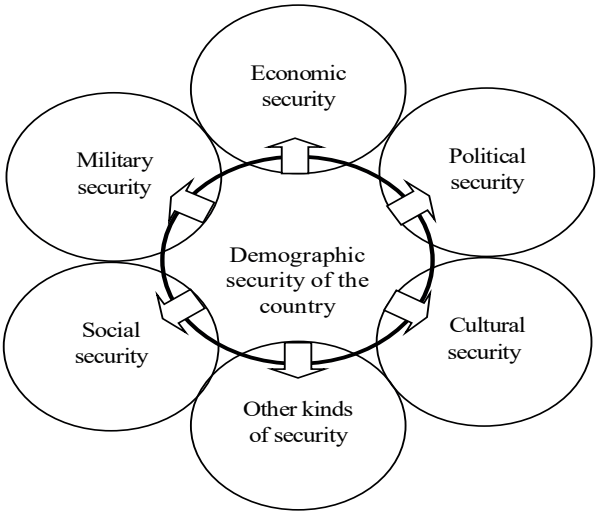

Fig. 1. The relationship of demographic security with various aspects of the national security [summarized from 5, 8]

Thus, in the broad sense demographic security is connected with almost all sectors of social vital activity, and requires separation, especially because of its ever-growing importance for Ukraine. All the above mentioned shows, that theoretically it is extremely difficult to substantiate the attribution of demographic security to a separate kind of the national security.

The demographic situation in Ukraine has been worsening in recent decades - demographers note the spreading of depopulation in the country. The population is decreasing every year as a result of natural and mechanical migration; the process of the nation's aging is going on, the indices of demographic burden on the population are growing; the reduced birth-rate in the long run will result in decreasing labor force and potential of the country. Thus, ensuring optimal demographic situation is one of the priority tasks for the Government, because all the wealth in the country is created by the labor of the population – the main productive force, labor resource potential [4].

During 2018 the population of Ukraine decreased by 233.2 thousand people by January, 1 it had been 42 million 153 thousand persons. This is stated in the express issue "The demographic situation in 2018", published on the official website of the State Statistics Service of Ukraine [13].

According to the data the number of deceased persons in Ukraine exceeds the number of births: 100 deaths accounted for 57 births. In 2018, 335.9 thousand children were born in the country and 587.7 thousand persons died. Migration increased on 18.6 thousand people.

According to the latest All-Ukrainian census conducted in December 2001, the

population of Ukraine was 48,415,000 people.

According to the official data of the Ministry of Social Policy, about 3.2 million citizens of Ukraine stay permanently abroad to earn money without taking into account Ukrainians who travel abroad for seasonal work [2].

Another important factor for analysis is average life expectancy. The index of life expectancy shows how long the average citizen of the country will live. The essential conditions are permanence of birth rate and mortality rate, because based on these data the average life expectancy is calculated. The average life expectancy in Ukraine in 2018 was 68.8 years, and it is absolutely equivalent for both gender categories. This index is not only much less than the corresponding indices in Western European countries, but is still considerably lower than the average life expectancy in the world. According to the UN, it is 71 years. It is worth mentioning that there is a significant difference in life expectancy between men and women. If the average life expectancy of men in the world is 74.6 years, in Ukraine it is only 62.6, or 12 years less [13, 14].

In particular, the sectors of social-economic threats include high and rising level of unemployment, social and economic stratification of the population, increased poverty, criminalization of the economy, low living standards in the country; the social-psychological factors are physical degradation of the population, degradation of the institution of the family and life values. The violation of ethnic and cultural traditions is also an important factor in emerging demographic threats because their sharp change can lead to moral confusion of the population, the violations of value priorities. The worsening of ecological situation in Ukraine has a negative impact on public health, resulting in lower reproductive capacity of the population and reducing life expectancy. An important condition for overcoming the demographic crisis is solving political and armed conflicts in Ukraine.

The main threats to the demographic security of Ukraine are reflected in Fig. 2.

Demographic threats are such factors and their complex, which may cause destabilization of the demographic system and, as a result have unfavorable effect on demographic and economic security on the whole. The threats, leading to demographic danger are divided into external and internal. The internal threats are the factors that arise directly in the demographic system and are described by its quantitative and qualitative characteristics. Social, economic, political, military, environmental, informational influences are external threats having both direct and indirect impact on demographic security of the country [8, 10]. The specifics of basic demographic threats systematized above, is limited to their having inter-object (inter-state, interregional, etc.) nature.

That is demographic security of any country in the world is determined not only by demographic processes taking place in it, but also by the demographic processes that take place outside the country (in neighboring states, regions, etc.).

Thus, the demographic situation must be constantly and fully controlled by the state, regulated by implementing the corresponding demographic policy – a complex

of measures aimed at forming stable qualitative and quantitative characteristics of the population reproduction, the objectives of which are to overcome the negative demographic tendencies and solve the urgent problems.

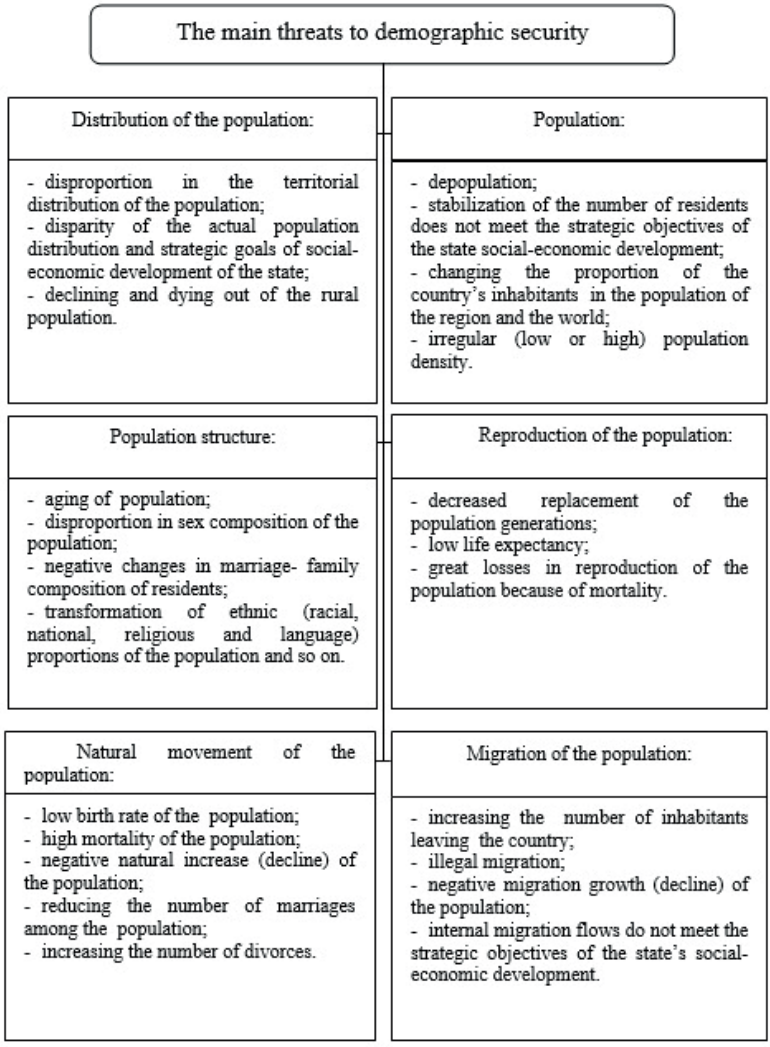

Fig.2. The main components of the country's demographic security [formed on the basis of 3, 5, 6, 14].

The country's population must be protected that is why the corresponding demographic policy should be pursued by implementing measures to overcome

the demographic and economic crises. In Ukraine there is a need to increase the population, so the country's leadership should influence the processes of the population reproduction, which can be achieved by encouraging a favorable demographic behavior of the citizens, especially in family planning.

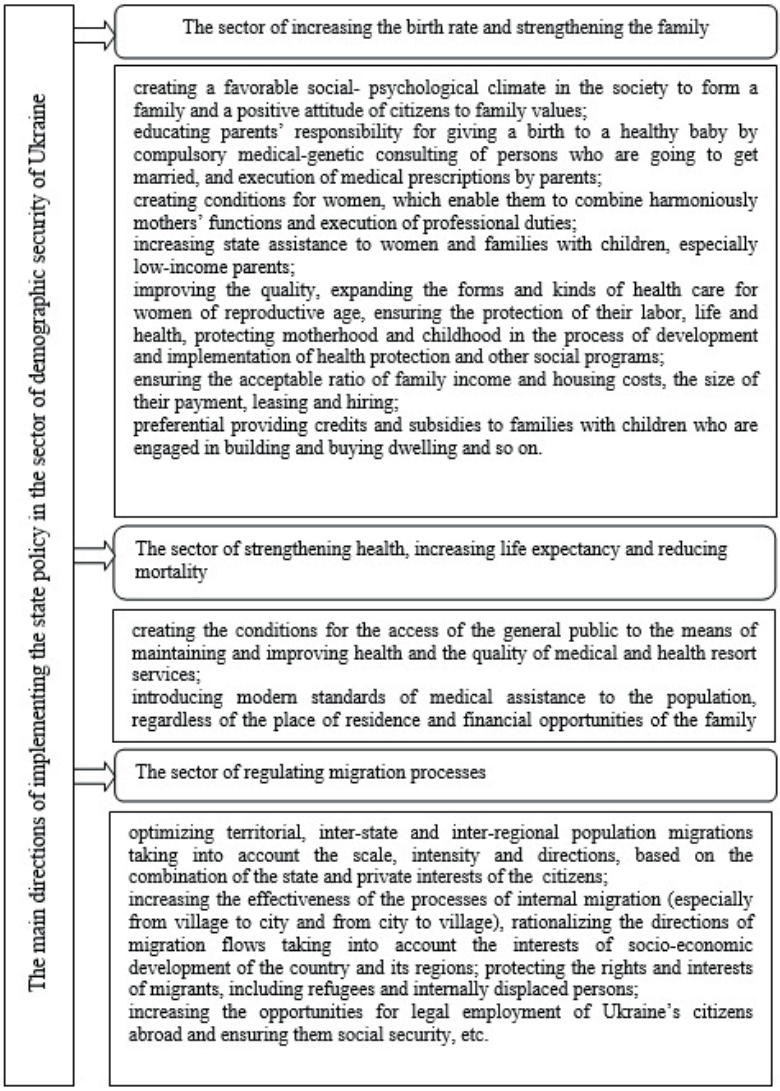

Fig. 3. The main directions of implementing the state policy in the sector of demographic security of Ukraine [formed on the basis of 4, 5, 6, 13, and 14].

Therefore, to achieve the appropriate level of demographic security in Ukraine its priority tasks should be:

- firstly, stabilizing birth-rate and bringing it in the long-term prospect to the level that ensures the simple demographic reproduction mode;
- secondly, improving the population's health, reducing mortality and increasing the average life expectancy;
- thirdly, strengthening the institution of the family, marriage-family relations and improving vital activity conditions;
- fourthly, improving the regulation of migration processes [10].

Based on the above-mentioned tasks, the main directions of implementing the state policy in the sector of demographic security of Ukraine are reflected in Fig. 3.

The main impact of the state on demographic processes can be carried out through the mechanisms of state administration, the main of them are the following ones:

There are the following mechanisms of regulating the state demographic policy:

- firstly, the legal mechanism of regulating demographic policy (creating unified legal and administrative standards of behavior);
- secondly, the economic mechanism of regulating demographic policy (providing direct financial aid, subsidies from the state budget or local budgets, indirect financial assistance);
- thirdly, information-psychological mechanism of regulating demographic policy (using mass media, art with the aim of forming public opinion, the standards of demographic behavior, definite demographic climate in the society) [14].

Thus, the demographic factor is essential for sustainable economic growth, guaranteeing economic and national security of the country because there is no sense in all other sectors of the state security, if there is no the main factor – the population, due to which all these sectors exist.

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BASIS FOR STRATEGIC MANAGEMENT AT HEALTHCARE ENTERPRISES

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Provision of healthcare is the responsibility of every government to assure the health of its most valuable asset, people. Advancement in healthcare includes the development of new diagnostic procedures, new techniques, new equipments, and new drugs. These techniques are developed to diagnose diseases faster at an early stage before the disease is fully developed, shorten lengthy procedures allowing

shorter hospital stays and create new drugs that combat illness in more efficient way with fewer side effects. The practice of medicine is being revolutionalized by these techniques, however, these techniques are a result of serious research i.e. they cost money to develop and therefore, the saving achieved by these techniques is eaten by the cost of the high technology.

The great development in healthcare is also matched by the development of new standards of care, which is updated annually to match the changes in the healthcare system. The Joint Commission for the Accreditation of Healthcare Organizations (JCAHO) is updating its standards of healthcare provision almost annually. To comply with these standards hospitals have to carry on mass changes that cost a lot of money, another cost factor that is not accounted for while planning the budget for a healthcare organization.

Healthcare is a continuously developing system; it is a dynamic system that requires a dynamic system for its management. The old management by objectives system is of no value in the management of the new era of healthcare. There is a need for a dynamic management system, clear vision, and a strategic management plan to decrease cost and ensure quality of services for our patients.

Total Quality Management (TQM) is a management system developed in Japan and use for over 30 years before it became know world wide it proved to be an excellent system for provision of quality services, decreasing cost, concentrating on customers' needs and achieves full staff involvement and support as well as their satisfaction. The system is dynamic that is suitable for continuously changing and developing organizations and services. Through its Continuous Quality Improvement model it can solve problems, improve processes and decrease cost. It is an ideal system for healthcare where it allows coping with the rapid change and manages the whole organization simultaneously. JCAHO approved and requires the application of this system in all healthcare facilities that seeks JCAHO accreditation.

Before we go into the details of managing healthcare we have to understand all its aspects and all factors affecting this growing system. These aspects are: standards of healthcare and how they affect healthcare delivery, the business side of health, and the quality and its impact on healthcare delivery and promotion.

Standards: the standards of healthcare are believed to be set to assure the quality of the services we provide to our patients, yet it is just the starting point in quality. Quality of services can be improved continuously to achieve customer's satisfaction beyond JCAHO standards. The JCAHO sets the standards of practice however; it basically categorizes services as functions and sets the requirements for documentations of the services. Therefore, to provide quality services we have to start with the standards and build on to create the level of services desired by our customers. Our customers are the one who determine the quality of our services since they are at the receiving end and they are the ones whom we have obligation to satisfy, after all they are the ones who pay for our services.

Business side of healthcare: healthcare recently underwent serious transformation,

i.e. the same forces that transformed and reshaped much of the world's economy also affected our healthcare system. Healthcare became a huge business driven by market demand. Our customers became more informed, more assertive, and more demanding. Their busy daily schedules don't allow for long waiting hours for the doctors, nor for the acceptance of one physician's opinion "doctors know best" it looks like that the same demythfication process of pharmacy profession, that took place following the launch of Pharmaceutical industry is reshaping the public belief in the medical profession. Customers seek quality, and go into extensive evaluation and reviews for the best doctor in the field. Also customers are not only looking for quality services but they demand convenience for the services they receive.

Healthcare providers are faced with number of issues to consider while planning for their organizations, one of the main issues is the Return On Investment (ROI); ROI has come to the forefront with the advent of the Balanced Budget Act and other financial pressures. ROI is defined as a financial measurement that looks at the percentage return on the use of specific assets (usually money, but not always) the normal formula to calculate ROI is:

ROI= Net income divided by the owner's equity

or

ROI= Revenue traceable to the efforts divided by the investment made

Generally in industry it is easy to understand and calculate the ROI yet in healthcare we are faced with number of issues that are unique to healthcare both on the impact and limit our ability to measure ROI for marketing these include e.g. innovation capital of medical facility.

There is often a significant time delay between marketing efforts and when a service is actually used. How many people come in for open-heart surgery during or right after a three-month cardiac services ad campaign.

Most healthcare usage is not planned or spontaneous. In fact usage is frequently avoided until the need becomes acute. People don't wake up and decide that today would be a good day for bypass surgery.

Many of the financial accounting systems used by providers are not geared to easily provide accurate pricing, cost, and margin information. One major problem in our industry is how we allocate overhead and the resulting margin. Our financial systems force every unit of measure (admission, visits etc.) to take a pied of the entity's overhead. While this is reasonable for annual auditing purposes, it does not make sense in measuring the ROI of a specific marketing effort. In most cases, new volume is incremental and does not result in any new overhead or fixed costs (unless significant levels of new volume are gained and maintained).

Many of the information systems used by providers are not geared to easily and quickly measure volume changes or specific usage tied to specific marketing efforts.

The bottom line is that we need to remember that marketing in healthcare is

more than tactical public relations and advertising. Marketing involves efforts that range from sales calls and physician relation to 24-hour phone access, system "ease of use", facility quality and pricing for elective or non-insured services. Some marketing efforts do have near-term tangible returns. Other efforts, however, involve the long-term building and maintenance of the "Brand". It is hard to attach an ROI to this brand building; through it can be measure quantitatively using broader objectives. However, ROI should be included during setting any marketing plan or strategy however, we have to keep these points in mind and not to expect the ROI will be easily assessed. It could be a long-term result.

Quality of Services: the Institute Of Medicine (IOM) defined quality of care as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge". It has also been demonstrated that delivery of high-quality care, as defined by the IOM, is a collaborative endeavor and not the exclusive domain of any one discipline, department, or organization. Unfortunately, in the quest to operationalize this definition, the core healthcare principle-first, do no harm-seems to have been forgotten.

While fee-for-service are perceived by some to encourage overuse of care and managed care's capitation system is thought to encourage underuse, clearly neither system exists to encourage misuse of medical services. Yet, according to the Centers for Disease Control and Prevention (1999), deaths due to preventable adverse events exceeded deaths attributable to AIDS, breast cancer and even motor vehicle accidents in 1998.

Using information to identify and effectively address opportunities for improvement and documenting and demonstrating the results of such efforts are critical for survival in today's healthcare environment. Both hospitals and managed Care Organizations (MCOs) are challenged to meet these demands in environments in which healthcare resources are diminishing, yet the requirements to demonstrate, improve, and sustain quality of care are increasing.

In early hospital Quality Improvement (QI) attempts, members of each respective discipline were charged with designing and coordinating their own projects; thus they never gained an appreciation for working collaboratively with one another. Although the 1990s rectified that situation as organizations experienced the power of interdisciplinary collaboration in their QI efforts, the next logical outgrowth, that of interorganizational collaboration, has yet to occur consistently. Establishing an interorganizational approach to quality as a core operational process within MCOs and their network hospitals will cultivate refinement of care that stems not from fiscal implications but rather from making the «right thing to do, the easiest thing to do whether it is in the doctor's office, the hospital, or the managed care organization».

The role of quality management is to assure the provision of high quality services, minimize or eliminate preventable adverse effects, maximize the

utilization of resources, improving processes with collaboration of all concerned parties and minimizing the waste attributed to misuse of services. Quality is achieved by implementing a management system that oversees all aspects of care as complementing each other and work through processes improvement to achieve their goals. The efforts of Quality management will be reflected positively on the business side of healthcare and will eventually reduce the cost of healthcare.

Developing a strategy for healthcare organizations is not a simple task, it requires full understanding of the current market challenges, evaluation of our customer satisfaction, evaluation of our current operations, assessment of the quality of our services. The strategy starts with the organizational leadership vision, and values statement, followed by development of objectives and devising a plan to the implementation of the means to achieve these objectives.

The first step as we stated earlier is the vision of the leadership, vision states the future where the organization wants to be at the said time driven by values which covers the accountability, continuous improvement, customer driven services, and the quality of the services provided.

Development of a management process for our organization is practically a Plan Doc Check Act (PDCA) cycle and it goes through five Phases:

Plan: Phase I: this phase include the feed back to the organization from different resources, e.g. Customers complaints, processes failure, stakeholders remarks, employees feedback, and the market place surveys. This data will identify the key business-related aspects of healthcare and provide clear picture on how the organization is performing, also it will highlight areas of strength and weaknesses in the organization.

Phase II: Objectives of the organization will be driven from the work atmosphere and the feedback of the working staff discussing their problems and proposing solutions for these problems. To obtain these objectives the leadership has to go through the process of Policy Deployment (PD).

Policy Deployment (PD) was borrowed from the Japanese, and the name itself isn't likely to till a great deal about it. PD is a simple straightforward process, which provides a powerful structure to communicate to your organization through the use of facts and data, the direction you want to move your organization.

PD creates the structure to set strategic objectives, both short-term (one to two years) and longer term (five to seven years), however, in healthcare we can't go that far with our strategic planning, where the changes in healthcare is quite drastic and maximum 5 years plan will be more than we can go for. PD compels your organization through the use of facts and data to develop very specific plans and projects to meet those objectives.

PD process can be organized in the following manner:

1. Executives request all managers to submit a list of problem area.
2. Managers request their staff to find out what their problems were.
3. List of problems and areas of improvements are passed to the PD Committee.

4. Executives will carry on their own assessment and surveys to evaluate customer's satisfaction.

5. All the information gathered plus the staff problems list and areas of improvement is passed to the PD committee, which is made up of senior management.

6. PD committee along with an executive committee formulates the fundamental objectives of the organization.

7. Organizational objectives will be formulated based on the final outcome of the PD process.

Do: Phase III: The results of PD will be reflected not only in setting the organizational objectives but it will be expressed in projects and other improvement activities. Therefore, Phase III puts organization and infrastructure around the output of Phase II. It will describe Who, Will do what, by when, and for What purpose, with What linkage to the system etc.

Check: Phase IV: Management efforts are now aimed at the following:

1. Keep activities focused on the selected themes.

2. Discourage dissipating energies with other legitimate but unsolicited goals and strategies.

3. Encourage persistence; continue to demonstrate management interest and support.

4. Support the use of data and logic. Discourage careless short –cuts and reliance on opinion data.

5. Extract and organize the learning, which continuously occurs in each effort. Redirect these learning back into the system.

Act: Phase V: The management reviews Feedback on the results of the different projects and process improvement efforts. This will allow the management to assess the progress made, and accept or reject the recommended changes based on the results. Data collected will give the organization the strength to make changes and modification of its operational system based on facts and data.

Planning the strategy for your organization starts by Vision, however, assessment of your current operational functions and evaluating your organization performance is the key to establishing efficient objectives. It will point out your points of strength and weaknesses that will be an asset in devising you objectives. Data gathered through the process of PD will be of great value in shaping your future look.

It is quite clear that to have effective management of your organization, it is necessary to establish a quality management department. Quality Improvement (QI) efforts will be the major force in improving the performance of your organization and increase your efficiency. Quality has been viewed by some organizations as an accessory that they can do without, however, it was proven beyond any doubt that it could be the most important function that guides you strategic planning of your organization, improve services, gain customers satisfaction and decrease cost.

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TRENDS OF SOCIAL ENTREPRENEURSHIP

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The aim of the abstract is to investigate the role of social business and its contribution to the development of a modern society. Definition, types and representatives of this business area are investigated in this article as well. Resources for social entrepreneurs available on market are analysed, both with current trends and issues of social business. Tools to accelerate social business are offered with the conclusion that appropriate education may boost potential of this entrepreneurial activity and some already elaborated programs observed in this article could become a basis for equal courses implementation in the other countries as well.

In this article, the authors are going to examine the phenomenon of social entrepreneurship, and to give a definition of this concept on a basis of opinions of various researchers. Stated research problem is to analyze the development of social entrepreneurship, current issues and trends with an aim to clarify main tools of accelerating social entrepreneurial activity. The development of the social entrepreneurship as a separate growing part of a modern business process is the main objective of the paper. The research on challenges and benefits social entrepreneurship brings to its stakeholders in different countries and regions is made, existing relationships within the system and the environment are analysed, foundations and available resources are mentioned to be used by the entrepreneurs with an aim to get a support. Main conclusions of the research are obtained in the result of review of latest scientific progress and according publications in the consonance with own

obtained experience: the need to change legislation according to the needs of the social entrepreneurs, wide work with publics should be provided to stimulate its activity and readiness to participate in the process of social entrepreneurship as it brings wider outcome for a society at large and to establish its sustainability, educational process should foster the social business development offering education opportunities within the field at several study levels and in different forms.

Research problem is to analyse the development of social entrepreneurship, current issues and trends which will underpin main tools of accelerating social business.

Main objective of the abstract is social entrepreneurship, its development.

For the study of the problem of social entrepreneurship the following methods were used: analysis of scientific and business literature, observations and interviews.

Methodological basis includes the following methods: system analysis - used to assess the challenges and benefits of social entrepreneurship in US, Europe and Latvia, the system of relationships between suppliers of services and publics, foundations and resources offered by the European Union.

Research results: the development stages of social entrepreneurship were analysed, tools to accelerate the social business were offered, education process as one of the most beneficial aspect to contribute the implementation of social entrepreneurship was offered to be taken into a consideration.

Research limitations: limited access to information for a truly complex evaluation and the fear of executives to reveal particularities of their business, which are connected to social entrepreneurship services in Latvia.

Originality/meaning: this article aims to identify challenges and benefits of social business in different countries and identifies the educational aspect among most beneficial tools of accelerating social entrepreneurship.

It seems obvious the development of our civilization reached self-actualization level (according to the Maslow`s pyramid hierarchy) at the beginning of the 21st century as concept of social entrepreneurship is popular than ever before. The idea when profit is gained it is possible and even desirable to share received contribution with others took minds of the progressive people from many countries. Every year grows amount of NGO – non government organizations, associations, foundations and private companies which announces themselves as belonging to social entrepreneurship and supporting other companies involved in this area of a business.

It is officially admitted already that social entrepreneurship doesn't matter nonprofit or voluntary activity, it is possible and acceptable to gain profit and to remain socially active and beneficial at the same time. Legislation of the countries should be changed altogether with an approach to taxation and other evaluation of this field of the business. Latvia also remains as an area where social entrepreneurial activity takes place and amount of involved organizations grows annually. The aim of this abstract is to investigate both issues and trends of social entrepreneurship in Latvia and abroad, including tools of accelerating this field of a business.

Definition, types, representatives. The phenomenon of social entrepreneurship is attracting more and more of attention in today`s world and its popularity is increasing rapidly among economists, politicians and researchers.

The importance of social entrepreneurship is enormous. In the focus of social entrepreneurship there are social gaps that are forming over stiff competition in the business environment. Social entrepreneurs should carry out a phase shift in the direction of social entrepreneurship to improve the lives of the population at large.

There are some already successful examples of social entrepreneurship. For instance, Nobel laureate Muhammad Yunus came up with the idea of giving out money to the poor without collateral. He had started a microcredit project with a loan of $ 27 to 42 people, and created the Grameen Bank with an annual loan portfolio of $ 10 billion and a customer base of several million people. The example to follow is the Shaukat Khanum Cancer Hospital in Pakistan. Although the hospital also receives charitable funds, owners of the hospital have launched a large network of medical laboratories that helps to provide free / subsidized the treatment of cancer.

It is important to understand that the launch of social enterprises means that the implementation of social work, the organization cannot rely on charity only. Investors have their own model of work and, as a rule- social projects must comply with this. It is necessary to realize its mission and ideas for the social entrepreneurs, which may be in a conflict for a charity funding. This makes difficult the task of the social entrepreneurship as the businesses have to apply their own funds for self-financing and to be independent.

So, what is it social entrepreneurship. One of the authors had defined the social entrepreneurship as a new type of business that is successfully developing in the world, through the creation of social wealth, but generation of economic wealth is not the main aim of social entrepreneurship [Dees, 2008; Leadbeater, 1997]. Other researchers argue with the statement, as the activities of social entrepreneurs have far-reaching economic implications for strengthen economic growth, reduce poverty and improve social development scale [Zahra, SA, Gedajlovic, E., Neubaum, DO, Shulman, JM, 2009]. As a result of the intensity and complexity of the social and environmental issues, social entrepreneurship is becoming increasingly important. In the commercial sector, social entrepreneurship is closely related (although a difference) with the concept of corporate strategy and the main areas such as corporate social responsibility, corporate social innovation. In the public sector, social entrepreneurship is associated with experiments in social policy and planning, which have been implemented in European countries and the EU since 1980 [Dees, 2008].

Types of social entrepreneurship:

1. The Leveraged Non-Profit: This business model leverages resources in order to respond to social needs. Leveraged non-profits make innovative use of available funds, in order to impact a need. These leveraged non-profits are more traditional ways of dealing with issues, though are distinguished by their innovative approaches.

2. The Hybrid Non-Profit: This organizational structure can take on a variety of forms, but is distinctive because the hybrid non-profit is willing to use profit to sustain its operations. Hybrid non-profits are often created to deal with government or market failures, as they generate revenue to sustain the operation outside of loans, grants, and other forms of traditional funding.

3. The Social Business Venture: These models are set up as businesses designed to create change through social means. Social business ventures evolved through a lack of funding-social entrepreneurs in this situation were forced to become for-profit ventures. In places like the United States, this model is friendly to environmental entrepreneurs, due to the available market opportunities [The Power of Unreasonable People, 2008].

By the year 2015, Forbes magazine mentions about 30 of young entrepreneurs who established their business with large social contribution in US. However, social entrepreneurship has a long time tradition in Europe as well. In 2013, by the support of the European Commission the portal with the aim to join social entrepreneurs was established: SEE, Social Enterprising Europe. It joins more than 50 social businesses across the Europe from following countries: Switzerland, Spain, Belgium, the UK, Italy, Former Yugoslav Republic of Macedonia. On the website, Socialbiz.eu, which is a part of the project, both with holding conferences and other events for social entrepreneurs is possible to find also the list of the organizations that can help to the social entrepreneurs to make their first steps. There is information about different foundations, supporting this area of business, such as:

1. The Skoll Fundation (www.skollfoundation.org), benefits communities around the world by investing in, connecting and celebrating social entrepreneurs. The Foundation has awards programs and presents their recipients on its website.

2. The Schwab Foundation (www.schwabfound.org), provides unparalleled platforms at the regional and global level to highlight and advance leading models of social business.

3. Ashoka (www.ashoka.org), a global organization that identifies and invests in leading social entrepreneurs – individuals with innovative and practical ideas for solving social challenges.

4. Grameen Foundation (www.grameenfoundation.org), helps the world's poorest, especially women, gain access to financial services, life-changing information and unique business opportunities.

5. NEF (www.neweconomics.org), the new economics foundation is an independent think-and-do tank that inspires and demonstrates real economic well-being.

Social entrepreneurs and their initiatives can be also awarded by the following worldwide recognized awards:

1. The Global Social Venture Competition (www.gsvc.org) GSVC is the biggest worldwide competition of social business planning, and it is organized by national chapters.

2. Brookes University Social Entrepreneurship Award (http://www.brookes.ac.uk/business-and-employers/social-entrepreneur-awards/) An award for social

entrepreneurs from Brookes University, UK.

Table 1

Useful Resources, Established in Order to Support Social Entrepreneurship in EU

	Name of the resource	Website	Remarks
1	Technet	www.technet-berlin.de	A network of people engaged in regional and local development in technology, employment and development (in German)
2	EMES	www.emes.net	A network of researchers and graduate students on social enterpreneurship
3	Le Mat	www.lemat.coop	A social brand to promote social tourism
4	European Network	http://european-network.de/englisch/aims.htm	European Network for Economic Self-Help and Local Development
5	European Commission	http://ec.europa.eu/internal_market/social_business/indexen.htm	Page of the European Commission on Social Entrepreneurship

Social economy in Europe is a large part of the business. Today, the social economy represents 10% of all European businesses and employs over 11 million paid employees. However, the social business is united under the most common challenge, which is: funding. Because of their unique mix of social goals and business techniques, banks and other financial intermediaries are often unfamiliar with the needs of social businesses or have difficulty in assessing the risk of investment. The European commission fully understands the gap between the needs of the social entrepreneurs and limited funding possibilities. There are two main challenges focusing the funding of the social entrepreneurs:

1. Funds dedicated to investing in social business can be costly and difficult to set up and gather investments

2. Funds which concentrate on investing in social businesses are not always easy to identify or distinguish from other funds, and it can be confusing for investors to compare the advantages of different funds or working out how effective a particular investment might be in supporting social businesses.

That is why it was proposed by the European Commission to invent a recognized brand for social entrepreneurship funds: European Social Entrepreneurship Funds. Funds that market themselves using this brand would have to invest at least 70% of their money in social businesses. With this label, investors will know that the majority of their investment is going into social businesses. In addition, the common EU-wide brand will make it much easier for investors throughout the EU to locate these funds. European Social Entrepreneurship Funds will also act as a

passport. Once a fund has provided the required information and follows some key requirements on how to organize and conduct themselves, it would have the right to gather investments from investors across the whole EU without incurring major costs. They would be supervised – to ensure they follow the rules – by the authorities in the Member State where they are based. These funds would provide new opportunities for private individuals and professional financial services investors to help fund social businesses, adding to support already available from funds, banks and public bodies. It is prospected that following benefits will be available both for social business representatives, professional investors and investment managers:

1. Social businesses will get easier access to private finance, helping support their growth. This will benefit many ordinary citizens: creating inclusive and sustainable jobs and growth across Europe.

2. Professional investors will find it easier to identify and choose funds that are targeting investments in social businesses (European Social Entrepreneurship Funds).

3. Investment fund managers will find it less costly and complex to raise funds, including cross-border, and will find it easier to distinguish their social entrepreneurship funds from other kinds of funds [European Social Entrepreneurship Funds, 2011].

European Social Entrepreneurship Funds was established in 2013 and is starting its activity with the aim to offer its services to the entrepreneurs across the Europe.

Social entrepreneurship aspects in Latvia. The concept of social entrepreneurship in Latvia is still under development, therefore we have a unique opportunity to build it exactly the way we need it. This statement is a quota from the mission of „Sabiedriskās politikas centrs PROVIDUS" [Providus, 2014], founders of the online portal socialauznemejdarbiba.lv, foundation of social entrepreneurship support in Latvia. The foundation supposes there should be following requirements to social entrepreneurs in Latvia:

1. The company's goal is to address socially important problems, creating measurable and useful benefits to the public.

2. Activities of social enterprise are organized according to commercial practice - creating goods and providing services in the market.

3. Social enterprise profits are channeled to achieve social goals, business development or to build reserve fund.

4. Employees must receive adequate and appropriate salary for their work.

5. Management methods and ownership of social entrepreneurship relies on democratic and participatory principles - corporate governance may consist of employees and stakeholders

6. A company can only get special social entrepreneurship status if it meets all of the characteristics and features in this list.

A legal framework for social entrepreneurship in Latvia has to be created so as to not only support establishment of new social enterprises, but also to help successfully expand the already existing ones.

Other programs and foundations that support social entrepreneurship in Latvia:

1. Baltic sea countries joint program INTERREG;

2. Programs of Society Integration Foundation, as Non-government organizations project support program (2009-2014), dedicated to micro projects;

3. Programs of Society Integration Foundation, as Non-government organizations co-finance program 2014-2016;

4. Riga City Council department of education, culture and sport program;

5. Association of Women with disabilities "Aspazija" in association with Teterev foundation.

There are also other non-governmental organizations, foundations and societies that support social entrepreneurship in Latvia. Some of them can be sponsored by private persons, companies and even agencies of other, non EU countries, such as NEW D(o)or initiative, whose main sponsor in The Jewish Agency For Israel. The project is a school for social entrepreneurs and actively operates already 2 years in Latvia and since 2015 also internationally (www.newdoor.lv), [New Do(o)r, 2015].

Education. Tools to accelerate social businesses are following:

- public organizations, governmental programs, EU programs in the frames of Erasmus + (Key Action 2 programs and others);
- private foundations with programs, boot-camps, courses and seminars supporting social businesses as Presentence (Israel), New Do(o)r (Latvia) and others;
- investing organizations, as Ashoka;
- online crowdfunding platforms, as kickstarter.com;
- platforms, supported by educational institutions, both public and private, (as ISMA Business Incubator, Latvia);
- zones, announced by government entrepreneurial friendly (with reduced taxes or other positive conditions);
- business parks, where companies could pay less for manufacturing and consumption;
- meeting points, where social entrepreneurs can meet together discussing their ideas, with free WiFi (as Tsiferblat chain of free space cafes in Russia, public libraries etc.)

However, there should be better involvement of higher education institutions into this process. It is more than clear already that social entrepreneurship as a field of a business has very sustainable trend to develop. That is why one of most beneficial tool to develop this business area is to deliver to its market experienced professionals. Appropriate education should contribute to this process.

Growing interest to this area of business is noticeable and many universities are starting to implement educational programs and platforms in relations with this entrepreneurial activity. For example, Harvard Business School (Harvard Business School, 2015) provides different enhancement activities for MBA, also offers Strategic Perspectives in Nonprofit Management program (SPNM), which provides thousands of nonprofit leaders with the tools and strategies to help them better deliver on their missions and make a difference in the world. Each summer, SPNM brings together

some 150 leaders of nonprofits from across the globe for an intensive six-day program designed to strengthen the capacity of nonprofit CEOs and executive directors to lead their organizations effectively. SPNM provides a conceptual approach to shape the direction, mission, policies, and major programs of nonprofit organizations.

The other famous HEI, Oxford University (Oxford University, 2015) in the frames of continuing education, offers online course "Social Entrepreneurship", which lasts 1 semester.

The potential of the program is wide and some sources on its implementations could be taken from ERASMUS + program funding. For example there could be elaborated Joint Master Degree program in the frames of the ERASMUS MUNDUS call. Erasmus Mundus Joint Master Degrees (EMJMD) are delivered by an international consortium of higher education institutions and, where relevant, other partners with specific expertise and interest in the areas covered by the program. An EMJMD is a high-level integrated international study program of 60, 90 or 120 ECTS credits, i.e. from a minimum of 12 months, to a maximum of 24 months. Study must take place in at least two of the Program countries represented in the consortium. Part of the studies can also take place in a Partner country if there is a partner-country institution involved (Erasmus +, 2015).

Other impact where HEIs could be involved might be traineeships at social business enterprises. These internships of international students are also financially covered by ERASMUS + funding and the help of these 2-12 months participants could be a noticeable shoulder for social businesses, sometimes with limited profit or even non profitable organizations.

Erasmus + programm guide, published by European Comission (Erasmus +, 2014) states that social businesses could be receiving organizations for such traineeships: "Eligible participating organizations, the receiving organization can be: … any public or private organization active in labor market or in the fields of education, training and youth. For example, such organization can be: a public or private, a small, medium or large enterprise (including social enterprises)".

The financial crisis unleashed economic fear throughout Europe bringing high unemployment rates, increasing poverty and widening social gap. The pressing economic situation demands a new way of thinking and developing instruments which will bring both prosperity and social welfare and cohesion. Social entrepreneurship is a new but sustainable way able to combine both successful business and decrease of negative social effects. To contribute its acceleration, following tools should be involved: public organizations, governmental programs, EU programs, private foundations with programs, boot-camps, courses and seminars, investing organizations, online crowdfunding platforms, platforms, supported by educational institutions, zones, announced by government entrepreneurial friendly, business parks, meeting points. Educational process must also be involved, different courses and programs should be developed to contribute successful run of social entrepreneurship. Especially significance for the business of preparing young

people are IT technologies [Nenkov, Momchev,2011, Nenkov, 2014].

Summarizing the need of implementation of social entrepreneurship program into the process of HEI offered education, we can state following:

- There should be a clear understanding of a purpose and motivation of learners and the course should be elaborated accordingly.

- Main topics should cover an introduction with explanation of definition for social entrepreneurship, students should be able to apply business models, to target exact social problems and to be able to create value proposition to interest potential investors.

- The course could differ on its length, content and destination. It could be boot camps, online and or distance studies, semester courses or full time MBA programs.

- Full time MBA programs can be elaborated in cooperation between ERASMUS + eligible participants applying for funding in the frames of ERASMUS MUNDUS.

- The connection between HEIs and social businesses could be even tighter with student`s involvement into this field of entrepreneurship thanks to their participation as being trainees during their traineeship, also covered by ERASMUS + funds.

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THE CURRENT SITUATION OF CHINA'S FOREIGN INVESTMENT IN THE ECONOMY, EXISTING MANAGEMENT PROBLEMS AND COUNTERMEASURES

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The Chinese economy has experienced rapid development for 30 years. It has maintained the status of the largest foreign investor in developing countries for more than 20 years, and surpassed Japan to become the world's second largest economy. At the same time, China's foreign investment The pace has also been accelerating, and its growth rate has substantially exceeded the growth rate of China's foreign investment. Driven by the state's policy of encouraging enterprises to "go global", China's foreign investment is guided by the development of free trade zones, overseas economic cooperation zones and multinational corporations. It should also be closely linked to the national strategy of "One Belt, One Road". However, there are still many unavoidable problems in the foreign investment activities, which seriously affect the quality and effect of investment and cause many unnecessary losses. As the scale of Chinese companies' foreign investment continues to expand, the management of foreign investment has become increasingly important. The article starts from the status quo of Chinese enterprises' foreign investment, analyzes the related problems in the process, and puts forward corresponding suggestions for the management problems existing in the process of Chinese enterprises' foreign investment [1].

According to data from the Chinese Ministry of Commerce, Chinese foreign direct investment flows have ushered in the first decline in a decade. The amount of foreign investment in 2017 was US$158.29 billion, a year-on-year decrease of more than 19 percentage points (Figure 1). Compared with the spurt growth of overseas investment by Chinese companies in 2016, the amount of overseas investment by Chinese companies in 2017 has dropped significantly. In order to further guide the "going out" behavior of enterprises, the Chinese government has intensively introduced enterprises to enterprises in 2017. Going out to the relevant policy. For example, "Guiding Opinions on Further Guiding and Regulating the Direction of Overseas Investment", "Code of Conduct for Overseas Investment and Management of Private Enterprises"; at the same time, the National Development and Reform Commission issued the "Measures for the Management of Overseas Investment by Enterprises" to further standardize the overseas investment reform of

enterprises while simplifying the administration of power [3].

China's national regulatory authorities have increasingly refined the management of Chinese enterprises' "going out", effectively promoting the healthy and orderly development of Chinese enterprises' foreign investment, and constantly optimizing the structure of foreign investment, and promoting the real economy, innovation, and high-tech to the world stage. At the same time, optimizing the global allocation of corporate resources will further promote China's transition from a big investment country to an investment power.

Fig. 1. 2008-2017 Changes in China's ODI flows, $100 millions
Source: calculated by authors according to http://www.ccg.org.cn/Research/View.aspx?Id=10541

From the regional distribution of overseas investment, the overseas investment of Chinese companies in 2017 was concentrated in Europe, Asia and North America, with the proportion of investment accounting for 53.4%, 18.8% and 16.6% respectively. (Figure 2). Chinese companies have relatively few overseas investments in Oceania, South America and Africa, with a share of 3.5%, 7.7% and 1% respectively. In 2018, the Beijing Summit of the Forum on China-Africa Cooperation, the growth of Chinese companies' future investment cooperation in Africa is obvious.

According to the statistics of Center for China and Globalization (CCG), from the distribution of China's "going out" investment industry in 2017, the manufacturing industry accounted for 40% of the total, up 4% from the previous year, and continue to be China's overseas investment. The most popular industry. The information transmission, computer services and software industries accounted for 15% of the total investment case, which has been the third consecutive year of growth, up 4% from 2016. With the M&A activities of Chinese Internet giants such as Alibaba.com and Tencent Holdings, the industry will also show rapid development [3].

Manufacturing is still a key industry for Chinese companies to invest overseas. Through the acquisition of advanced technology and scientific management

experience through overseas mergers and acquisitions, and the transformation and upgrading of the entire industry, the allocation of the domestic industrial structure can be better optimized.

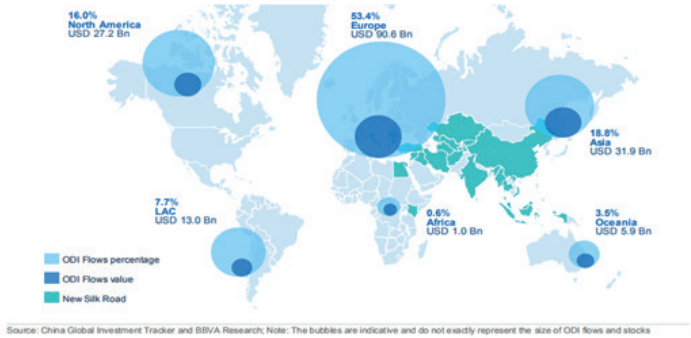

Fig. 2. 2017 Major distribution areas of China's foreign investment

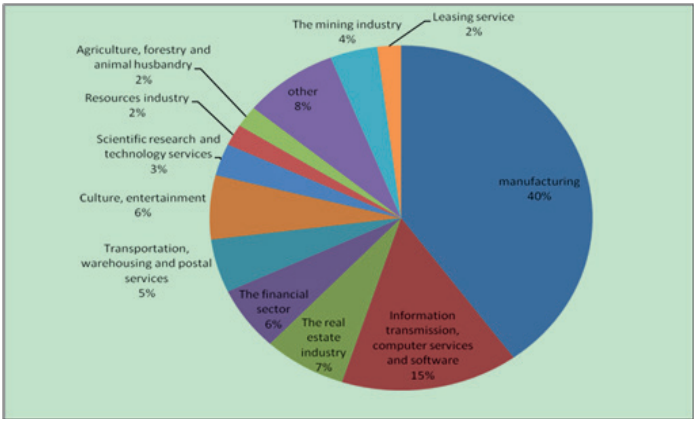

Fig. 3. 2017 Distribution of Chinese enterprises' foreign investment industry
Source: calculated by authors according to http://www.ccg.org.cn/Research/View.aspx?Id=10541

At the same time, Chinese companies have acquired R&D, operations, management and technical teams that are in line with international standards, as well as relatively stable customer markets through overseas mergers and acquisitions in information technology, computer services and software industries, and constantly improve the high-tech fields of Chinese companies. The right to speak.

Judging from the current situation of world economic development, the adjustment of the world economic structure is relatively large. Faced with relevant opportunities and challenges, "going out" has become an important part of China's social and economic development. The same is also an important way to adapt to the

economic development of the international community. In addition, from the above economic development work in China, it can be seen that for the demand of the international market, increasing the pace of Chinese enterprises' foreign investment has become an important factor in promoting global economic development. Faced with the increasing pace of China's foreign investment, in the process of global investment, China needs to develop faster and more smoothly, and the management problems in the process of foreign investment become even more important [3].

Since the 21st century, China's foreign direct investment has continued to grow. According to data from the Chinese Ministry of Commerce, China's total foreign investment in 2018 reached US$129.83 billion, a year-on-year increase of 4.2%. China's foreign direct investment is gradually becoming an important part of international capital. At the same time, the «One Belt, One Road» initiative has greatly promoted the close ties between countries along the line in economic and trade activities and achieved a win-win situation.

With the increasing number of Chinese foreign investment enterprises, corporate management issues have become an important issue for Chinese companies in the process of foreign investment. Faced with the increasingly complex foreign investment environment, the increased risk of foreign investment, and the increasing uncertainty of the international security situation, Chinese companies' foreign investment still shows rapid growth, which is the result of the confidence and management ability of Chinese enterprises. From a vertical perspective, through continuous exploration and market-oriented reforms, Chinese enterprises' self-management and management capabilities have been continuously improved, laying an important foundation for conducting and expanding the supervision of foreign investment of Chinese enterprises. Of course, we can't be blindly optimistic, because there are still many problems in the management of foreign investment enterprises [3].

Objective and sufficient investigation and research to determine a reasonable investment direction is an important prerequisite for realizing the purpose of investment. Unreasonable or even unclear investment directions are common problems in corporate foreign investment. Serious research on policy support, technical feasibility, reliability of the economy, and market environment and capabilities is an important part of ensuring investment success. Many companies do not conduct research or research at all, but they are not based on the subjective judgment of policy makers, and they do not have a sound investment policy and investment management system. They also do not have realistic medium- and long-term and short-term investment plans, and investment activities are free. It will create a huge loss of hidden dangers for enterprises.

Whether the success of a company's foreign investment is important or not is whether it has realized the expected investment income. Whether the investor's equity is its own net assets has increased or not, and whether it has played an active role in the overall development of the company. However, in many cases, because

the enterprise is not accurate in grasping the market environment and its own capabilities, and does not form its own market survival and competitiveness, it will make the investment income of the enterprise unsatisfactory. The lack of scientific expansion will also lead to the loss of income [4], [5].

In the face of the global market environment, foreign investment operations are more challenging than local own operations. If Chinese enterprises want to succeed in the global economic environment, they must not only do a good job in corporate management, but also do a good job in capital operation, so as to realize the development and growth of the company and enhance its position in the international market. Enterprises should formulate their own foreign investment policies and overcome the blindness and short-term nature of investment behavior. The investment policy should be adapted to the characteristics of the company and conform to the national industrial policy and relevant regulations. The scale of investment must be in line with the control scope of the enterprise, including capital capability, management control capability, and risk solvency.

Management is the decision-making, the quality of decision-making comes directly to the effect of investment, and successful decision-making comes from the scientific, democratic and compliance procedures of decision-making. The enterprise investment department should strengthen the implementation of its functions, make decisions on investment, truth, and prudence. In the decision-making process, we must listen to all aspects, relevant experts and the opinions of the employees. In the process of investment decision-making, it is necessary to pay attention to relevant laws and regulations, and investment projects must comply with relevant laws and regulations, thereby protecting the interests of enterprises [5].

As the main body of decision-making and implementation of foreign investment, enterprises are the key to China's optimization of foreign investment structure and improvement of investment quality. Chinese enterprises "going out" should pay more attention to the adjustment of investment structure, climb to the upstream of the global value chain, and improve the quality and level of "going out". On the one hand, Chinese enterprises should learn from developed countries and enhance their investment capabilities; on the other hand, they should cooperate with developed countries to develop third-party markets and achieve mutual benefits and win-win results [6].

With the sustained and rapid economic growth, the Chinese economy has become an important engine of the world, providing a very good opportunity for Chinese enterprises to invest abroad, especially the proposal and promotion of the "Belt and Road" construction, bringing all-round improvement to China's openness. Major strategic opportunities. Chinese enterprises should make full use of their development advantages and adaptability to foreign investment, effectively integrate production factors and build independent value-added chains across enterprises, regions, and countries, and strive to move toward the high-end and high-value-added links of the value chain. The integration of resources in a broad space enhances their competitive advantage and more actively participates

in the competition in the international market. With the continuous optimization of China's foreign investment enterprise management issues, China's foreign investment development will become more and more open, and China's foreign investment will be more healthy and stable development in the future, contributing to the global economic development [7].

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MODELING OF THE PROCESS OF RESOURCE RISK MINIMIZATION WITH CONSIDERATION OF TRANSPORT EXPENDITURES IN THE FIELD OF FOREIGN ECONOMIC ACTIVITY

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The current development of business activities in all sectors of the economy in Ukraine is characterized by a rather high and at the same time an ever-increasing level of competition. At the same time, the business environment itself is characterized by a high degree of risk. This, first of all, requires the use of resources additional to those that can be obtained from the profit of the enterprise or organization. However, even today, effective business activity is impossible without making important decisions about their functioning and further development. Changes that take place in the surrounding environment make modern organizations flexible and adaptive, react instantly to transformation, and predict the probable factors of negative impact on the activity of enterprises in general. Yes, we see that, together with economic factors, the non-economic components are of paramount importance in the competitiveness of firms and their achievement of high performance indicators. In particular, it is a management of the organization of production processes - the introduction of resource-saving and energy-saving, environmentally safe technologies, the introduction of quality control systems, etc. [1, p. 601].

In modern conditions of economic actors economic activity to assess the state and dynamics of the economic system, to manage, make decisions in the financial and economic sphere of enterprises have to be in the conditions of risk, conflict, the actions of destabilizing factors, etc.

Biopreparations of the SE «Sumy Biological Factory» are currently exported exclusively to Moldova. The issue of expansion of markets is due to the rational management of the resource risks of the investigated enterprise. So, at the present time it is necessary to conduct research aimed at reducing the subjectivity of the decision-making process and increasing its scientific capacity, especially in the presence of a resource risk factor. Scientifically grounded decision-making will help the enterprise manager to be more systematic, and the tools of this process will help him to be more rational.

Thus, marketing risk management should take into account transport costs for the delivery of manufactured products to their destination.

Economic and mathematical methods of decision simulation are used to develop such tools. The use of these methods and tools aims at evaluating prospects and alternatives systematically, not intuitively. In the case of a managerial decision to conclude an agreement or contract for the sale of goods, it is imperative to use

simulation to formulate administrative decisions, thereby becoming programmatic decisions. However, sadly, but in modern conditions of functioning domestic enterprises of bio-industry, modeling of solutions is not used. That is why there is a real need to create models for individual types of decisions.

For example, in making decisions in the field of foreign trade, which would closely reflect the actions of the main elements of the management structure of the enterprise, common within this type of activity. By analyzing and experimenting with such a model, an entrepreneur engaged in foreign economic activity could identify the best course of action. For example, knowing their economic condition, losses and profits from foreign economic activity by item, the risk situations that arise when working in the foreign market, the manager can calculate the possible gains or losses from the future transaction in a risk situation. The risk element, as already noted, is present in any managerial decision to a greater or lesser extent.

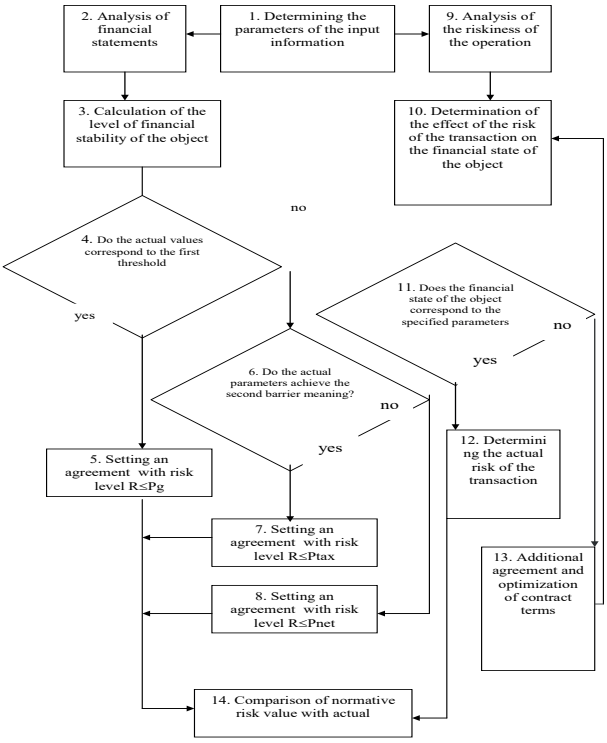

Fig. 1. The algorithm for modeling the process of minimizing marketing risk taking into account transport costs
Source: proposed by the author

Thus, the simulation will be conducted in accordance with the algorithm, provided that at the time of preparation of the signing and execution of the contract, the state of the resource risk exists, and the manager has sufficient information to assess the possible consequences of the decision.

Pg – gross profit of the enterprise from the transaction;

Ptax – taxable profit of the enterprise from the transaction;

Pnet – net profit of the enterprise from the transaction.

The model of approval of the decision by the exporter for foreign-economic activity in a situation of risk is developed, and it involves the use of a set of formalized and non-formalized methods. They were chosen as a means of an objective assessment of complexly regulated environmental factors. This model allows to develop a mechanism of approaching the behavior of the management system of the foreign economic agreement to a rational and reliable determination of the optimal strategy of the enterprise in the market. In the process of formation of contractual relations in the situation of resource risk it is necessary to determine the sequence of actions of the enterprise to implement a set of measures aimed at achieving maximum returns in a risk situation. In order to systematize this process, an algorithm for modeling the resource risk minimization process is proposed, taking into account transport costs (Fig. 1). The solution of the proposed model is carried out in accordance with the proposed blocks. Let's consider the step-by-step proposed scheme of modeling the decision-making process when concluding agreements for the transportation of biological products abroad in the conditions of resource risk.

The first block of the algorithm contains information about the possibilities of the enterprise, which have developed under the influence of factors of the economic environment. The main objective in assessing the potential of an enterprise is to identify the strengths and weaknesses of its activities in the foreign market and to make adjustments to the strategy in order to increase the competitiveness.

To simulate the behavior of a specific control system, an analysis of the financial and economic activity of the enterprise in conjunction with the study of the subject of control (block 2) is carried out. This gives an opportunity to assess the objective state of the enterprise, due to its organizational and economic and technical and organizational characteristics, and to carry out the calculation of generally accepted indicators that determine the profitability of the enterprise, its commercial activity, financial stability.

Reporting statistical and analytical material on the activity of enterprises, used in the analysis taken from the balance sheet of enterprises, forms No. 1, 2 to the letter of the Ministry of Industrial Policy of Ukraine No 01 / 8-1-5-402 of March 17, 1998 and Form No. 1 to the Decree of the Minister of the Ministry of Natural Resources of Ukraine No. 348 dated by May 23, 1995. All indicators are considered in dynamics for a number of years from 2012 to 2016, which makes it possible to draw conclusions about the development of the enterprise for the period under study.

To determine the financial position of the company more appropriate is the

method considered in [2], because it enables to determine not only the main reasons for the poor state of the financial sector of the enterprise, but also gives an idea of the current financial situation in the enterprise.

The table shows that the company in recent years has suffered financial instability, which led to a crisis of finance. Regarding the risk areas, the company moved from the high risk area (2013) to a steady financial state, which allowed the enterprise to balance its solvency in the area of critical risk (2014) and then into the area of unacceptable risk (2015-2016), when the company is on the verge of bankruptcy. The reasons for such a situation can be: a permanent shortage of own working capital, which does not allow to increase the scale of the enterprise and does not guarantee the fulfillment of obligations. This indicator characterizes the reliability of the company as a partner. In this case, any enterprise conducting general commercial activity is entitled to expect from its partner additional guarantees for the implementation of the agreement in order to avoid the risk of non-fulfillment of obligations by the partner, as the risk in executing the transaction is partly determined by the structure of own funds. Resource risk increases with a decrease in the share of own funds. From 2017 financial state of the enterprise can be considered stable. To overcome the crisis, it was helped by additional external financial infusions and stabilization of long-term contractual relations with partners.

According to the results of the calculations, the enterprise is divided into areas of resource risk for the identity of problems in the financial sector. Further calculations of resource risk values are conducted in selected groups (Table 1).

Table 1

The state of the enterprise depending on the financial stability and the area of the resource risk in which it operates

Area of normal stability	Area of hesitative state of finances	Area of critical state of finances	Area of crisis state of finances
Area of minimum resource risk	Area of increased resource risk	Area of critical resource risk	Area of unacceptable resource risk
SE «Sumy Biological Factory» 99-00	SE «Sumy Biological Factory» 95	SE «Sumy Biological Factory» 96	SE «Sumy Biological Factory» 97-98

Source: proposed by the author

Calculation of indicators of financial sustainability of an object (block 3) makes it possible to find a zone of resource risk, in which the enterprise is located, to determine the limits of the resource risk, which must be respected by the enterprise, while conducting foreign economic activity, taking into account financial stability. Thus, the definition of a financial state of an enterprise gives us a limit on the size of the resource risk of a possible transaction:

$R\ min < R < R\ max$,

where Rmin, Rmax – limiting the parameters of the agreement, or the minimum and

maximum values of the permissible resource risk in the existing economic conditions.

The uncertainty always exists, therefore, the resource risk of activities can not be destroyed. It is an acceptable resource risk that is the result of simulation, it is laid down in contractual terms by both parties. An economic precondition for an acceptable resource risk is the impact on the management system, on external and internal factors, as well as the interconnection and interdependence between them. It is economically expedient for a foreign economic agreement to use in the calculations the principle of optimization of activity, break-even, which determines and specifies the calculation of the zone of permissible, critical, catastrophic risk for a particular enterprise engaged in external activity. Such an approach leads to a more complete integrated assessment of the state of the enterprise and maximally approximates to obtaining a system for managing optimal predicted results, reducing possible deviations from achieving the goal [3].

So, having considered the financial condition of enterprises, we can talk about the area of resource risk in which the company works, but this does not show the risk of concluding transactions, but only gives certain restrictions when they are concluded in the form of the marginal amount of risk, that is, what the businessman may risk to achieve the goal — the conclusion and implementation of the agreement [4].

The scale of the maximum allowable losses under the agreement should have the following form (Table 2). In block 4, 6 the verification of compliance of actual indicators of financial stability of the enterprise with the nature of the risk of concluding transactions is carried out. Blocks 5,7,8 characterize the quantitative value of an acceptable risk for the identified financial state.

Table 2

The scale of losses in areas of financial sustainability of the enterprise and zones of resource risk

The area of absolute financial sustainability of the enterprise	Area of normal stability	Area of hesitative state of finances	The area of the critical state of finance	Area of crisis state of finances
Area of maximum permissible resource risk	Area of unacceptable resource risk	Area of critical resource risk	Area of increased resource risk	Area of minimum resource risk
The risk can be equal to the amount of the supply on the transaction	Balance profit on agreement	Taxable profit on the transaction	Net profit from the transaction	Net profit from the transaction

Source: proposed by the author

The following is an analysis of the riskiness of operations on the foreign market and the frequency of their occurrence, determining the resource risks that most often appear in the activities of domestic enterprises (block 9).

At enterprises, contracts on content and their compliance with regulations were considered, as well as data on the availability of claims, late payment or non-payment of goods in the years from 2013 to 2017. The total amount of losses by item, as a percentage of the total proceeds are shown in Table 3.

Thus, comparing the amount of expenses from risky transactions with the average revenue from sales of products in certain years (Table 3), it is possible to determine the riskiness of transactions in the current year, that is, to determine which region of the resource risk these contracts are. However, we first calculate the coefficient of resource risk as the ratio of planned expenditures when transporting products to the expected revenues from sales of products.

Table 3

Calculation of the resource risk factor when applying the model of marketing risk minimization taking into account transport costs

Indicator	Year				
	2013 y.	2014 y.	2015 y.	2016 y.	2017 y.
Total proceeds from sales of products, ths. UAH	8872,0	7316,0	8984,0	7129,0	13826,0
Total costs, thousand UAH, including:	504,8	516,5	240,9	449,9	796,3
transport losses	230,7	74,6	25,2	22,1	49,8
currency losses	186,3	124,4	179,7	171,1	290,3
losses from non-payment of goods under a letter of credit form	0	240,0	0	82,7	52,5
losses from non-payment of goods in the form of payments - bank transfer	39,0	32,9	8,1	69,2	232,3
losses due to non-conformity of the goods	22,2	16,8	8,1	78,4	132,7
losses through the application of penalties	26,6	27,8	19,8	26,4	38,7
Risk factor,%	5,7	7,1	2,7	6,3	5,8

Source: proposed by the author

Thus, it has been established that with each passing year the coefficient of resource risk on the investigated enterprise varies. In particular, the highest level of resource risk occurred in 2014, and the lowest - in 2015, which was correspondinly 7.1% and 2.7%.

Having considered SE «Sumy Biological Factory», we calculated the average value of losses from risk transactions and expanded them according to the types of financial sustainability, thus, it is possible to determine in which area of resource risk transactions were conducted, in particular, the focus is on 2018 (Table 4).

Table 4

Average losses from risk transactions depending on financial sustainability of the enterprise

Risk of external economic agreement	FINANCIAL STATE OF THE ENTERPRISE					
	Normal financial stability					
	Transport losses, % (R tr)	Currency losses, % (R cur)	Non-payment under the letter of credit, % (R lc)	Non-payment by bank transfer, %, (R bt)	Losses due to quality mismatch, % (R q)	Penalties, % (R p)
1. Minimum resource risk agreement.	0,0	2,01	0,0	2,12	0,25	0,41
2. An agreement on increased resource risk	0,0	1,91	0,0	3,35	0,0	0,5
3. Agreement on critical resource risk	1,6	2,3	0,0	1,15	0,04	0,02

Source: proposed by the author

The proposed model of resource risk minimization, taking into account transportation costs for SE «Sumy Biological Factory», allows us to work out optimal strategies for harmonization of contracts for the supply of biopreparations in the market of pharmaceutical services at the time of its signing. The validity of the obtained results determines the possibility of their wide application at the enterprises, regardless of their sphere of activity.

The institutionalization of resource risk research involves the allocation of specialists in the field of resource risk and the formation of targeted curricula. It was established that the factor of resource risk in applying this model on the investigated enterprise on average over the last five years amounted to 5.5%, and 2.6% of this degree reached the costs of transportation of products.

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METHODOLOGICAL MANAGING PRINCIPLES OF ENTERPRISE SUSTAINABLE DEVELOPMENT

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In the context of the increasing globalization rate for many countries of the world, including Ukraine, the problem of sustainable development of the agrarian sector is becoming more urgent. There is much concern about sustainable and integrated development in the agrarian regions of our country, where this form of territorial organization of the population and production prevails. Taking into account the fact that the priority of the national policy of Ukraine is to provide the population with high quality food products in an assortment of varieties and sufficient quantity, the scientific problems of the agrarian sector development are relevant. Their solution largely depends on the state and conditions of functioning of agriculture, which has undergone significant transformational changes as a result of reforms and, nevertheless, continues to be in a difficult financial and economic situation.

The problem of effective management of the enterprise development is under consideration of the modern scientific elite of the world for a long time. Special attention to its study is paid, first of all, in developed European countries, where the status of an active participant in market relations depends on the successful implementation of the "concept of sustainable development". In the context of European integration of Ukraine, leading domestic enterprises are supposed to be interested, first of all, in the introduction of progressive elements that ensure constant development.

Nowadays, there is no a single generally accepted definition of the category "sustainability of agrarian branch development", which is caused by the contradiction and underdevelopment of the concepts of sustainable development, the lack of information for quantitative measurement of the degree of sustainability. Some authors consider sustainability, in particular of arable farming, as the ability to withstand negative effects, mainly – spontaneous forces of nature, to prevent or weaken declines of production [6]; others consider it as the sustainability of the middle level of the dynamic series [9]; still others interpret it as the sustainability of evolution, development of the phenomenon under study [8]. However, the notion of sustainability is not limited to these. Sustainability of agrarian development is not only an opportunity to overcome unfavourable phenomena in agriculture, but also the ability to use them to maximum effect.

It is well-known that in economy of any country enterprises of agrifood sphere specializing in production of food products have a special role. This is due to the fact that they influence the trends of the national economy, are first that test innovative ideas and, if successful, worthly compete with foreign producers of this segment.

Taking into account the isolation of some scientific schools and the lack of works devoted to the complex theoretical and applied analysis of the subject under consideration, we note that there is no complete study on the management of sustainable development of the agrifood enterprises in Ukraine and Nigeria, which determines the topicality of this research.

The main tendencies of the agrifood sector in Nigeria are aligned with the problems that are typical for the Ukrainian agro-industrial complex. Within this framework, the comparative analysis of these two countries in the context of sustainable development of enterprises (SDE) and raising the standard of living of the population is relevant and valuable from practical and theoretical point of view. The proposed analysis of the management of SDE as a factor in improving the quality of life is particularly important in terms of scientific novelty. A thorough study of the peculiarities of the development of agrifood enterprises as exemplified in the two countries can help to formulate effectively and clearly the task for the formation of powerful economic potential by Nigeria and Ukraine, which is evidence of the practical relevance of this scientific work. Based on the systematization of the main problems restraining the development of enterprises of the two countries, the authors found out that respondents distribute them in such a way – fig. 1 [7, 10, 14, 15, 16].

Fig. 1 shows that the most significant are the problems listed on the principle of decreasing below [7, 11, 14]: low domestic demand for products manufactured by enterprises (we note the constant increase of influence); insufficient investment of money; the presence of outdated equipment (that causes lower production rates).

Taking into consideration the problems mentioned above, adequate management is needed, since, nowadays, the requirements for managerial decisions are rather strict. This results in the acute need to form and test effective management tools related to functional operations (e.g., planning, control, etc.) that take place at the enterprises of the agrifood sphere within their SD. Therefore, it is necessary to consider the problems, opportunities and conditions for achieving SD at the level of enterprises in the context of comparative analysis of the two countries.

Following the principles and recommendations declared at the United Nations Conference in Rio de Janeiro, Brazil in June 3, 1992, and guided by them both in Ukraine and in Nigeria, the strategic transition to SD of the two states was mapped out, which provides the optimal solution of economic, social and environmental problems and the task performance [1].

Regarding the etymology of the interdisciplinary universal “sustainable development” commonly used in the scientific sphere and politics, it was proposed during a meeting of the commission headed by Norwegian Prime Minister Gro Harlem Brundland [4, p. 234]. In the author’s interpretation, it meant progress that

satisfies primary needs. According to [3], this kind of development will not prevent the next generation from providing for new needs.

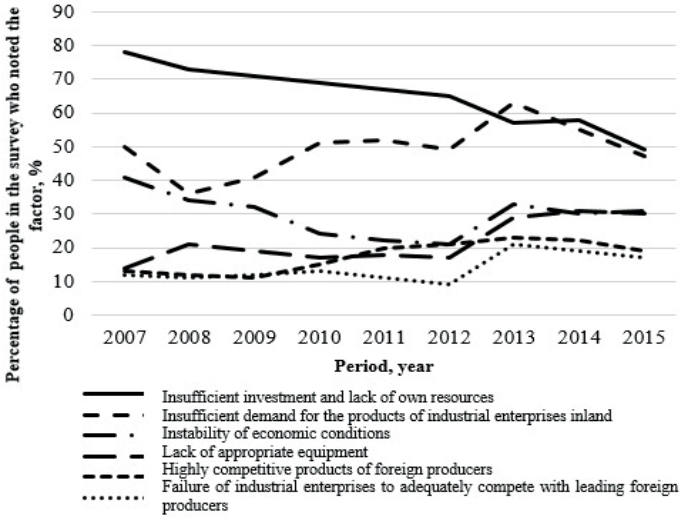

Fig. 1. Problems that influence the development of processing enterprises in Ukraine and Nigeria [based on 7, 11, 12, 14]

The authors of modern etymological and lexicological dictionaries often identify the notion "sustainability" with "continuity", justly noting that it indicates the existence of some balance between the desire to meet current needs (for example, in natural resources) and take care of the needs of future generations (interest in positive institutional changes, investment attractiveness, favourable environment, etc.).

It should be noted that "sustainable development" is rather new notion (though its appearance dates back to 1972). In modern science, it is at the stage of formation, which can be seen from a large number of authors definitions and contradictories about its essence, the principles of the formation and functioning. Unlike other forms of development, SD has the following characteristics:

1) direct connection with the environment;
2) forecasting future needs;
3) focusing on improvement of life quality;
4) use of equal opportunities;
5) coordination of all actions taken with the impact on the environment.

It is important to emphasize that for a long time, in the context of market relations, the term "socio-economic development" was interpreted exclusively as an indicator of technological and economy-wide growth. The GDP growth showed progress and, accordingly, was identified with improvement in the standard of

living and welfare of people. It should be noted that functioning of public institutes, economy as a whole and the environment was considered isolatedly for some time. As a result, destructive changes occurred in the natural human environment and internal worldview.

A similar model of society existed only by means of generations "in future". The global challenges of our time, when civilization faces environmental problems, total poverty, hunger and moral degradation, can be explained by these factors. The depreciation of moral standards provoked the massive appearance of terrorist organizations, religious and ethnic conflicts. In the view of many experts [8-16], the twentieth century has made it clear that the unregulated market and economic planning cannot fully ensure positive changes either in the ecological or, moreover, in the socio-economic sphere.

The combination of all of the above reasons contributed to the fact that advanced international public organizations (the analytical centre the Club of Rome with its famous report "Borders of Growth" [15], the International Institute for Applied Systems Analysis (IIASA) (Luxembourg, Austria) and the International Federation of Institutes for Advanced Studies [1] approached the challenges of globalization in a different way. In science, such a critical approach was named "sustainable development" ("concept of sustainable development"). In part, it is a continuation of the doctrine of the noosphere proposed by the famous academician V. Vernadskyi at his time [5, p. 17].

The essence of this approach is to necessarily coordinate economic, social and environmental development of society. Its goal is to maintain the quality and safety of life in place for present and future generations so as "not to deteriorate the state of the environment and to promote social progress that takes into account the needs of each person" [13].

As a result of the complete introduction of the notion "sustainable development" and the adoption of the document declaring its basic principles ("Agenda 21" following the results of the monumental United Nations Conference), leading specialists and politicians expect that obvious crisis moments of civilization will be avoided. This accounts for the trends outlined in the society at the end of the 20th century, which concern many states, spheres of production, subjects of commercial / non-commercial activity [1].

At the United Nations World Summits dated 1992 and 2002, attended by prominent scholars, politicians and public figures from 180 countries, the concept of SD received a generalized interpretation. And the delegates of the International Ecological Forum in 2003 put forward an initiative to popularize the principle points of the concept at the micro and macro level. The members of UNEP proposed a certain list of characteristics of integrated economic sustainability (fig. 2).

"Agenda 21" mentioned above was approved by all the participants of the United Nations Conference. According to its content, countries and cities should gradually come to SD by introducing this notion at the macro and micro level. Since, in M.

Castells' opinion, it "unites most of the main problems of preservation, restoration of nature and ensuring decent life of all generations" [1].

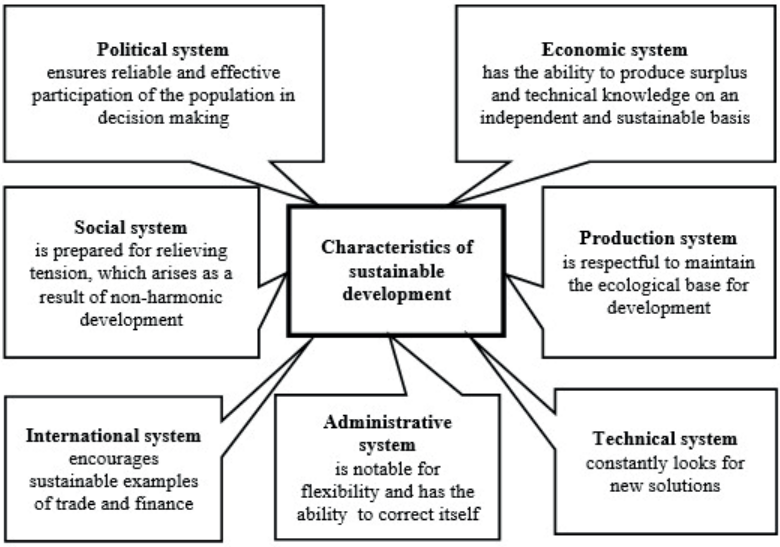

Fig. 2. Content of characteristics of sustainable development of systems [based on 1, 4, 6, 7, 9, 14, 16]

As a signal to the integration of entrepreneurship and social problems, the innovations described were conceived and quickly used by advanced business circles. So, at the end of the 21st century, the Charter "Business and Sustainable Development" was published, which proclaimed, "Economic growth creates all conditions necessary for preserving the ecological balance and achieving the social goals that determine SD [11]. Dynamic and socially responsible business is the driving force of the economy SD and forms the managerial, financial and technical resources necessary for solving the problems of the environmental conditions" [14]. The created Business Council of business circles developed and published another document of strategic importance – "Changing Course" [12].

In general, successful testing of the SD concept by representatives of business circles is becoming more and more global and has significant support. It is used by such industrial bookends of universal importance as: Intel, Procter & Gamble, British Airways, Bayer AG, Dupont, Canon, Volvo Car Corporation, Shell International, Hewlett Packard, Volkswagen AG, Ford Motor Corporation, Electrolux, Hitachi, Mitsubishi Corporation, Nike, Philips Electronics, Nokia, Renault, etc.

Following a unique trend "sustainable development", as well as on the wave of the popular in the early 21st century trend towards the introduction of social

responsibility at the corporate level, a new indicator – the share index of sustainable development of Dow Jones (Dow Jones Sustainability Index – DJSI) was introduced by the efforts of the global business elite [6]. Today, the subjects of DJSI are determined on the principle of integrated assessment of the development level, and, therefore, are automatically regarded as the most successful.

Summarizing all above-mentioned information, we consider that it is necessary to propose our own definition of the notion "sustainable development of the enterprise". Sustainable development of the enterprise is suggested to be defined as a dynamically progressive process of purposeful changes within the main areas of the enterprise activity, where the main criteria of development are determined by economic efficiency, environmental safety and observance of the foundations of social justice and business responsibility for improving the quality of the nation's life. Coordinating and consolidating these three components is the main task. In this regard, for enterprises that are oriented in their activities on the principles of SD, the performance of the specified tasks and the whole complex of administrative missions is becoming the first priority.

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FACTORS AFFECTING THE COMPETITIVENESS OF THE COUNTRY

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In modern market-based economic conditions, the competitiveness capacities of companies, industries, regions are regarded as the main instrument for intensification of the socio-economic development of the country [6]. Both market participants and the state are the subjects of the formation and regulation of the competitive environment, the development of competition justice, creating conditions for improving the efficiency and competitiveness of the economy.

The consideration of the nature of the factors that shape the competitiveness of the country is of particular interest. At the early stages of the competition

system development, these factors were associated with the economic activities of enterprises, and the competitiveness of the country was considered as an integral indicator of it, which synthesized the parameters of competitiveness of national enterprises and their products [2].

Later, the experts changed their approach to the interpretation of the concept of competitiveness of the country and considered it as the capacity of the state to form and develop an environment that promotes the creation of the adding value for enterprises, and for citizens - improvement of their well-being. Accordingly, competitiveness was related not to the resources but to the institutional factors, in other words, the economic environment parameters that determine the type of the entities' economic activity [3, 5, 10]. In this regard, the notion of country's competitiveness, which reflects the significance of the institutional properties, reflects the nature of the phenomenon more adequately in comparison with the concept of competitiveness of the national economy. Moreover, the emphasis is laid not on the result achieved by the country at a certain point in time, but it reflects the potential of the country more fully, which corresponds to the concept of ability.

Modern definitions of the country's competitiveness adopted by a number of official organizations are in fact consistent with the theory of M. Porter [9] and reflect a new stage in the evolution of the concept of competitive advantage. The definition of competitiveness, adopted by the OECD, reads: Competitiveness is the ability of companies, industries, regions and nations to generate a relatively high level of income and wages while remaining open to international competition [4].

Thus, competitiveness is a complex multidimensional and multilevel category inherent in a market economy system. The pragmatic meaning of this category conveys the extent to which a set of its content characteristics can be used as a basis for developing methods and means for solving practical problems, related to the goal to achieve the required level of competitiveness. The traditional approach to the definition of any category is obviously insufficient for conveying the pragmatic aspect of its content. We need some explication that could reveal at the most general level the content interconnection of the category itself and its components with the content of other categories in the subject area. Depending on the sources, there are two types of country's competitiveness:

- Competitiveness achieved through low production costs;
- Competitiveness determined by the required knowledge and skills.

The competitive advantages are the result of an interaction of many factors that can be divided into two groups. Each group characterizes a certain sphere of reproductive conditions for the country [2].

Thus, the first group comprises the factors that determine the technological conditions of production. The factors belonging to this group form the technological matrix, through which the production activity is carried out. Schematically matrix consists of two elements: material (equipment and technologies) and manpower (labor force). The level of production efficiency depends on the qualitative

parameters of these parties: the level of technique and technology development, and the quality of labor force, represented as the aggregate of knowledge and production skills.

The second group is formed by the factors that reflect the social conditions of production, that is, the peculiarities of the environment in which this technological matrix (the productive forces of society) operates. This group includes social, cultural, institutional, legal and other factors, the combined effect of which forms the social conditions of production.

This study offers to understand the competitiveness of a country as creating conditions for:

- the residents to confer benefits that they consider to be valuable;
- use (attraction) of the respective types of economic resources for this purpose;
- the conclusion of the appropriate types of contracts to preserve the country's attractiveness for its residents.

Accordingly, a country with more developed productive forces is competitive, and among countries that have equal levels of the development of productive forces, and a country that creates better conditions for their functioning will be more competitive.

The typology of factors of a country's competitiveness provide further opportunities, on the one hand, to consider the interdependent factors as a unity; on the other hand, to reveal the nature of the causal relationship between them.

The criterion for the classification of factors is the stability degree of the competitive advantages they generate. According to Taranukha Yu.V., there are two types of factors: of low and high order (Fig. 1) [11].

In the process of globalization of the economy, the importance of the factors of low order weakens and that of the factors of higher order increases, although the formation of the latter becomes more and more complicated task and the potency of their neutralization increases. However, it is important to argue that the competitiveness of the country is ensured not by the presence of factors, but by the creation of conditions for their effective functioning and the availability of a mechanism for their implementation. Thus, the country's competitiveness is a multifaceted concept that has content features and consists in the ability of a country to redistribute the value created in the world economy in its favor and to maintain the quality of life of the population at a rather high level.

The ability to assure a country's economic independence from fluctuations of the world markets, from the influence of other countries is an important indicator of competitiveness, although it is a factor possessing the characteristics of the lower order. The level of competitiveness in this context depends on the kind of the competitive advantage the country is ready to copy, the available resources and the types of the external economic operations.

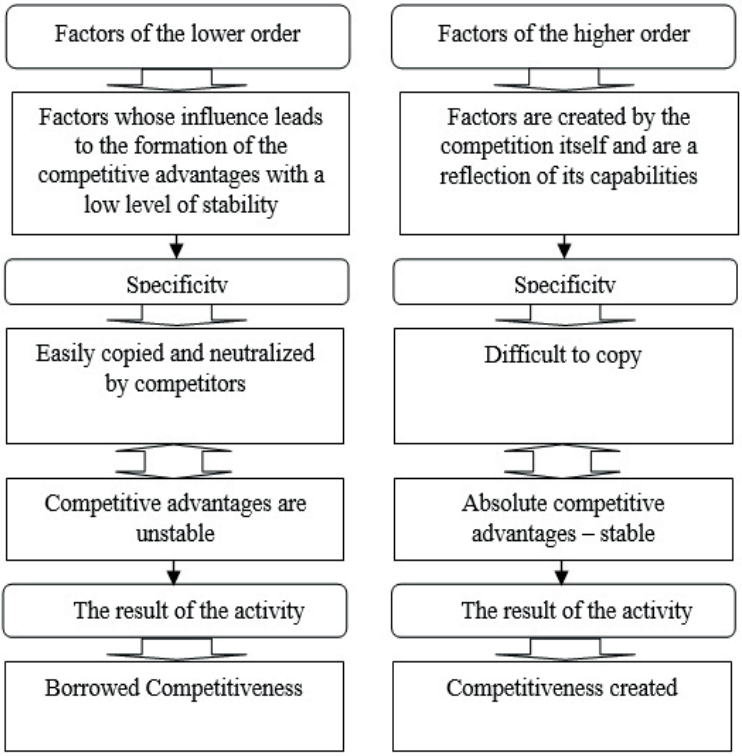

Fig. 1. Types of factors of a country's competitiveness
[formed on the basis of 2, 10, 11]

It is essential to determine the matrix dependence of the factors of the competitiveness by their types, which will contribute to an effective assessment of competitiveness and the formation of competitive advantages of the country (Table 1).

National competitiveness is determined on the basis of the identified competitive advantages and weaknesses of the country. The competitive advantages of the country include:

- high expenditures from the state budget for research and development (R & D);
- human development and high opportunity costs;
- stability of the political and legal system;
- share of gross domestic product (GDP per capita);
- high life expectancy;
- high resource efficiency;
- optimal export;
- low inflation;

- availability of natural resources and favorable climate, favorable geographic location;

Table 1

Criteria for assessing the competitiveness of the country [designed on the basis of 1, 5, 7, 8]

Factors of the lower order	Factors of higher order							
	Domestic economic potential	Foreign Economic Relations	State regulation	The credit and financial system	Infrastructure	Management system	Scientific and technical potential	Labor resources
Component factors	Added value	Current balance of payments	National debt	Capitalization of the economy	Basic	Efficiency	R & D expenses	Demographic characteristics
Investments	Exports of goods and services	Government spending	Accessibility of capital	Technological	Labor costs	Scientific level of the staff	Characteristics of the labor force	
Savings	Import of goods and services	Fiscal policy	Dynamism of stock exchanges	Busines-based (for business)	Corporate intensity of labor	Technological management	Employment	
Final consumption	National currency rate	The efficiency of public administration	Efficiency of the banking sector	Energetical	Management efficiency	Scientific environment	Unmployment	
Economic sectors development	Investments in securities	Justice	Ecological	Corporate culture	Intellectual Property	Education al system	Cost of living	
Direct foreign investments	Law enforcement agencies	-	Standard of living	Adaptability	National protectionism	-	National cultural values	

- a significant proportion of competitive organizations;
- competitiveness of labor resources;
- flexibility of the financial system;

- lack of public/government debt;
- high educational level of the population;
- high competition in all spheres of activity;
- openness, high level of international integration and co-operation;
- high quality of the market infrastructure in regions;
- low tax and customs rates;
- high culture of business;
- a high level of information management of the country [5].

The world ranking, according to the Global Competitiveness Index (2017-2018), was published on the basis of the statistical studies conducted by the World Economic Forum. Traditionally the rating was headed by Switzerland. The most competitive top ten states were the United States, Singapore, the Netherlands, Germany, Hong Kong, Sweden, the United Kingdom, Japan and Finland.

Ukraine this year ranked 81th among 137 countries, having improved its positions by four points (Table 2).

Table 2

Positions of Ukraine and some countries according to the Global Competitiveness Index [12]

Positions of Ukraine and some countries according to the Global Competitiveness Index	2012-2013 (з 144 countries)	2013-2014 (з 148 countries)	2014-2015 (з 144 countries)	2015-2016 (з 140 countries)	2016-2017 (з 138 countries)	2017-2018 (з 137 countries)
Ukraine	73	84	76	79	85	81
Georgia	77	72	69	66	59	67
Turkey	43	44	45	51	55	53
Russia	67	64	53	45	43	38
Poland	41	42	43	41	36	39

According to the study, Ukraine has worsened its position in 4 out of 12 key indicators, the biggest losses (minus 13 points) are in the part Labor Market Efficiency. The last year's researches also assumed the tendency to deterioration of this indicator. Then Ukraine worsened its positions by 17 points.

According to the data, Ukraine has demonstrated a decline in the indicators of the innovation component of the Index - (minus 9 points), the infrastructure (minus 3 points) and in the level of education and professional training of the personnel (minus 2 points).

Despite the slight improvements, this year we still have the worst positions in the bank stability ranking (130th place), the regulation of stock exchanges (134th

place), the quality of roads (130th place), inflationary changes and the ability of the country to retain talented people (129th place), in property rights protection (128th place).

The negative factors for doing business in Ukraine are inflation, corruption, political instability, high tax rates, complexity of tax legislation, instability of government, difficult access to finance, inefficient state management, bureaucracy, currency market regulations, insufficient education of the employees, poor ethics of workforce, lack of ability to innovate, restrictive regulation of the labor market, inappropriate quality of infrastructure, crime and theft, poor quality of health care [12].

The in-depth analysis of the domestic and foreign experience and the key findings of the study contribute to better understanding of the principles of competitiveness efficiency, observance of which will allow the country to increase or maintain its competitiveness. The study argues that the golden rules of competitiveness efficiency are:

- stable and predictable legislation;
- flexible structure of the economy;
- investments into the traditional and technological infrastructure;
- stimulating private savings and domestic investment;
- increasing the aggressiveness of exports and attracting foreign direct investment;
- improving the quality, efficiency and transparency of management and administration;
- interdependence of wages, labor productivity and taxes;
- reducing the gap between the minimum and maximum earnings in the country;
- significant investments in education, especially secondary education, as well as in the continuous improvement of the skills of workers;
- balance between the advantages of globalization of the economy and the country's national characteristics and interests (that is, alongside with the awareness of belonging to the world community there must exist a national idea and national self-identity).

The experience of economic restructuring in Ukraine and other transition economies clearly shows that at the present stage of economic transformations only a substantial expansion of competitive advantages can become a significant factor and facilitator in the recovery of the national economy. For Ukraine, this factor is of particular importance, as it allows to accelerate the market transformation of the economy, to get access to the world commodity market and create foreign exchange reserves necessary for the modernization and structural adjustment of production [11].

Competition is a complex category. It provides an opportunity to actualize a vigorous potential of the market stimulus for business activity. Implementing an effective economic policy with an emphasis on fair competition principles, we can attain the desired harmonization of the interests of the state and business entities. It's important to emphasize that the state only creates the appropriate conditions

for the emergence and improvement of the factors of competitive advantages, and commodity producers directly create these advantages. Therefore, the state efforts to create acquired or specialized competitive advantages can be nullified by the slowness of the state authorities' decisions, their inability to timely understand the needs of specific industries and adopt new directions of activity.

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THREATS TO INFORMATION SECURITY: MONITORING ASPECT

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In the context of a permanent information confrontation in the world, the spectrum of the information threats is rapidly increasing and expanding significantly. This situation poses a serious threat to national and international security and leads to unpredictable and sometimes harmful consequences in all spheres of vital activity of the state [2].

The issue of information security of enterprises has become extremely topical these days. The reason for this is a high level of informatization of the economic activity and social life on the whole through using information resources in all spheres of human activity, which often substitute other types of the resources. In the era of the formation and development of the global information economy, the counteraction to various threats and challenges born in this era is becoming a serious problem, which concerns the issue of ensuring sustainable functioning and development of the modern world and individual subjects in the current and strategic perspective [6, p. 94].

The statistic data provided by the Information Security Monitoring Center at the beginning of 2018 confirm this provision. Monitoring Center «Prospective Monitoring» is a service that processes information about security events from the connected to the center systems, determines whether a sequence of the events is an incident or not, and helps the employees of the monitoring organization respond to the incidents.

Although the observations and research analytics of the mentioned center covers only a sample of registered entities, the data presented in the report will allow us to trace the overall picture of the information threats range and information security system [5].

Regarding the analyzed data it is expedient to note that:

- the information security event is understood as identifiable occurrence of a change in the everyday operations of the system, service or network, indicating a possible violation of the information security policy, or failure of the protective measures, or the emergence of a previously unknown situation that may be relevant to the security of the information systems;

- the notion of information security incident refers to the occurrence of one or more undesirable or unexpected events of information security, which indicate the probability of a violation of business operations and the creation of a threat to the security of the information system.

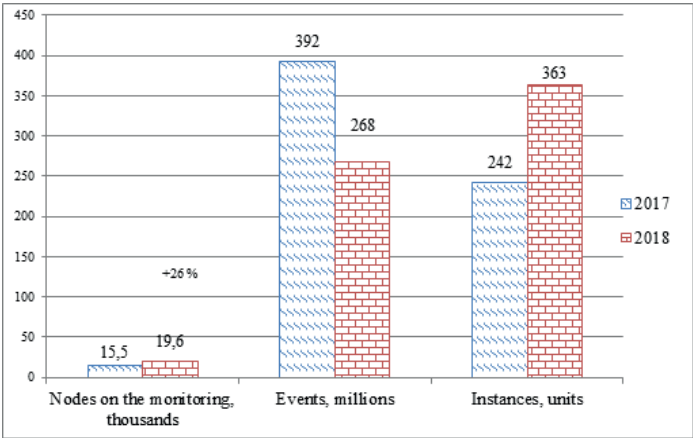

Fig. 1. Dynamics of the changes in the main determinants of the threats to information security [according to the data from the Center for Information Security Monitoring]

The sources of security events are networks and host IDS, network devices, security scanners, antivirus solutions and honeypots.

Within the internal processing of the information security system, incidents are classified according to their influence resources (Table 1).

The study has revealed that the High Criticality level of a security incident is related to the key server resources or high-risk resources of the user (resources that handle critical in terms of business, finance or legislature information). Medium Criticality level of a security incident deals with noncritical resources of server sector. Low Criticality level of a security incident refers to the noncritical resources intended for regular users sector.

Malware takes the largest share in the incidents because the more nodes to monitor, the more incidents related to the software. Like in 2017, the family infected by malicious software WannaCry and Petya / notPetya prevails. It does not encrypt data, but spreads over the network, infecting the vulnerabilities of EternalBlue-nodes.

Adware involves infecting the end system, transferring information about the user to the command server and displaying the targeted advertising.

Virus software aims at infecting the end-system, spreading the virus over a local network, disconnecting/blocking services that obstruct the spread of the virus, attempting other attacks inside the network to get the critical information and transfer to the command servers.

These days Malware is increasingly being used for Mining cryptocurrency.

As for «Exploitation of vulnerabilities», in addition to the usual EternalBlue exploits, you can separately highlight a large percentage of vulnerability exploits on the Web, and especially in Apache Struts, exploits that fell into the Metasploit suite.

Table1

Classification of the information security violation incidents [based on the data from the Center for Information Security Monitoring]

Incident class	High criticality	Average criticality	Low criticality	Total incidents	Share incidents
Malware	59	29	66	154	42%
Exploitation of vulnerabilities	33	19	16	68	19%
Selection of passwords	26	23	10	59	16%
Attack	10	26	11	47	13%
Violation of the policy of the IS	11	9	8	28	8%
DDoS	4	3	0	7	2%
In general:	143	109	111	363	100%

Matching the passwords involves attempts to select authenticated information for access to the services and resources of the controlled organizations – RDP, SSH, SMB, DB, Web.

Violation of the information security policies is a violation of the information security policies by the users / administrators of the controlled resources in the use of outdated versions or non-trusted software. This software can be used by hackers to attack by exploiting vulnerabilities and the use of resources for their own benefit (Mining bitcoin / ethereum).

DDoS with using resources of DDoS Amplification organization is the technology of replacing your address with the address of the «victim» and generating small requests to open services. Upon request, the service returns the response to the sender's address several dozen times larger.

Attempts to identify and exploit the system's vulnerabilities include the use of flaws in the system, in order to violate the integrity and proper functioning of the system. The vulnerability may be caused by programming errors, design flaws, unreliable passwords, viruses and other malware, scripting and SQL-injections. Some of the vulnerabilities are known only theoretically, while others are actively used and have well-known exploits.

The sources of attacks, in this case, are the IP-addresses, which are the parties to networking with controlled addresses.

The map shows the location of the first hundred IP- addresses by the number of the registered events. Most of these addresses are located in Russia, Ireland, Germany, the Netherlands, the USA, Canada, China, Germany, Mexico (Fig. 2).

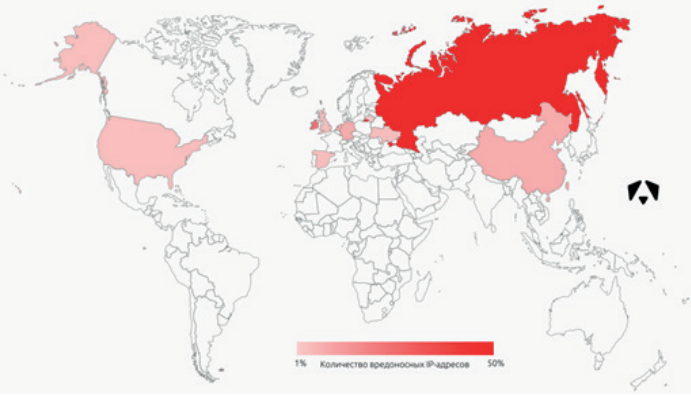

Fig.2. Map of the malicious IP-addresses in accordance with the number of the registered events of an information threat
[the data from the Center for Information Security Monitoring]

At the same time, Kaspersky Lab specialists compiled a map that displays the percentage of the attacked computers in the country. The highest level is observed in Vietnam - 69.6%, Russia - 46.8%. The lowest recorded number of attacks was in Israel (8.6%), Denmark (13.6%) and Great Britain (14.5%) (Fig. 3).

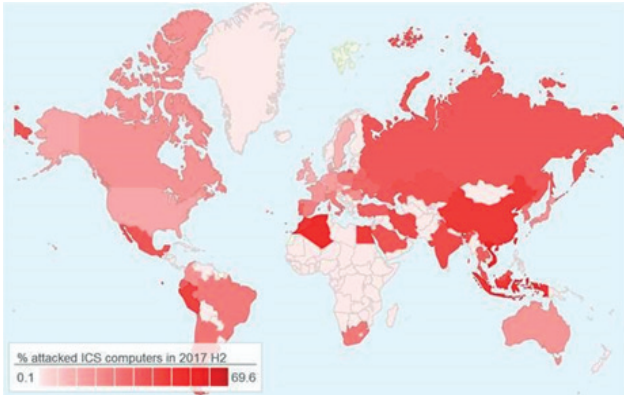

Fig.3. Map of the attacked computers in the country [based on Kaspersky Lab data]

Microsoft has released a regular report on security threats to information systems.

According to the study in 2018, up to 9% of computers encounter malicious software [7].

The growing popularity of cloud services has increased the number of attacks on them. According to Microsoft, in 2018, the world recorded 4 times more security

threats than the same period a year before. The number of attempts to sign in to Microsoft from harmful IP-addresses increased by 44%, becoming the main source of the cloud service infections (51%). The most common attacks are through the dial-up protocol (23%), spam (19%), port scanning (3.7%), SSH protocol * (1.7%), and others [3].

The report argues that the most widespread are Trojans malware (by the end of 2018 they had been caught out by the users of 10.26% of computers).

The second and third place belongs to viruses (1.59%) and bootloaders of trojans – droppers (0.64%). In the same period, unwanted software was found on most infected computers by the installers of additional software (5.49%), browser modifiers (2.14%) and adware (0.25%) [3].

Accordingly, Gartner forecasts costs increase in all major areas in 2019. About $ 57.7 billion (+ $ 4.65 billion) is planned for cyber defense services, for security of infrastructure - about $ 17.5 billion (+ $ 1.25 billion), for network security equipment – $ 11.67 billion (+ $ 735 million), for consumer software – $ 4.74 billion (+ $ 109 million) and for the IAM-system – $ 4.69 billion (+ $ 416 million) [4].

Analysts also believe that by 2020, more than 60% of the world organizations will invest simultaneously in data protection tools, information loss prevention software, encryption and audit. By the end of 2018, the share of companies purchasing such issues was estimated at 35%.

Another significant Article of the corporate costs in information security is engaging the third-party professionals. The costs of the companies for IT outsourcing in 2019 will increase by 11% and will amount to $ 18.5 billion. The main reasons for it are the increasing demand for the cybersecurity personnel, the technical complexity of the IB-systems and the growth of the cyber-threats.

According to Gartner, in 2019, corporate costs for third-party IB services will amount to 75% of the total cost of software and cyber security equipment, while in 2017 this share was at 63% rate [4].

Achieving a higher level of cyber resistance within individual enterprises or the entire society requires more efforts to identify and manage new risks inherent in modern technology. Companies need the effective guidance and procedures for implementing information security measures that digital progress requires. In the digital transformation, special attention should be paid to the protection of the technologies and processes while implementing, and in some cases, to integrate cybersecurity into this process.

Summing up, it is worth reminding of the need to reconsider the interpretation of information security as an additional optional service, the inclusion of which is not a prerequisite for the successful functioning of the society, country, organization, personality. These days the information environment is developing and being structured. The issues that we could have neglected before can not be ignored now. This is an incentive to introduce new legal acts and promote the emergence of new regulators, both public and private. This is also the reason for transforming the

criminal information world both by the methods of attacks and by the participants [1].

Thus, the provision of the information security remains one of the most pressing and complex problems in modern data transmission networks.

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IMPLEMENTATION OF ECO-INNOVATION MANAGEMENT TO ACHIEVE SUSTAINABLE DEVELOPMENT GOALS

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In modern conditions ecological economics goes in the first place, which addresses the relationships between ecosystems and economic systems by integrating ecological, social and economic aspects in sustainable development.

Following the end of the World War II economies of developed countries grew rapidly: economic prosperity characterized by high productivity, wages, consumption and system of social benefits. The economy became more prosperous, but since oil crisis its explosive growth slowed down. The recognition of significant global challenges such as the economic recession, environmental degradation and resource shortages led to the successive technical change for the creation of a new model of society.

The global community set sustainable development as a goal for society and acknowledged that business and industry play a crucial role in reducing impacts on resource use and the environment through efficient production processes, preventive strategies and cleaner technologies. Eco-innovation globally emerged as route to achieving sustainable development [2; 5].

Due to increased mass production and improved technological efficiency, eco-innovation must address aspects of the economy, ecology, and society to impose limitations on the present rate of environmental resource use.

Eco-innovation aimed at significantly improving environmental protection and comprises new, better or cheaper abatement technology; green products, energy technology and transport; cleaner process technologies and waste reduction. They are closely related to the development and use of environmental technologies as well as the concepts of eco-efficiency and eco-industry. Initially, eco-innovation merely focused on production and processes, but has been expanded to new management and business methods, the use or implementation of which is likely to prevent or substantially reduce the risks to the environment, pollution, and any other negative impact of the use of resources throughout the lifecycle of related activities (Fig.1). Currently, the world market of environmental products and services is growing.

Eco-innovation exerts a significant influence on environmental performance, enhances a firm's competitive advantage, and industrial symbiosis allows firms to achieve a win-win situation in their supply chain network [6; 7]. The technology push is particularly important during the initial phase of an innovation's life cycle, and environmental regulation may lead to eco-innovation by forcing technological improvements. In the diffusion phase of new environmental products, the demand from consumers, public procurement, and other firms, and exports is important.

The guarantee of accelerated private investment in innovation is the expectation of rapidly growing demand for products based on those new technologies. Environmental accounting systems, eco-audits, and eco-labels may improve eco-innovation's information base and determine innovative behavior in firms. R&D investments or fiscal benefits, can help to develop eco-technologies, and financial aids contribute to forming and supporting eco-innovation markets. [1; 3; 4; 9].

Environmental technology involves new design principles, operational tools and processes along with practices for continuously improving environmental performance. The closed-loop supply chain, which consists of both forward and reverse activities in a specific system, is considered to play a critical role in the management domain.

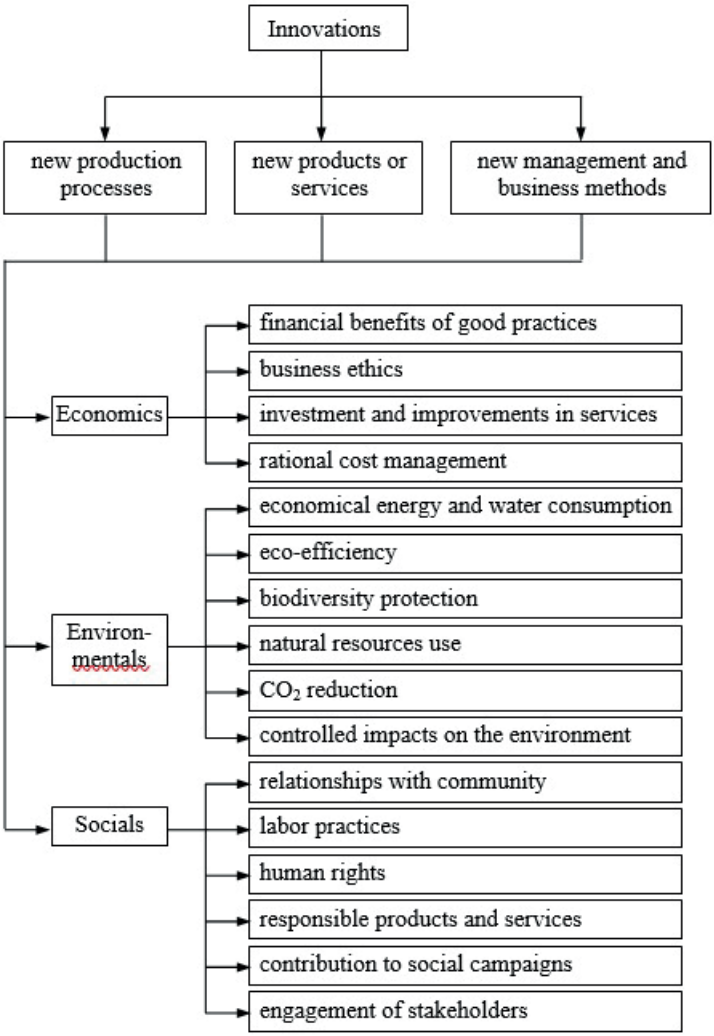

Fig. 1. Innovation features subordinated to sustainability criteria
Source: developed by the author.

Faced with the fuel intensiveness of material acquisition, highly energy intensive manufacturing, the end of life of products, harmful fertilizers, raw material wastage, the degradation of the ecosystem and land, high water and chemical consumption, companies are forced to embarked on eco-innovation. Establishing sustainable production and consumption patterns is the common aim of eco-innovation.

Table 1

Priorities for Eco-innovative projects in different sectors

Economic sectors	Specific priorities considering its important environmental impact
The building & construction sector	- Innovative building products that reduce environmental impact and/or support a rational use of natural resources; - Water saving, re-use of natural waters, rainwater collection and green roofs; - Innovative sorting, re-use and recycling of construction and demolition waste.
The food & drink sector	- More efficient and cleaner processing of products that reduce waste and increase material recycling and recovery; - Innovative packaging methods and material that reduce environmental impact and maximize the use of raw materials in the food sector; - Innovative products, processes and services reducing environmental impacts of consumption (new packaging, distribution and purchasing decisions); - Improved efficiency water management processes that reduce the use of water across supply chains.
Greening business / 'smart' purchasing	- Promotion and implementation of environmental criteria for purchasing decisions of enterprises; - Innovative cluster approaches to management which contribute to the optimal use of resources, energy efficiency and biodiversity conservation - Products and services that follow the life-cycle approach in line with the principles of the sustainable consumption and production
Materials recyclin	-Improved sorting processes for waste materials: industrial, construction, household, electrical and electronic waste; - Business innovations for strengthen the competitiveness of the recycling industries; - Eco-friendly design and production of high quality consumer goods; - Innovative recycling processes.

Source: developed by the author.

Eco-innovation as a priority area requires support projects in different sectors which aim at the prevention or reduction of environmental impacts or which contribute to the optimal use of resources. Practical examples of eco-innovation include processes to recover valuable substances from waste water, more efficient food packaging, producing construction materials from recycled waste; introducing technology to generate energy from the processing of organic waste; reduction in harmful chemical use; sustainable business practices; eco-tourism (Table 1).

However, remains big hurdles like stubbornly high domestic competition, the risk of intellectual property violations, complex regulations, and administrative processes, cheap imports of raw materials which undercut demand for organic produce, a lack of viable financing options, to commercial loans in particular [8; 10].

The scarce development in the companies in respect to their environmental strategy may be a consequence of the links among some of the following factors: limited financial resources, the type of organizational structure, the managers' scarce environmental training and short term orientation, the staff's scarce environmental awareness and training, the status of the environmental issues in the company, the companies' lower ability to obtain highly radical innovations, the scarce influence of manufacturing process flexibility in the most advanced states of the environmental strategy in the companies and their lack of relation ability with external stakeholders.

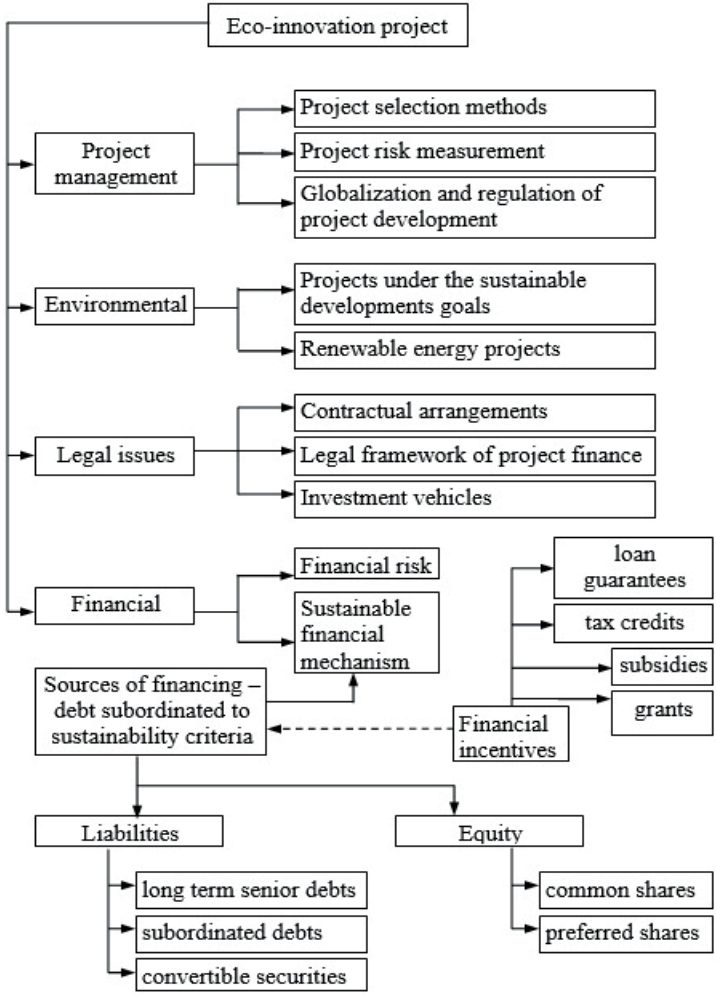

Fig. 2. Organization and management of eco-innovation project
Source: developed by the author.

There was a need in a systemic approach that facilitates understanding of the relationship between the biosphere and the economic-finance structure which is focused on optimizing resources for generating not only environmental benefits (global warming prevention, resource recycling, and environmental consciousness) but also economic profits (quality, costs, and delivery). Changes are needed to establish new ways in order to close the gap between the development of infrastructure systems and financing sources using the incorporation of sustainability criteria in the financing process (Fig. 2).

The implementation of environmental management systems plays an important role in building eco-innovation in circular business. Managing waste in a proper way helps to protect human health and the environment and enhances a firm's sustainability. Therefore, creating a program that controls the amount of waste they generate is important. Cooperation with suppliers plays a vital role in formulating a firm's innovative ability. The relationship between firms and suppliers should be built based on trust, information exchange, technological collaboration, and investment.

Firms gain numerous benefits from information knowledge sharing among buyers, manufacturers, and suppliers, such as improving communication among employees, enabling better and faster decision-making processes, stimulating innovation and growth, improving deliveries to customers, and reducing the loss of knowledge. By building a tracking system for products, firms can make more accurate forecasts or decisions based on all information regarding the stock, delivery, and condition of products (Table 2).

An environmental management system can help achieve cost savings, improve operational efficiency and environmental performance, increase customer loyalty, and enhance employees' skills. Firms should give more consideration to launching environmental management systems to enhance profitability and to developing increasingly more environmentally friendly products and services, which is critical to building eco-innovation and to gaining further competitive advantages over business rivals.

Eco-innovation can enhance environmental awareness and increase operating efficiency within a firm. The technological, entrepreneurial, territorial and economic dynamics of innovation favors innovative approaches by actors who, through their behaviors, strategies and smart innovation policies, modify economic models in a perspective of sustainable growth.

Table 2

Suggestions about the decisive attributes that may assist business in reaching the circular level

Directions	Aspects	Explanation
Environmental technologies	waste management	reduces the amount of materials, energy, water, and land used, thereby raising the input efficiency of each business unit that is produced and distributed
	green-power technology development	development of new technology that is more environmentally friendly
	recycle, reduce, re-use	allows used resources and used materials to be part of the production and consumption process for a longer time, that is, until they are physically degraded
	environmental monitoring / pollution control	an important type of eco-innovation that can lower air emissions and waste. In addition, environmental monitoring can help to reduce damage by preparing methods against risks
Organizational innovations	management of the value chain	includes strengthening the transformation from local and unidimensional optimization to extensive life cycle optimization and addresses the entire product life cycle
	information knowledge sharing	allows suppliers, manufacturers, and retailers to increase the accuracy of forecasts, orchestrate production and delivery, align inventory-related decisions and develop a platform to share information
	creating knowledge	relates to the sources of knowledge, and suggested that the key to success relies on collaboration and coordination among partners throughout the entire value chain
	implementation of environmental management system	suggesting that eco-innovation occurs only if the applications are not harmful to human health and the public widely understands the meaning of the natural environment
Green product and service innovations	development of environmentally friendly new products and services	generates new demand and opportunities for green product / service deliverables
	eco-efficient package innovation	traditional and non-sustainable business practices encounter constraints linked to a rising green agenda; current products / services deliverables are thus required to consider a broader definition of value to fulfill public expectations, including ecological value
	adapting to customers through personalization	can be considered a buffer to reconfigure and shift existing products / services and design new products/services as ecological product / service deliverables, thereby addressing stakeholders' needs and market segments. This approach is a value proposition that complements the more "traditional" financial and market-related metrics
Green innovation process	knowledge sharing among partners / employees	a firm is able to promote knowledge sharing practices among groups or organizations to generate new ideas and explore new business opportunities to facilitate innovative activities
	cooperation with suppliers	research and development related to green innovation processes can guarantee inputs or elements with eco-friendly characteristics

Source: developed by the author.

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THE SHADOW ECONOMY ASPECT IN THE NATIONAL SECURITY SYSTEM

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Since the beginning of the transition period, Ukraine has faced the problem of a shadow economy – illicit economic activity, uncontrolled by society production, distribution, exchange and consumption of inventories and services. The shadow economy in Ukraine has become one of the major threats to the national security. Its impact on the Ukrainian society and the state is complex and systemic.

The topicality of this problem is substantiated by both internal and external factors. Firstly, the complication of intra-economic and socio-political problems in a number of countries: the state budget deficit, unemployment, «shadow economy rampage» and other negative phenomena of decline in production, political instability and aggravation of social tension in society. Secondly, in conditions of some countries debilitation, the desire of other states to military-technological superiority over them, the use of economic levers of pressure to achieve their political interests is increasing. Thirdly, the issue of maintaining a certain balance between the positive and negative factors of the foreign economic relations influence on the course and pace of the national socio-economic transformation, including the provision of the state defense capacity, are the issues of vital importance [3].

At all times, national economic security has been a paramount problem. The economic security of the state is characterized by the conditions and factors that determine the state of the economy, its stability, degree of the legalization and the level of legislation efficiency. Actually, the economy of any state, as well as other spheres of human life, includes the shadow sector [9].

At the moment, the issues of the shadow sector's influence on the state economic security of Ukraine is one of the most urgent, since their solution depends on the leveling of external and internal threats to the subjects of legal relations, as well as the prospects for their economic growth.

All countries of the world try to cope with the shadow economy in their systems of economic security with alternating success. The essential determinants of the shadow economy identification are the volume, forms, aspects of implementation and the level of socio-legal control. The economic specificity of the shadow economy is its destructiveness, that is, the direct negative impact of the subjects of legal relations on the economy of the country or a region [1].

According to Z.S. Varnalii, the shadow economy is a complex socio-economic phenomenon, which is represented by a combination of uncontrolled and unregulated (both illegal and legal but immoral) economic relations between the economic entities aimed at getting surplus income through the concealment of income and

evasion of taxes [2].

Some Ukrainian and foreign economists assume in their works that the shadow economy is an economic activity that contradicts the law and is a combination of illegal economic activities that fall into a category of criminal offenses of different degree of gravity.

O.V. Skoruk argues that the main reasons for the existence and growth of the shadow economy in Ukraine are:

- protracted socio-economic crisis in the country;
- presence of the organized economic crime and corruption in the state and local self-government bodies (in terms of corruption Ukraine was the 131st among 176 most corrupted countries in 2016);
- extra-banking money circulation;
- the complexity and chaos of tax legislation;
- the imperfection of the current legislation in the sphere of national security;
- the criminogenic activity of the banking system;
- shadow psychology and shadow morality of our society [8].

Most scholars in this area consider the shadow economy as a system of three integrated sectors:

1. Informal economy («second» or «white collar»). It is prohibited, concealed by law economic activity of the «white» (official / formal) economy, which causes a hidden redistribution of the previously created national income. This kind of activity is mainly performed by «respectable professionals» from the senior staff («white collars»). That is why this kind of shadow economy is often called «white-collar» economy or the «second» economy. It does not develop any new products or services, that is, the benefits of the «second» shadow economy are at the expense of the losses of the others. In modern conditions, the unofficial economy forms the largest sector of the shadow economy. Subjects of unofficial economic activity are those who oppose the state and evade government control and tax levies [5].

2. Fictitious economy (gray) is the economic activity permitted by law, but which is not registered (mainly small business) and deals with the production and sale of consumer goods and services. Unlike the «second», «gray» shadow economy functions more autonomously. The participants of the shadow economy or producers deliberately avoid official registration (not wanting to pay the costs connected with getting licenses, paying taxes, etc.), and the report on such activity is not provided by law.

3. The underground economy (black) is illegal economic activity related to the production and sale of the banned and extremely insufficient for the demand goods and services. The «black» shadow economy, in the broadest sense of the word, includes all activities that are commonly excluded from the formal economic relations, since they are considered to be harmful to the society and dangerous for the formal economy development. This activity may not only be based on the violence and redistribution (theft, robbery, extortion) but also implies the

production of goods and services that destroy a society (drug business, racket). In recent researches, attention is focused, first of all on the economy of the organized crime and the activities of the professional economic criminals.

It is a commonly recognized fact, that the shadow economy can exist and develop on a large scale only in the conditions of corruption of all systems of state power and management. It forms corrupt relations in all spheres of politics and economy.

The shadow economy closely correlates with the number of jobs and the level of corruption and crime. In a country with underdeveloped industry, with a high rate of unemployment in the economy, the employment that does not meet the needs of the population, the shadow economy with its large share in GDP is inevitable. People, deprived of legitimate work, are forced to adapt and therefore are engaged in any activity that brings income.

In countries with high taxes system, shadow economy helps the business survive. Therefore, it performs a positive function, reducing the official unemployment rate and providing the population with illegal jobs. Despite this positive (short-term) effect, the disastrous consequences for the economy (in the long run perspective) are inevitable.

Since the shadow economy actions are uncontrolled and unregulated, a significant number of able-bodied population of the country is forced to take an illegal, criminal path. The main goal of the shadow economy is profit, which they can not get without violation of the country's legislation.

It is a generally accepted fact that the shadow economy and corruption are inseparable and generate each other. The shadow sector in the economy is a fertile ground for the development of the corrupted actions since it lies outside the scope of legal norms. In addition, the shadow economy generates a steady demand for the corrupt services and regulates the number of the corrupt officials it needs. The corrupt activity itself is an integral part of the shadow economy. Thus, the fight against corruption can not be effective without combating the shadow economy. In this context, the problem of studying these negative socio-economic phenomena in the country and working out the strategy of the state policies against corruption and the shadow economy ought to be considered together, as one single complex task. Only this methodological approach can ensure reliability of the obtained results and data.

The most debatable, controversial and versatile issue is the assessment of the balance between the positive and negative effects of the shadowing activities on the official economy. In the case study of the complex institutional phenomena, to which the shadow economy belongs, the dualistic approach to the interpretation of the positive and negative features is more appropriate. Most of the economic processes are characterized by the duality of positive and negative qualities that have a constructive and destructive impact in terms of the interests of the society. Depending on the period of cyclical development, both official and shadow economy can equally manifest their beneficial system-forming and destructive antisystem characteristics. In this respect, the national research specifics are principal. In certain studies on economy, the degrees of negativism and the threats of the shadow

economy are somewhat overestimated. It is natural because they are predominantly associated with the underground (criminal) sector of economy. In this case, the absolutization of the negative assessments will ignore the positive effects of the shadow economy (for example, the contribution of the hidden component to the GDP of the country, which is not taken into account) [6].

Many experts on the economic relations argue that the presence of the shadow economic activity is a determinant of the unsuccessful economic policy of the state. The imperfection in the policy provides further opportunities for the shadow economy to penetrate into all spheres of the social life. The shadow institutes have taken spreading roots and germinated in the political and legal system. Thus, shadow activity has a significant impact on the state of the economy and the social climate of the society. Most of the aspects considered by us suggest that the shadow economy leads to negative social and economic consequences. At the same time, one can argue that these consequences, which are the results of the shadow economic processes, can not be estimated exclusively as negative ones. Many types of shadow economic activities facilitate the development of the legal (official) economy. The negative effects of the shadow economy activity concern, above all, the fact that various social and economic institutions undergo systemic changes and cause the deformation of the society foundation.

Table 1 shows the results of the analysis aimed at comparison of the positive and negative determinants of the shadow economy influence on the legal economy.

Consequently, the key findings of the study suggest that the role of the shadow economy in a constantly changing socio-economic environment is ambiguous. On the one hand, tax evasion increases the competitive advantages of the enterprises engaged in the shadow actions, and also allows the employees of these companies to receive additional incomes and reduces the level of real unemployment. On the other hand, as a result of the shadow activity, the state budget suffers losses, the efficiency of macroeconomic policies decreases, the structure of the economy undergo transformations, the investment climate and the competitive environment for law-abiding entrepreneurs worsen. The shadow sector in the economy has detrimental effects on the national interests of the country and its economic security. The formation of the effective policy to combat the shadow economy requires new scientific socio-economic and economic-legal approaches.

The analysis of the role of the shadow economy in the national security system has revealed that its influence on the economic growth and the development of the formal economy is multidirectional and besides the negative and harmful features, they have some positive effects.

Undoubtedly, any shadow economic activity is a crime. Economic crime starts with a deviation from the generally accepted regulations of social development, which is still unstable in Ukraine and is characterized by legislative inconsistency, administrative disorder and violations, and many other negative factors. Therefore, it will be appropriate to note that the transition to the shadow economy is not only a

digression from the standards of social development but may also be a forced act of the economic entities. In general, their economic activity is carried out on legal grounds, but real final financial profits are concealed in order to evade tax payments [7].

Table 1

Positive and negative aspects of the shadow economy

Positive features	Negative features
The effectiveness of the shadow enterprises activity is higher than the effectiveness of the legally existing enterprises.	The shadow economy destructively affects competition and distorts the market mechanism
Participants in shadow relations have the opportunity to earn extra money and increase their incomes	Shadow relationship distort the tax system of the country and do not provide sufficient tax revenues to budgets of different levels
GDP of the country on the whole is growing including the regions where the shadow business is developed	Shadow activity negatively affects the state financing system, reduces the state budget and deforms its structure and budget sphere
Shadow relations reduce social tension in the society, facilitate social contradictions between the rich and poor strata of the population	Shadow producers do not invest in R & D (research and development)
Shadow economic activity of the population helps to smooth excessive inequality of incomes	The shadow economy entails deformation of the social sphere
	Shadow economic phenomena negatively influence the reproduction of the labor force in the formal economy
	Shadow economic activity has a significant negative impact on the country's ecology
	Enterprises participating in shadow relations violate consumers' rights
	Active shadow activity is one of the causes of the corrupt society
	Shadow economic activity has a substantive negative impact on the international economic relations

Thus, the shadow economy destabilizes mostly the interests of business entities:

- it obstructs the formal mechanisms of taxation and, accordingly, reduces the amount of taxes collected, thereby affecting the national interest. Alternative, shadow tax mechanisms (the content of «roofs», payments to officials for their direct duties, etc.) often supplant the official taxation;

- shadow activity disorganizes the production process in the official economy, worsens the situation of existing economic organizations and prevents the creation

of «healthy» enterprises, infringing collective interests;

- the shadow economy, being related to the criminal activity, generates numerous conflicts, the only way to resolve some of which is the use of violence. Sociological surveys indicate that 30-40% of enterprise managers have personally encountered cases of racketeering, extortion, attempts to put the enterprise under the control of criminal groups;

- institutionalized de facto and many other far-from-not-harmful economic phenomena, for example, resolution of conflicts between entrepreneurs using force or illegal privatization of former state property, etc.

Thus, the existence of the shadow sector in the country's economy is a serious threat not only to economic but also to national security on the whole.

The key findings of this study provide evidence that the shadow economy effects on the formation and growth of the legitimate economy should not be interpreted as purely destructive but as multidirectional ones. The detailed analysis of the shadow economic activity contributes to better understanding of the negative, destructive factors and positive features of the shadow processes in the economy. The conclusions of the research may help to determine the strategy of how to control their expansion because of the potentially serious consequences for the national security system.

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INCLUSIVE DEVELOPMENT OF THE UKRAINIAN ECONOMY: STRATEGIC ASPECTS

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In modern conditions of fundamental changes, on both domestic and world scales, it is difficult to holistically comprehend and objectively evaluate processes and occurrences in the economic sphere of the state. The escalation of international military and political tension is due to a change of technological systems and age cycles of accumulation, during which there is a profound structural restructuring of the economy on the basis of fundamentally new technologies and mechanisms of the capital reproduction.

The key positions of the neoclassical model of economic growth, provide consideration of scientific and technological progress as the only way to achieve long-term development and recognize endogeneity of accumulation of capital, knowledge and human capital, are also relevant today. This is evidenced by the chosen course of states to ensure sustainable development, which strengthens the role of innovation. However, by this time one of the complex, and even the most debatable problems of developed economies is the problem of so-called secular, that is, «eternal» stagnation [5]. The existence of «failures» in the system of social protection, health care in many countries, the problems of social adaptation and environmental risks, and the restriction of access to goods and services already today characterize the inability of a market economy to solve key social problems.

For the first time, the term of inclusion was applied in the 1970s in the United States, but then only social inclusion was highlighted, which meant the increase in the degree of participation of all citizens in society, when each person as an individual is perceived by society and has the ability to fully participate in society. Differences and deviations are consciously perceived in the context of social integration, but their significance is limited. The right to participate in society is based on social ethics in all spheres of life [3]. Gradually, the concept began to apply to the economy. Severe environmental circumstances as a result of technogenic activities, a number of social and political problems indicate that the evaluation of economic, social or other processes purely from the standpoint of financial and material profitability is, though indicative, but imperfect. Also, the growth of separate country or sector of the economy is not isolated from others due to globalization and technological progress.

Foreign economists J. Robinson and D. Asimoglu consider the economic essence

of the notion of «inclusiveness» as an involvement in the process of everyone, without distinctions and restrictions [1]. According to the domestic scientists A. Bazylyuk and O. Zhulin, inclusion consists in adapting the system to the needs of the person, «... the concept of inclusive development implies that each subject of the economy is important, unique, valuable to society and has the abilities to satisfy it's needs... « [2, c.20].

Inclusive growth is a concept that provides fair opportunities and equal rights for economic actors, accompanied by benefits brought to each sector of the economy and various groups of society. This approach extends traditional models of economic growth and includes focusing on equality of health, human capital, ecological state of the environment, social protection and food security as global security factors in the broad sense [2].

Inclusive growth is fundamentally different from standard economic growth, since it has wider goals than income growth and GDP, and requires the country's government to actively work to achieve these goals, without assuming that positive results will automatically come from growth; shifts the accent on human development and increasing its welfare and reducing poverty and inequality level; aimed at increasing attraction and active participation in the economy, and not only on the results of the distribution. The development of the concept of inclusive development in accordance with the EU Development Strategy up to 2020 is presented in Fig. 1.

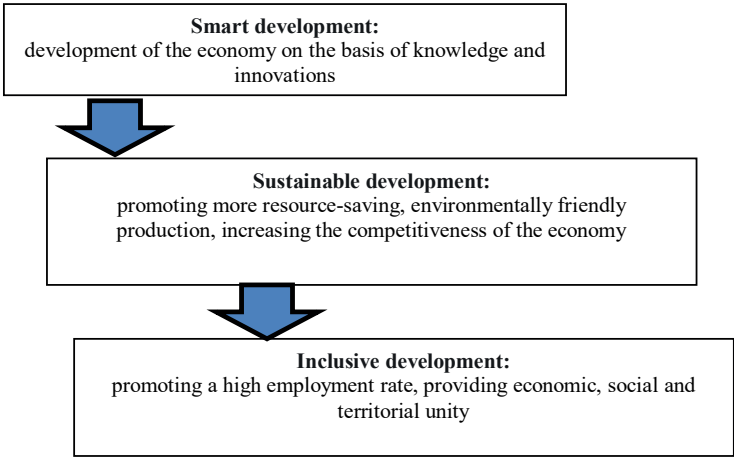

Fig. 1. The place of inclusive development in the system of the main priorities for Europe according to the Development Strategy up to 2020 [4]

The main key aspects of inclusive growth are investment in human capital, creating new jobs, structural transformation, progressive tax policies, social protection, avoidance of discrimination, social integration and participation,

effective institutions.

The study of the content and features of inclusive economic development and the opportunities for its achievement in countries with different levels of social and economic development were at the center of scientific research in many countries and international institutions, including the Organization for Economic Cooperation and Development (OECD), the United Nations Development Program (UNDP), the European Commission, International Monetary Fund (IMF), World Economic Forum (WEF), World Bank, International Center for Inclusive Development Policy. The main areas of this research are the identification of opportunities for ensuring equal access to markets, resources and an unprejudiced regulatory environment for different social groups, the formation of mechanisms for ensuring productive employment, increasing income for alienated groups and combating poverty, developing new approaches to the consumption of scarce resources and achieving inclusive growth in the long run. Inclusiveness, in particular, has been identified as one of the key priorities of the strategy for economic growth "Europe 2020" [4]. According to this strategy, the EU is working hard to resolutely overcome the crisis and create a more competitive economy with higher levels of employment. The Europe 2020 strategy aims to achieve the priorities of smart, sustainable and inclusive growth.

The World Economic Forum in Davos presented the Inclusive Development Index 2018. Ukraine ranked 78th place among 103 countries. The first in the rating is Norway, the last one is Mozambique. At the same time, GDP was and remains the main indicator of the country development. At the same time, this indicator has a number of limitations, such as how much conventional hryvnias or dollars per person according to GDP index, in no way shows how these funds are distributed and what quality of life they provide.

The Inclusive Development Index (IDI) is an expanded estimation of the country's economic development. In addition to the GDP estimation, this Index measures 11 additional parameters. IDI consists of 12 indicators, which are divided into 3 large groups:

1. Growth and development (GDP per capita in US dollars, labor productivity, healthy life expectancy, employment).

2. Inclusiveness (inequality of income, poverty rate, inequality of wealth, median income of dollars per day - for parity purchasing power - per capita).

3. Generational equity and sustainability (net savings, CO2 emissions per unit of GDP, state debt, the ratio of working-age population to disabled).

For convenience of comparison, the country's ranking is divided into two sectors: developed (30 countries) and developing countries (79 countries), including Ukraine. Ukraine ranks 47th place in its sector. For comparison: Moldova – 31st, Russia – 19th, Poland – 5th, Turkey – 16th. In the first group we have a problem with employment – 51st place.

In the group responsible for inclusiveness, we have rather high rates - the total 17th and the first place among developing countries according to the index of

income inequality and poverty.

At the same time, according to the index of wealth inequality, Ukraine ranks one of the last places (73rd out of 79). This may mean that even with the concentration of wealth in the hands of a few families, it does not work on them and does not generate sufficient income to influence income inequality. Another likely explanation is that there are some problems with the collection of used data.

For stability, Ukraine has negative indicators: the total place is 75th out of 79. One is more or less positive, is the ratio of the working-age population to disabled (10th out of 79).

Global changes in conditions of the world economy inclusive development, particularly in the employment sector, which are reflected in the analytical conclusions of leading HR agencies around the world, indicate a possible disappearance of about 66% of traditional professions over the coming years. A significant number of people who are working today will be replaced by technologies, machines that have been spreading over the last time. This means that for successful activity only narrowly professional characteristics are not enough. The modern economy and the labor market place absolutely new demands not for fulfillment of the set goals, but for how the tasks are carried out, the problems are solved, how quickly a person guides and adapts to changing business environment. It must possess a whole range of personal, psycho physiological, moral and aesthetic, emotional, volitional qualities necessary for the successful development of its own potential. In addition, the ability to effectively co-operate, build communication channels, critically think and predict the effects of its actions are necessary components of a fully developed personality to succeed. People in the 21st century are exposed to the environment characterized by diversity and interconnectedness. The constant influence of economic, digital, cultural, demographic and ecological factors on human life is caused by constant intercultural collisions. It requires the development of skills related to global competence, which focuses on the development of global and intercultural human world view. Strengthening of global competence is essential for the prosperity of people in a rapidly changing world, as well as for progress in conditions of the world economy inclusive development. Therefore, it should be noted that today there is a need not only for the skills needed to be competitive and ready for labor market challenges, but also to develop capacity for analyzing and understanding global and intercultural issues.

In Ukraine there are enough speeches by both scientists and politicians and government officials who see a single opportunity «to move from «raw drift» and «debt hole», depending on international financial institutions to ... the European level of well-being» in the transition «from the extractive to the inclusive economy, when economic processes will involve the broad groups of population, which can freely demonstrate their talents and entrepreneurial initiative». Some of them consider the key mechanisms for this is cooperative movement and programs like ESOP operating in the United States and Europe, believing that «this is a real way

to «soft deoligarization» and an inclusive economy».

However, in Ukraine today, there is already a legislative initiative that can be considered as a step towards an inclusive economy, involving the broad groups of population, solving social and economic, demographic, and environmental problems in rural areas and Ukrainian agriculture. The conviction that the «proper» launch of the land market should lead to the improvement of all processes that took place during the 15-year moratorium on the sale of agricultural land, and the leveling of distortions in the Ukrainian agrarian model caused by these restrictions, are not shared by all involved in decision-making in this area. Moreover, this is a decisive resistance, and not only about «not being worse». Sale of agricultural land in the version proposed by the government (the Ministry of Agrarian Policy of Ukraine) opens the market for ordinary peasants, but excludes large «players» (primarily agroholdings) from this process.

Ukraine has made some important steps towards increasing level of inclusive growth and development. At the current stage, a national plan for the practical implementation of sustainable development ideas is in effect (National Report «Sustainable Development Goals: Ukraine»).

As practice in other countries shows [6], the development of projects of inclusive market involves large numbers of low-income population as producers, small businesses, customers and consumers. The development of inclusive markets in Ukraine should be an important step in implementation of a holistic concept of the system of population social protection, focusing on reducing social risks for the poor and vulnerable, creating conditions for reducing poverty, helping to form active employment policies and reduce unemployment, including:

a) organization of public works;

b) development of an automated system of information from local labor markets, primarily through the bank of vacancies, and the organization of information exchange, at least within neighboring administrative districts;

c) professional training and retraining of unemployed on the basis of tripartite agreements between employment services, employers and educational institutions, etc.

For this purpose, it is necessary to consider inclusive business models as an element of a common business strategy aimed at attracting vulnerable groups of population to the business activities of various sectors of the national economy.

Despite the controversy about the feasibility of using the inclusive development index in statistics, the concept of inclusion itself is quite rational for Ukraine (Table 1).

The concept of inclusive economic growth arose because financial profitability cannot be the only criterion in a number of aspects of the social sphere, in environmental issues, etc. Inclusive growth is aimed to provide fair opportunities for economic actors in the economic growth and equality of sectors of the economy and groups of population, and also focuses on equality of health, human capital, ecological state of the environment, social protection and food security.

Table 1

The main advantages and disadvantages of implementing the concept of inclusive growth for Ukraine

Disadvantages	Advantages
Lack of legal framework	Gives impetus to economic recovery without using tough measures
Does not underestimate the problem of the country's external debt	Pays attention to the diversification of the economy (tourism, intellectual development, etc.)
Requires financial investment upon startup	Takes into account the problems of ecology and social injustice
	Increases employment level

In the system of qualitative indicators of inclusive growth, based on its theoretical essence, and taking into account the example of the functioning and implementation of the European model of inclusive development, it is necessary to allocate the employment level of population and creation of work places with the income that exceeds the poverty line. In the process of seeking a national strategy for inclusive economic growth, it is important to outline the priorities that reflect the achievement of the strategic goal - high level of population welfare and living standards. Increasing employment and diversity of its types as the basis of inclusive development will promote the activation of entrepreneurial activity, especially in rural areas, reducing seasonality of production, full use of endogenous potential of territories. Opportunities to adapt to the European model with the elements of «inclusive growth» should be provided, based on at least two key conditions:

1) business development and business availability to financial resources within the framework of new institutional approaches;

2) formation of the European integration of the economy.

Therefore, the active participation of the population in the development of rural entrepreneurship, the effective distribution of public goods and the attraction of capital will promote the modernization of agrarian production, technological improvements, increase of labor productivity, and thus creation of conditions for inclusive growth.

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INTERNATIONAL LABOR MIGRATION AS AN INSTRUMENT FOR ENSURING THE NATIONAL ECONOMY COMPETITIVENESS ON THE WORLD MARKET

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The modern global economic system has emerged as a result of the international division and specialization of labor and the further development of trade in goods, services and production factors between countries. The share of trade in world GDP has almost tripled from 1960 to 2017 from 24.12% to 57.85% [1]. Such a sharp jump was possible because of the deepening the specialization and the better use by the countries of their competitive advantages.

N. Gruschinskaya [4] notes that similar geographic, climatic, resource and other conditions enforce individual competition between different countries for creating better conditions for producers. Also, N. Grushchinskaya [5] points to the existence of geoeconomic competition, which is conditioned by the similarity of the factor conditions of neighboring countries, which contributes to their specialization in certain sectors. D. Yatskov [6] notes that selecting the enterprise location requires the analysis of the country's factor conditions in order to determine minimum production costs location to ensures the competitiveness of the company and its products in the world market.

N. Krivenko also agree with such view and admit that global producers that create major part of world GDP, on its side, allocate its capabilities in order to get better business conditions with lower manufacturing costs [2].

We focus on manufacturing costs as one of the factors that determines the

country's ability to provide favorable business conditions primarily due to lower cost of production in comparison with other countries.

As the existing borders create barriers to the movement of factors of production, and the prices of factors of production vary between countries and for a little within the countries, we assume that the competition is for the placement of production.

This assumption is confirmed by the theory of comparative advantages of Geksher-Olin. Each country provides competitive advantages over other countries through the surplus of certain factors of production used in a particular industry. The achieved competitive advantages, however, can be offset due to the Stopler-Samuelson Theory of international trade [3].

Considering the facts mentioned above we want to pay attention to The Global Manufacturing Cost-Competitive Index (BCG's Index) calculated by Boston Consulting Group. This Index measures changes in direct manufacturing costs from 2004 to 2014 among the world's top 25 exporting economies. The index develops competitiveness scores based on manufacturing wages, productivity, energy costs, and currency exchange rates compared with the U.S. dollar [7].

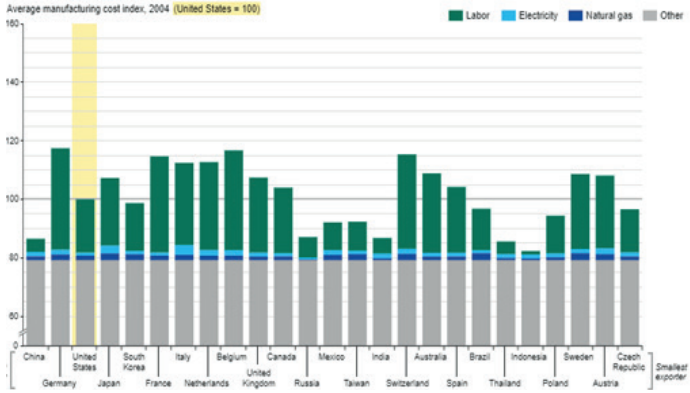

Fig. 1. The Global Manufacturing Cost-Competitive Index for 2004 [7]

It must be understood that productivity directly depends on capital, which is necessary for productivity growth, or in other words, the creation of technological production.

The BCG's Index points out a fact that many countries with low wages and resources costs have much higher manufacturing costs comparing to developed countries with high wages and resources price.

Figure 1 shows that the share of energy costs and other resources is relatively tight for all countries. However, labor costs adjustments by productivity are the most differentiated for exporting countries and, according to our assumptions, determine the competitiveness of the country on the world market.

Comparing the cost structure of the BCG's Index for 2004 (see fig. 1) and 2014

(see fig. 2), we see that the biggest changes in the structure occurred in the share of labor costs. For a number of countries this factor has become decisive.

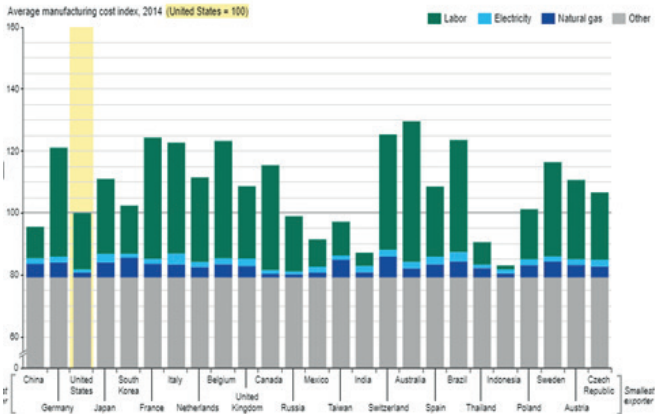

Fig. 2. The Global Manufacturing Cost-Competitive Index for 2014 [7]

For example, the cost of manufactured goods in China was on average 15% lower than in the United States in 2014. And just for a 1% in 2016. To better understand the causes of such changes, consider Table 1 and Figure 3.

The wage increased for 1000% in China and for 81.6% in the United States from 1995 to 2015. An important was the acceleration of the wages growth rate.

Table 1

Hourly wage for 1995, 2005, 2015 years [9]

Countries	Years			Відносне відхилення, %		
	1995	2005	2015	2005 to 1995	2015 to 2005	2015 to 1995
China	0,3	0,7	3,3	133,3	371,4	1000,0
USA	11,6	15,9	21,1	37,1	32,5	81,6
South Korea	7,3	15,1	20,7	106,8	37,1	183,6
India	0,7	0,9	1,7	28,6	88,9	142,9
Great Britain	17,2	30,1	38	75,0	26,2	120,9
Germany	30,4	38	45,5	25,0	19,7	49,7
Japan	23,4	25,3	24	8,1	-5,1	2,6

Hourly wage growth in China was 133.3% from 1995 to 2005, and 371.4% in the next decade. At the same time, the hourly wage growth in the United States

slowed down. The opposite satiation was observed with productivity growth.

Despite the fact that productivity growth in China was ten times higher than in USA it obviously could not cover hourly wage growth for 1000%. As a result China almost lost in comparative advantage in manufacturing costs mainly because of labor costs.

Similar tendencies were observed in other countries. The Boston Consulting Group report [8] indicates that a number of countries traditionally considered low-cost countries are under pressure from a number of factors that have been causing a significant increase in production costs since 2004, including Brazil, China, the Czech Republic, Poland, Russia.

Fig. 3. 2005 to 2015 productivity growth

At the same time, Mexico and the United States are becoming more competitive through slower growth in labor costs and energy prices. As of 2014, Mexican production costs are lower than in China. It is expected that the costs of TOP-10 exporters will grow and become from 10 to 25% higher than in the United States.

Thus, there we consider that an equalization of production costs between the major exporters of the world will accelerate the competition between main exporters. The labor cost adjusted by productivity will become one of the main factors determining the competitiveness of the country in the nearest future.

As the wages growth depends on a number labor force and productivity depends on capital we can make next assumption:

- Preserving the actual level of labor costs or slowing down its growth rates in developed countries will require an engagement of international migrants to lower wage growth. Raising the productivity, as an opposite, requires much more capital as it considers developing and implementation of a new technologies for developed countries. The margin growth of productivity might appear too little to cover the wage growth.

- As opposite, for developing countries it is better to raise the productivity as it considers implementation of existing technologies. By the way, migration policy is also crucial for such countries as mass labor outflow can dramatically push the wages and as a result the labor costs. Another important point is a brain drain.

Raising the productivity will be lowered if a country loses its high skilled workers.

It should be noted that the engagement of international labor migrants in developed countries is possible under the relevant conditions of the labor market in such countries.

First of all, it is low unemployment rate particularly in specific sectors. Such and other conditions describe Dual Labor Market Theory [10] and The 2000 World Migration Report [11].

The ability of developed countries to engage international migrants to its labor market and the corresponded threat for developing countries are explained by raising labor mobility in the world. The UN data on number of international migrants (see table 2) shows that their number tripled during the period from 1970 to 2015 years.

Rising of mobility of international migration is also confirmed by rising of share of remittances in world GDP (see fig. 4).

Table 2

Number of international migrants and it share in total population [12]

Year	Number of migrants, persons	Number of migrants to world population, %
1970	84,460,125	2,3
1975	90,368,010	2,2
1980	101,983,149	2,3
1985	113,206,691	2,3
1990	152,563,212	2,9
1995	160,801,752	2,8
2000	172,703,309	2,8
2005	191,269,100	2,9
2010	221,714,243	3,2
2015	243,700,236	3,3

This represents the fact that international migrants are first of all workers what is important for both countries that receive and send the migrant.

Before the conclusion we want to describe the example of migration policy of USA that might describe the country's success in world manufacturing cost competition. Figure below shows that USA received 49.8 million of migrants that is 20.4% of all international migrants in the world.

The US share of highly skilled migrants is about 40% and determines their leading position in the process of brain drain. It is also noted that the United States accepts about 32% of all international students enrolled in higher education abroad [14]. Authors note that brain drain from developed countries to developed countries causes minor damage for such countries, because such migrants usually return to their countries of origin. However, highly skilled migrants from developing

countries mostly do not return.

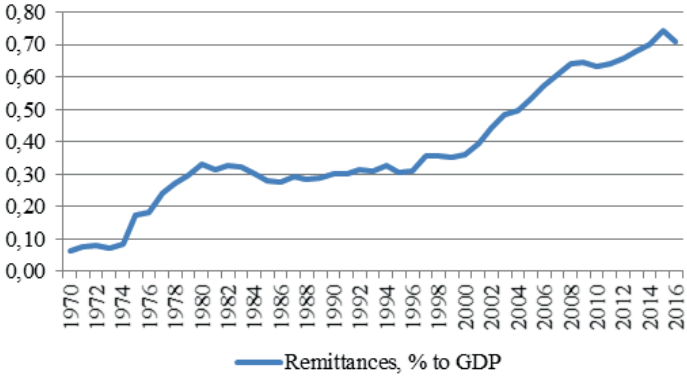

Fig. 4. (a) Remittances share in world GDP from 1970 to 2016 [13]

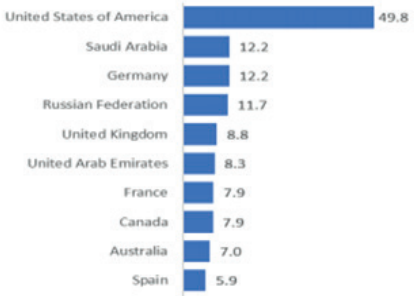

Fig. 4. (b) TOP 10 countries by the number of international migrants received by 2017 [9]

Taking into account the conducted research, we formulate the following conclusions:

- global competition between the world's leading exporters is intensified by the equalization of production costs between them. It is expected the change of traditional production centers in the near future;
- the largest change in the structure of production costs is caused by change of labor costs adjusted for productivity;
- maintaining the actual labor costs or slowing in its growth will require an increase in labor productivity and/or lowering the wage growth rates;
- the labor productivity growth in developed countries is limited due to the need to develop new technologies, while in developing countries it requires a using of already existing technologies that lead to greater productivity growth than in developed countries;
- developed countries might engage international migrants to slow down wage

growth. Developing countries need to slack a labor outflow to prevent a high wage growth rate and brain drain.

Therefore, in view of the growing competition of exporting countries in the global market, increasing labor mobility, the ability to slow down the wage growth in developed countries by attracting international migrants and the threat of sharp rise in wages in developing countries as a result of the outflow of labor force, international migration should be seen as an instrument for ensuring the competitiveness of the national economy.

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THE FORMATION OF FOOD SECURITY MECHANISM AS A MAIN CONDITION OF THE NATIONAL ECONOMY STABILITY

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Ensuring the optimal level of food security as a part of the national economic security presupposes close relationship of all its components [1].

First of all, food security depends on the territorial community of the population and has multi-level hierarchy based on the subject who solves the food problem and its functions. The center of this problem is the person with his (her) food requirements, without satisfying which it is impossible to perform productive activity and reproduction (Table. 1). Today, in the conditions of Ukraine, the level of food security is affected by many factors. The main factors of influence on food security are: the ability of agrarian sector to respond timely to market conditions, the stability of resource supply and cooperative relations, the availability of the necessary volumes of transitional stocks, solvency of the population and the accessibility of food for all citizens, the degree of protection from the dominance of imported products, insufficient investments in developing rural territories, and as a result, the introduction of new technologies and machinery in food sub-complex branches.

In other words, food security is achieved by the available corresponding systems

and mechanisms guaranteeing the sufficient volume of production and supply of food and adequate response to risks caused by irregularities in this area [2].

Table 1

Hierarchical levels of food security

Number	Level	Subject solving the problem	Function of object
1.	Global	The UN, specialized bodies (FAO, WTO Committee on Food Security, etc.).	Promoting sustainable economic development of states, long-term food adequacy programs
2.	International	The EU and others (created by signing trade, pricing, standardization of food agreements)	Promoting sustainable economic development and the formation of state and international funds, improvement of food quality parameters
3.	National	Legislative and executive bodies of state power	The stability of economic development, formation of the national food funds, balance of supply and demand
4.	Regional	Regional authorities	The stability of economic development, formation of regional food funds
5.	Local	Local authorities (municipality, district)	Creating the conditions for receiving incomes from households, supply of products and their quality control
6.	Family	Households	Buying and using of food products
7.	Individual	Average citizen	Productive activity of every citizen

Source [3] and supplemented by the author

All this has to be ensured by active, balanced, and consistent agrarian policy aimed at the development of agriculture, stimulation of agricultural production in order to ensure the needs of all sections of the Ukrainian population in food and food products of plant and animal origin in the necessary amount, assortment, quality, and the established safety level which are necessary for the health and normal vital activity. It is also necessary to revive export potential of the national agrarian sector. All these measures, together with the appropriate legal regulations – the adoption of a special law of Ukraine "On food security", in which, first of all, the definition of food security as a legal category and its characteristic features will be given, will improve increasing the effectiveness of legal regulation of the relations in the field of food security, and, thus, ensuring the population with high quality and safe food products at the necessary level, and also will enable the agrarian sector to react adequately on food market conditions, increase the competitiveness of farm products manufactured by Ukrainian producers both inside and outside the country

and realize its export potential [4].

Under modern conditions the problem of forming the mechanism of ensuring food security in Ukraine remains unsolved to the end. The situation is complicated by inter-regional differences in the state of agrarian economic sector and the level of food self-sufficiency.

The economic management mechanism can be defined as a definite system of the society's management, the model of economic sphere of the public life. Reproducing the totality of all the components of the latter, the economic management mechanism forms synthetic category, the essence of which is made of systemic and integral functioning of all economic forms of the social life [5].

Consequently, the nature of the economic management mechanism is considerably connected with the political and economic priorities of the state in the context of the existing historical conditions. Effectively functioning economic management mechanism is aimed at ensuring stable reproduction process, both at micro- and macro-levels.

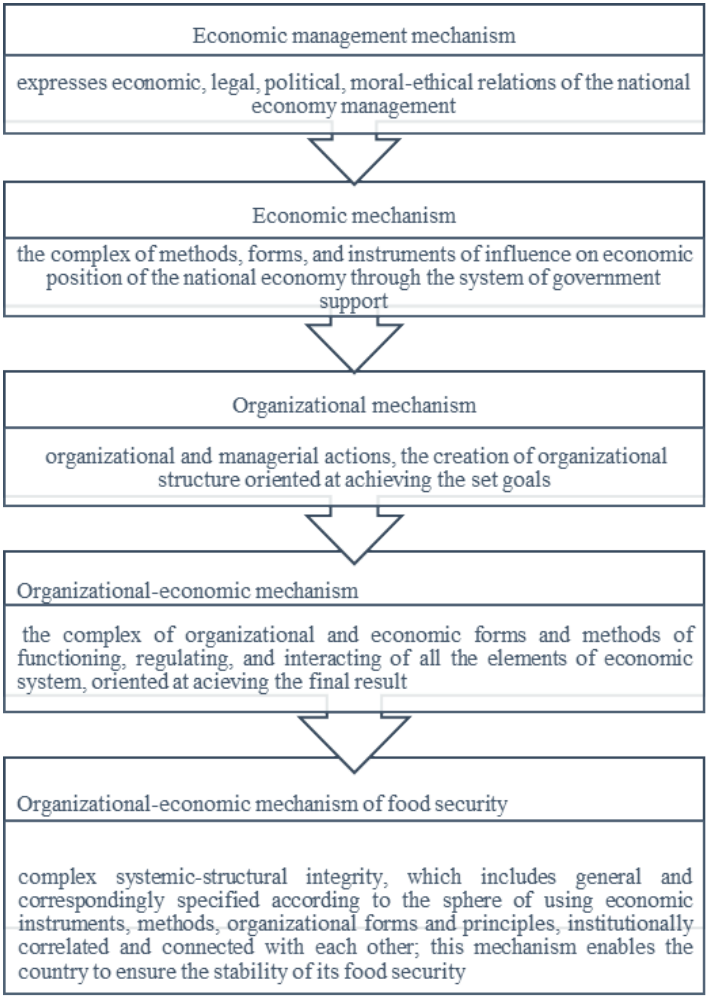
The economic management mechanism is based on full economic and legal independence of economic subjects, the economic mechanism of branch regulation. Its main tasks are: to provide intensive, competitive production based on innovations; to coordinate economic interests of producers, consumers, and the state [6].

Despite the apparent complexity of the studied phenomenon and complications connected with using the approaches to defining the essence of economic management mechanism it is necessary to single out organizational- economic mechanism as its important element. Organizational-economic mechanism is a combination of techniques, methods and means to manage social production aimed at achieving high final results with the least spending of labor, material, and financial resources [7]. Organizational-economic mechanism (OEM) is a form of economic management mechanism implementation on the background of the phenomena of economic life, which is a combination of organizational-economic tools and methods of influencing the corresponding processes [8].

Osipov Yu. M. characterizes organizational-economic mechanism as a system of organizing social economy as a social system of economic subjects with inherent mechanisms of management and the corresponding public institutions regulating the activities of economic subjects [9, p. p. 60-61].

The contents of organizational-economic mechanism are contained in establishing strict mutual relationship, order and determining the degree of importance of the elements, which it includes, i.e. developed organizational-economic measures, and in choosing necessary qualitative transformations in the production system [9].

B. Pohryshchuk considers organizational-economic mechanism as a synthesizing notion, i.e. a complex of organizational and economic forms and methods of functioning, regulating, and interacting of all the elements of the economic system aimed at achieving the final result [10].



Generalized and adapted by the author based on

Fig.1. The structure of economic management mechanism of the national economy

Organizational-economic mechanism, as viewed by Yu. Luzan [11] is a way of ensuring the implementation of the objective laws' requirements in the process of subjective human activity. The following areas are independent objects in the complex of organizational-economic mechanism: state-legal; managerial-legal; administrative-executive; state and economic management; self-governance.

Thus, the organizational-economic mechanism of food security is a complex systemic-structural integrity, which includes general and correspondingly specified according to the area of using economic tools, methods, organizational forms and

principles, which are institutionally coordinated and linked, and this mechanism enables the state to ensure the stability of the country's food security [12]. On the whole, the effectiveness of the organizational-economic mechanism of food security depends on the institutional coordination of all the components of this mechanism (Fig. 1).

In modern economic conditions of Ukraine's integration in external markets it is particularly important to increase the competitiveness of the national production in manufacturing food products and other consumer goods.

The problem of ensuring food security at the national level is extremely important because solving this problem consists not only in providing safe and high quality food products, but also in supporting and developing agrarian food sector and other sectors of the economy, contributing to solving the demographic problem and ensuring the efficiency and competitiveness of the national economy.

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OUTSOURCING: HISTORY OF DEVELOPMENT AND PRACTICAL APPLICATION

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The business management efficiency in the modern economic environment requires adoption of complex quick decisions in real time regime. Intensive competition compels managers to implement actively all available technologies today, attract more skilled workers and renovate production facilities without delay.

The rapid development of outsourcing and the practitioners' close attention to the issue are caused by gradual changes in the fundamental aspects of the modern economy, which increasingly takes on a form of the network. The network, in this case, can be defined as a group of interconnected companies which joined together to utilize their specific resources and advantages in the joint projects and which can be geographically located in any part of the world. Outsourcing has become one of the ways of establishing the organizations of such type in the globalized world.

The term «outsourcing» comes from the English words «external resource use». The international business practice determines this term as the sequence of the organizational decisions, the essence of which is the shift of tasks, operations, jobs, or processes, previously implemented by the organization independently, to an external organization which is commonly known as the third party. Outsourcing is often referred to as «the phenomenon of the twentieth century» and «the greatest discovery of business in the recent decades», since this concept was introduced in the business practice and spread worldwide only in the late 80s of the twentieth century.

The origins of the practical outsourcing as a method of production co-operation and high technology management in the industry relate to the period of «great confrontation» between two great managers – Henry Ford (1863-1947) and Alfred Sloan Jr. (1875-1966) who ran the giants of the automotive industry – Ford companies and General Motors.

Henry Ford substantiated the philosophy of outsourcing in the following way: «if there is something that we can not do better and cheaper than our competitors, then it makes no sense to do so; we need to entrust this work to those who perform it with a knowingly best result» [3].

In fact, those activities that were either secondary or peripheral were shifted to outsourcing. In the distant 1950s, outsourcing for a small business was seen as a way to overcome many restrictions, and as to a large company it was considered to be a sign of the inefficient doing of the business and even an indication of financial distress.

The confrontation of the two leaders of the automobile industry has clearly shown that under the conditions of strict competition, no company can be self-sufficient and rely solely on its own resources. It is expedient and convenient to

shift some of the processes, that ensure a large company ‘s production, to the specialized smaller companies. The shift of production and management functions outside the company initiated the practice of outsourcing. Since the 1970s of the twentieth century, outsourcing in the production of cars has become the basis of the production process organization [3].

Now outsourcing is of the same value as reengineering was in the 1990s. Ten years ago, this concept was rarely mentioned, but now outsourcing is as commonplace, as the core functions of enterprises – research and development, production, and work with personnel.

What is outsourcing today? Recently there has been an increase of interest in the interpretation of the notion. In our opinion, the most accurate among them is the definition suggested by B.A. Anikin in his manual «Outsourcing and Outstaffing: High Management Technologies». The scholar defines outsourcing as «the sequence of the organizational decisions, the essence of which is the shift of some functions or activities, previously implemented by the organization independently, to the external organization, or, as it is commonly called, the «third party»» [1].

Ukrainian terminology of outsourcing is not yet sufficiently unified. An enterprise, that provides services in the sphere of the division of labor, can be called an operator, outsourcer or a contractor.

Those companies that want to, or those who have already shifted some of their functions to outsourcing, are called the customer.

One more definition of the outsourcing provided by foreign, rather authoritative resource «WiseGEEK» is worth mentioning in the analysis. It reads: «Outsourcing is a treaty act of two companies concluded to provide the services, that otherwise can be performed by their employees» [8].

In the course of this study, we have come across the work by D.V. Lanska in the Scientific Journal of KubSAU. It provides a list of terms that are very close in their outsourcing content:

- «Facilities management» – management of enterprise facilities;
- «Shrinking» – reduction, compression of the organization activities;
- «Downsizing» – reduction of organization;
- «Spin -off» – division of business units or «unfastening» of the structures;
- «Contracting out» – shift of a contract to the third parties;
- «Externalization» – the shift of the control over the performance of any function to the company specializing in this field [6].

Some researchers still put the sign of equality between the concepts of outsourcing and subcontracting. However, current research argues that outsourcing is broader in its meaning concept, which is not limited to the shift of the technical functions and business processes, but also includes the transfer of a part of the risks to the partner; it is long-term by nature and depends on the lifecycle of a company [4].

The Institute on Outsourcing, having conducted its own research, distinguishes between IT outsourcing and the VRO business process outsourcing. It is this

division that is appropriate for analysis because each type can be easily described. In addition, IT outsourcing has been singled out as the precursor of modern outsourcing and is the absolute leader in the outsourcing market today. Practically, almost all companies refer to IT outsourcing in the beginning, and only then gradually switch to the other types of it. However, production outsourcing, which has recently become more commonplace in the activities of companies, deserves special attention [3].

Take as an example Toyota. The company is engaged only in the design, assembly and sale of products, while most of the component parts are manufactured by the third parties, often small enterprises. Moreover, this way of doing business is characteristic of almost all Japanese car manufacturers. The automobile companies of this country, due to the flexibility and mobility of their business since the 1970s, began to regain market from the «big three» of the automotive industry in the United States – companies of General Motors, Ford and Chrysler and did it with a quite torrential pace. By the beginning of the 1990s, these three companies had lost 25 % of the American car market. And only the creation of alliances with Japanese companies and the transfer of part of the business to outsourcing (not only auxiliary processes, but also the main ones) allowed them to improve their position.

Well-known long-term relationships between companies EDS and General Motors or Systemhaus and Daimler Benz can be another vivid example of the established mutually beneficial relationship between the outsourcer and the client. The leading position among IT outsourcing companies at the end of the 20th century was IBM Global Services IBM, which had a turnover of more than $ 25 billion in 1997 and more than 110,000 employees in 60 countries. The range of outsourcing services is expanding along with the development of computer technologies, information networks and relevant technical and software tools. The constant use of the Internet and other information networks has stimulated the development of the market for access to data (applications) placed by the provider (Application Service Providing, ASP). At present, according to the analysts of the International Data Corporation (IDC), the leader of the market for ASP service providers is Oracle and its Oracle Outsourcing subdivision that provide customer support for Enterprise Resource Planning (ERP) and systems of Customer Relationship Management (CRM). According to Oracle's own estimate, companies that use IT outsourcing can save more than 75% of their labor costs [2].

As for Ukraine, the activity and readiness of its representatives for new knowledge in this field make this country a desirable and promising partner. Among the most prominent Ukrainian market participants are such companies as Information Technologies, Incom, GlobalLogic Ukraine, Luxoft, AMI, SITRONICS VERNA, Art Master and SoftServe. At the same time, insufficient wages for these services within the country make the highly-qualified specialists emigrate abroad. An interesting fact is that Poland is looking for IT professionals in Ukraine, and Germany uses 6% of the Ukrainian outsourcing opportunities. In 2016, the

volume of services provided in Ukraine reached $ 1.1 billion, and the number of IT professionals working in this field reached 25,000 [7].

In addition to the main reasons for using outsourcing, some complimentary factors should also be highlighted:

- the boom of individual entrepreneurship in the service sector around the world in the 80-90s of the last century (the emergence of small enterprises) has increased the demand for financial, accounting, legal, IT services that the established network of highly specialized outsourcing companies could provide;

- the development and distribution of the Internet allowed to provide outsourcing services in real time, even in case the company providing them is territorially distant from the enterprise-customer, which makes the cooperation more effective.

Today, determining the role of outsourcing in the business system, it is necessary to identify in which spheres of the company's activity outsourcing finds its application. Different kinds of outsourcing and practice of using this business methodology suggest that all areas of a modern organization activity are open to the application of outsourcing.

There are the following spheres of outsourcing application:

1) outsourcing of the supplementary production sector concerns, first of all, provision of equipment, electric power, transport, assistance in the repair of equipment, supplying the auxiliary devices and facilities, etc. The refusal to perform the functions of auxiliary production independently allows the company to achieve much higher level of the main production activity;

2) outsourcing of the main production area is a strategic plan aimed at the integration of the company into a national or transnational global production system. The degree of outsourcing of the main production functions and the form of relationship with outsourcers may differ depending on the level of development and lifecycle of the industry, the lifecycle of the individual products, the availability of the international sources of resources, the efficiency of the resources utilization, internal reserves and external capabilities, the peculiarities of the competitive environment;

3) outsourcing of the sphere of the company's management (outsourcing management functions) is related to the increased requirements for the qualification of managers and the widespread use of information technology management. To determine the capabilities and the main areas of outsourcing of management functions it is necessary to:

- to focus the company's management attention on the main components of the production value creation chain;

- apply an individual approach to all management functions in terms of their uniqueness and strategic importance;

4) outsourcing of services covers various types of activities in the organization related to meeting the needs of society in services, as well as those that serve business processes which are a part of the business system and ensure its functioning.

Outsourcing of the service sector is primarily related to the technological specialization of the producers and the expansion range of complex and knowledge-intensive services. It involves significant growth of business services volumes (including credit-financial and insurance) and also telecommunication services;

5) human resource outsourcing, or HR-Outsourcing becomes a top priority for the organization due to the spread of modern human resource management. The functions of the human resources management (hiring/dismissal, training and certification of personnel, career planning, motivation policy development, etc.) are shifted to a special subdivision of the company. Outsourcing of these functions can significantly reduce the cost of maintaining the relevant departments and subdivisions and improve the quality of human resource management including the overall level of corporate culture [1].

The study has revealed that benefits of outsourcing for companies are as follows:

- cost reduction of the functions transferred to the executor;
- improvement of quality and reliability;
- concentration of attention on the main goals of the enterprise;
- access to additional resources, new technologies and knowledge;
- reduction of operating expenses;
- speeding the release of goods of the company in the market;
- improvement of management system;
- the possibility of placing orders for the production of component parts abroad at prices lower than domestic ones and of better quality;
- reducing staff training costs;
- increasing the market segment that the enterprise covers;
- reduction in the cost of the functions transferred to the outsourcer;
- increasing the investment attractiveness of the company;
- distribution and reduction of risks [5].

Thus, outsourcing can be a beneficial bargain for many businesses that do not have sufficient resources to control all stages of the production process.

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THE IMPORTANCE OF FOOD SAFETY POLICY IN THE STRUCTURE OF NATIONAL SECURITY OF UKRAINE

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One of the most important and ambitious socio-economic goals of the society is the creation of decent quality living conditions for the citizens, primarily, by satisfying their needs in food in accordance with the ration standards of nutrition improvements and nutrition security. The state policy is aimed at preserving public health and regulating the demographic situation in the country. Food security issues are among the priorities of not only economic but also social policies, as they are determined by the macroeconomic situation and depend directly on the efficiency of the social production and the income of population.

Globalization puts forward new requirements for providing high-quality food products to the population. This problem is very complex and multifaceted and concerns the interests of every citizen and the interests of the whole state. For this purpose, the research company The Economist Intelligence Unit has published the results of a global study of countries around the world in terms of food security. In the 2014-2016, research and food security rankings in the world covered 109 countries which were ranked in three main categories: the level of availability and consumption of food, the availability and adequacy of food, the quality and safety level of food [5].

According to the 2017 Global Hunger Index, Ukraine is among the first in the ranking of the developing and the underdeveloped countries in terms of the number of starving people. In the last four years (2014-2017) Ukraine has fallen to 16 points in the Global Food Security Index - from the 47 place to the 63rd [10].

Hence, one of the priority directions of state policy development is the promotion of food security in the field of food products supply to the population and in the sphere of industry resources. The problem of preserving food security is not a new phenomenon. It has always been a global issue both in the political and in the socio-economic spheres of life in any state and in the world politics too. Food security

is a multifaceted socio-economic and political phenomenon. There are different approaches to the definition of the notion of food safety in the economic literature: philosophical, sociological, economic, methods of economic and mathematical modeling, etc.

The term «food security» first appeared after the grain crisis of 1972-1973. The term was interpreted then as «maintaining stability in the markets of food products with the availability of basic food products for all countries of the world» [2].

Many Ukrainian dictionaries and encyclopedias on economics do not contain the definition of the term food security. There is no consensus among scientists and economists in defining this concept. Nevertheless, representatives of the leading economist schools are consentient in determining the components of the economic security. A commonly-used definition of food security is "a state's capability to satisfy the needs of the population for food at the level that ensures their decent living" [3].

The Law of Ukraine «On State Support to Agriculture in Ukraine» gives the following definition to the concept: «food security is the protection of human life interests, expressed in the state's guarantee of unrestricted economic access of a person to food products in order to maintain their quality life activity» [6].

The analysis of different approaches to the definition of «food safety» allows us to draw the following conclusions. Food security of the state is:

1) the state of the economy and such degree of the agroindustrial complex development, which guarantee a stable level of the population self-sufficiency rate that corresponds to the scientifically substantiated parameters in terms of medical norms;

2) independence of the country from the world food market situation concerning the provision of the population with foodstuffs;

3) creation of necessary reserves and stocks;

4) sustainable development of the country's agricultural sector.

Food security is achieved through own production of the necessary amount of foodstuffs, or by means of own food production and the system of measures for its purchase with optimized prices, including transportation, storage, processing, etc. From the logistic point of view, the trading system sufficiency and consistency are of great significance for providing the population with food and, undoubtedly, the country's own production forms its basis [8].

As an object of research, food security is seen primarily as a system for the production and distribution of food.

In its economic sense, food security covers the four main components of its achievement:

- physical availability of food, that is, the availability of food throughout the country, whenever necessary and in the required assortment. Within this component, the following indicators of food safety assessment are to be taken into account: level of self-sufficiency of necessary types of agricultural products and foodstuffs, the nutritional value of the consumed food, the imports share in food resources,

territorial availability of foodstuffs, etc.;

- economic availability of food. Every citizen must have a level of income that allows them to buy food regardless of their social status and place of residence. Within this component such indicators as the ratio of the growth rates of monetary incomes and food prices, the polarization of the distribution of cash income by social groups, the share of food costs in the total expenditures of people are calculated;

- the stability of access to food, which guarantees access to food for every citizen not only in the short term but also in the long run;

- food security, which is considered as a possibility to prevent the production, sale and consumption of low-quality food products that are harmful to the health of the population. For this purpose, the amount of the food products rejected by the state bodies, the population with overweight and other indicators are considered [1].

The World Summit on Food Security was held in Rome on November 16-18, 2009, which identified strategic goals and outlined five basic principles for ensuring sustainable global food security.

Principle 1. Invest in country-owned plans aimed at channeling resources to well-designed and results-based programmes and partnerships.

Principle 2. Foster strategic coordination at national, regional and global levels to improve governance, promote better allocation of resources, avoid duplication of efforts and identify response gaps.

Principle 3. Strive for a comprehensive twin-track approach to food security that consists of:

1) direct actions to immediately tackle hunger for the most vulnerable strata of population;

2) medium- and long-term sustainable agricultural, food security, nutrition and rural development programmes to eliminate the root causes of hunger and poverty, including through the progressive realization of the right to adequate food.

Principle 4. Ensure a strong role for the multilateral system by sustained improvements in efficiency, responsiveness, coordination and effectiveness of multilateral institutions.

Principle 5. Ensure sustained and substantial commitment by all partners to investment in agriculture and food security and nutrition, with provision of necessary resources in a timely and reliable manner, aimed at multi-year plans and programmes [4].

The most important indicators of food security include:

1) a high level of development of the agro-industrial complex, able to provide food for the entire population, including its poorest stratum;

2) availability of necessary transitional strategic reserves;

3) possibility to invest in food production the required funds for long-term sustainable development of agriculture.

The agri-food policy should strive for prevention and termination of the threats to ensure food security. Prevention should be understood as activities aimed at

preventing the implementation of the arranged threats. The goal of prevention is to implement a system of measures to detect and neutralize or eliminate the causes of threats. Termination of threats involves activities aimed at preventing or ceasing the threats that have been already activated [9].

Threats to food security are divided into internal and external ones. The internal threats include:

1) increase of import dependence on food products supply;

2) excessive openness of the economy;

3) criminalization of economic relations.

The external threats include:

1) a technological blockade, the danger of which grows because of lagging in the scientific and technical sphere;

2) the loss of markets in the far and near abroad;

3) overproduction of food in other countries;

4) economic and financial dependence on other countries.

In this context, the feedback of food security and competitiveness is a topical issue, as the main principles for achieving food independence are the effective work of foodstuff producers and the improvement of the general state of the economy. Thus, the competitiveness of business creates conditions for the realization of the food policy of the country. At the same time, the effective work of agricultural and food processing industries contributes to the development of markets for raw materials and food products, promotes creation of new jobs, improves the employment situation of the country and creates conditions to increase income of the population, increases revenues to the budget due to the growth of tax deductions.

The provision of food security, as well as the competitiveness of the economic entity, is also associated with typical risks for them: the macroeconomic risks (reduction of the investment attractiveness of the domestic real sector and dependence on the foreign economic situation); the technological, manufacturing and financial risks.

Thus, the place and role of food security correlate with other components of the national security system and its reliability is extremely important for the economic stability of the regions and the state.

To achieve the level of the developed countries, it is necessary to solve several interconnected and capital-intensive tasks simultaneously. The decisive among them are: technological modernization of the agricultural and food processing industry, sphere of services in the agro-industrial complex, formation of the personnel potential, capable of developing innovations, carrying out the programs on the restoration of production on the abandoned agricultural lands, including measures of increasing crops, development of the modern social infrastructure in the rural areas (houses, roads, etc.), transition to the policy of the intensive development of the rural sector. It is necessary to monitor constantly the parity price in the agricultural sector and other sectors of the economy, use indicative prices for timely

measures to ensure the production profitability of meat, milk, grain, sugar and other vital food products [7].

The activities of subjects at all levels must be coherent and interdependent, since food security at each level depends on the subjects, the tasks faced by them and the ways of their solution. The food security control is carried out by the State Food Department, which was established as a part of the Ministry of Agrarian Policy of Ukraine on the basis of the Food Industry Committee [6].

Thus, the notion of food security is an integral part of the concept of national security in any country, and the state is directly in charge of its reliable functioning. Sustainable socio-economic development of society is impossible without ensuring a sufficient number of people with quality food. An important condition for ensuring food security is the consistent implementation of a set of interrelated and coordinated organizational, economic, legislative, administrative and social measures at the state and regional levels that provide basis for successful food security management.

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ORGANIZATIONAL AND ECONOMIC RECONDITIONS OF FORMING OF THE EFFECTIVE SYSTEM OF MANAGEMENT OF THE UNIVERSAL SECURITY MANAGEMENT

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The article analyzes the organizational and economic preconditions for the formation of an effective personnel security system of the enterprise, examines the issues of close interrelation between organizational and economic methods of providing personnel security. It was emphasized on the necessity to use complex and combined solutions for increasing the effectiveness of personnel security, considering the criteria of personnel security as an indicator of the level of implementation of labor potential.

Formulation of the problem. Domestic enterprises in today's conditions operate in unstable market relations, unstable economic, social and political environment. That is why there is a need for firms to adapt to economic, scientific and technological, informational and social changes. Therefore, the issue of the formation of scientifically grounded recommendations in the formation of an effective system of personnel safety management at the enterprise, which would contribute to the ability of enterprises to self-development, the efficient use of resources, the practical implementation of scientific and technical ideas, become a priority for its managers.

Analysis of recent research and publications: theoretical analysis of the organizational and economic prerequisites for the formation of an effective system of personnel security of the enterprise was considered by such authors as Yu.Garust, V.Karkovsky, A.Lobza, I.Migus, O. Parkhomenko-Kutsevil, O. Khalin and others. However, the theoretical aspects of the preconditions for the formation of the personnel security system require a more detailed consideration and generalization.

The purpose of the paper: generalization and analysis of organizational and economic prerequisites for the formation of an effective system of personnel security management of the enterprise.

Presenting main material. The development strategy of an enterprise always ensures economic growth, which can be achieved through the effective management of the personnel. As an effective management process is one of the inalienable factors

both in the organization of successful activities and in ensuring the competitiveness of the company on the market. Between the effectiveness of management activities, personnel security and how fast the company can be directly connected.

In modern conditions, the issue of staff loyalty becomes particularly relevant, due to the fact that staff is considered as a factor of competitiveness, and the loyalty of employees of the company as a competitive advantage. Loyalty is an emotional commitment to an organization, the level of which depends on the degree of acceptability of external personnel (salary, benefits, working conditions, etc.) and internal (the content of the work, opportunities for professional growth, recognition and evaluation of achievements) incentives offered by the employer [4].

An important component of personnel security is the effective functioning of the staff motivation system. Of great importance in the management of the personnel component of economic security are management methods, through which the direction and coordinated activities of units and officials of the enterprise to achieve the goals of ensuring the economic security of the enterprise [6].

Motivation of personnel in the personnel security system plays the role of the stabilizer, which is revealed in the system of measures aimed at attracting, implementing, developing and maintaining highly skilled personnel, as well as motivating specialists to reveal hidden capacities in order to carry out their work efficiently and effectively [2].

An important factor that affects the level of personnel security is the organization of work with personnel, characterized by a number of measures and methods aimed at the effective use of human resources and its protection.

One of the organizational preconditions for the formation of a personnel management system can be considered the need for an organization to provide its security at the initial level - in the recruitment of employees to work. That is why the enterprises apply special measures and checks at the recruitment stage.

The recruitment of personnel is a key point in the process of guaranteeing personnel security of the enterprise. It should minimize the negative impact on personnel security of the enterprise through the risks and threats that may be caused by the staff and its intellectual potential and labor relations in general [1].

Organizational methods provide the necessary conditions for the functioning of the organization, and also create the limits in which it operates and develops. These include, in particular, the distribution of functions of senior staff, the periodic renewal of powers (cancellation of orders, redistribution of functional duties, etc.), the assignment of cases to not only one specialist, but several - on a competitive basis [6].

Organizational methods include such concepts as organizational structure, selection of personnel, determination of the responsibilities of each employee, the development and implementation of internal standards of work, the provision of mandatory orders. One of the main functions of administrative methods is to ensure the interconnection between all divisions of the enterprise.

The organization of a sufficient level of personnel security at an early stage may in the future play a very important role and help to ensure the most efficient and rapid training of employees, the use of their internal capacity in full to achieve the goals of the enterprise.

The hiring system is a set of measures aimed at attracting and selecting applicants, taking into account the relevance of their competencies to the requirements of the vacant position and interests of the organization. The hiring system is a complex concept and involves a series of complex organizational measures aimed at attracting candidates who have the qualities and competencies necessary to achieve the goals set by the organization [3].

The reluctance of the organization to bear material losses or not to make a profit where it is possible can be attributed to the economic preconditions for the formation of the personnel security system. The economic position of any organization depends from the frameshift. And as a result, each enterprise uses certain economic measures and methods to achieve its goals.

Economic methods of providing personnel security - these are such measures that create a favorable financial environment for employees of the organization. The main measures by which economic management of personnel security is carried out are the payment of labor, the provision of a certain level of income, and the mandatory management accounting.

Economic management methods are implemented through the use of economic levers and incentives, namely, remuneration, income, management accounting, etc. Under economic methods of securing personnel security, it is first of all to understand such measures, which create a favorable material and motivation field for the employees of the organization and do not encourage them to move to competitive organizations with more attractive wage conditions. Therefore, the enterprise needs regularly to recalculate wages and ensure that it corresponds to the work being performed [6].

Low level of personnel management, untimely payment of labor of certain categories of staff or insufficient level of it also have a negative impact on personnel security of the enterprise [1]. There are cases when economic methods have an advantage over organizational ones, because incentives are more robust than orders.

As a result of using economic methods one can see the settlement of interests of all parties. When implementing these methods it becomes possible to ensure effective production planning, management accounting is carried out, and the effectiveness of each unit and each individual type of work is determined.

I also consider it is necessary to note that the organizational and economic preconditions for the formation of the personnel security system, as well as their further application in the system of personnel security management in the form of special methods, measures and restrictions, are closely interconnected and can not exist separately from each other. These aspects of personnel security are also influenced by the psychological climate within the team, prompting the

organization's leadership to find certain approaches to the team to organize the most effective work, and sometimes apply disciplinary methods to employees in case of violations of established rules and standards.

As Parkhomenko-Kutsevil notes, psychological methods constitute a set of specific ways of influencing interpersonal relationships, social processes that arise in labor collectives. From the standpoint of personnel security, such methods should be based on the creation of a supportive socio-psychological climate, the formation of a stable team, personal work with personnel and personnel management, solving individual problems of each employee in order to accumulate staff and a sense of collectivism. In such teams, as a rule, employees appreciate their work, they want to continue to work in the future [5].

Control is an important element of personnel security – it is a set of tools set up for all personnel of the enterprise (including administration). Its constituents are regulations, restrictions, regime, technological processes, valuation, control and other operations. The purpose of this complex of means is to prevent and eliminate the possibility of causing damage to the company. The task of the security service at the enterprise in this area is the organization of a democratic and transparent system of personnel attestation and compliance with its current system of remuneration [1].

In the disciplinary sphere of life of the organization certain restrictions are imposed and liability is imposed for violation of the rules of handling certain information. The category of information depends on the occupied position of the employee and access to commercial secrets. Disciplinary methods can be used in the form of dismissal, transfer of an employee to a lower position, reprimand, material recovery or retaliation. This sphere of organization functioning is very important as it gives the employee an understanding that each of his actions has consequences for which he is personally responsible.

Conclusion. Thus, economic and administrative methods are closely interlinked with other areas of the organization's safe operation. Their correct and effective work is impossible one by one. It is necessary to analyze the measures applied in each component of personnel security and ensure their coordinated work. It is equally important to monitor compliance with all existing standards and standards operating at the enterprise. Due to the correct and efficient provision of economic and administrative methods, as well as their close interconnection, an effective system of personnel security management of an enterprise can be created. These methods ensure the coordination of the work of all divisions of the enterprise, clearly form the rights and responsibilities of each employee and create material and economic conditions in which employees seek to develop themselves and the whole enterprise as a whole. Therefore, the prospective directions of further research will be the analysis of modern technologies of management of personnel safety of enterprises of agro-food industry.

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PART 2. MANAGEMENT OF MODERN SOCIO-ECONOMIC SYSTEMS A SECTORAL AND REGIONAL APPROACH

DIRECTIONS OF ADAPTATION OF AGRICULTURAL MARKET TO THE CLIMATE CHANGE

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One of the important environmental problems of the XXI century is the global climate change. Climate change for agriculture in Ukraine is conditioned, first of all, by global warming, the direct consequences of which are droughts, which adversely affect the yield of crops, since the weather component of the crop in our state is more than 50% [4].

Therefore, the most important task for land users is to search and implementation of effective methods for the accumulation and rational use of available moisture reserves in the soil.

It should be noted that the problem of moisture supply of plants has always worried scientists and producers, therefore, a constant search for techniques to create a favorable water regime of the soil was conducted. Even in the eighteenth century, a scientist agronomist O. O. Izmailsky wrote in his well-known agrarian book «How Our Steppe Has Dried Up»: «All the worries of the owner should be reduced to the sole purpose of increasing the part of the atmospheric moisture that is absorbed by the soil, if possible, adequately decreasing amount of atmospheric moisture, uselessly flowing from the surface of the soil» [5].

At the same time, the director of the Poltava experimental field B.P.Cherepakhin emphasized that in the conditions of the Forest-steppe, the efficiency of agriculture is based on soil moisture, while emphasizing «... everything in moisture, everything for moisture, everything for the sake of moisture.» In connection with global warming, these thoughts of the classics of agriculture become topical.

Today, there are three theories of climate change, which are associated with drought. Some climatologists believe that climate fluctuations (cycles) are probably related to the influence of solar activity, that is, with those internal processes,

resulting the appearance of spots on the Sun, which are gigantic electromagnetic vortex formations. Their number and size are not always the same. The variability of sunspots number has relatively well-ordered nature, it passes in wave-like way.

Now, a close relationship between solar activity and physical processes in the upper atmosphere is revealed, but scientists believe that solar activity also effectively affects the lower part of the Earth's atmosphere. Kh. P. Pogosyan [9] writes: «There is no doubt that the age fluctuations in the climate occur as a result of changes in the nature of the atmosphere general circulation. Similarly, the nature of circulation, obviously depends on solar activity and other astronomical phenomena».

Consequently, age fluctuations in the climate occur due to changes in the nature of the overall atmosphere circulation. I. E. Buchinsky [3] believes that the climate change is a common phenomenon in nature, has a relatively ordered nature and passes in a wave-like way. It causes many people to perceive that the climate «in our eyes» is changing. However, this evident climate change, is only its «natural» fluctuation, rather than a steady change in one direction.

Basing on the basis of the meteorological concept of nonlinear processes and predictability of the behavior of complex natural systems in the future, E. M. Biletsky and S. Stankevich [2] practically also tend to the fact that droughts are a common occurrence in nature due to the climate fluctuations. At the same time, they note that large-scale natural disasters that cyclically occurre on the planet have already repeatedly occurred in the history of the Earth and human civilization.

An international group of scientists believes that global warming is caused by the displacement of geomagnetic poles of the earth's axis, which are influenced by space factors. As a result, the planet slightly slowed down its turn, about a second a year. Due to the loss of that second, the amount of released thermal energy exceeds all the energy produced by mankind as a result of its activity during the year. This caused a change in the albedo of the planet, its orbital parameters, an increasing the surface temperature, which seriously affects climate change, the emergence of threatening hydrometeorological phenomena, one of which is drought.

However, displacement of the geomagnetic poles of the earth's axis brought not only more heat. At the same time, changes in the «wind rose» are appear - as a result of the transformation of the global circulation of air masses on the planet, in Europe and in our country in particular [6]. Change of geomagnetic poles affects sea currents, the main of which is the Gulf Stream, whose flow rate has already slowed down by 20%, which also affects the climate of Europe. The air masses that are saturated with moisture from the Atlantic Ocean, primarily from the warm course of the Gulf Stream, moving above the vastness of Europe in the eastern direction, gradually irrigate the land with relatively regular rains. The movement of such air masses is a kind of obstacle for the invasion of cold air to our country from the Arctic (northern direction), or hot and dry air from the continental depths of Asia or Africa (eastern and southern directions). The easing of airflow pressure from the Gulf Stream side may be one of the causes of the penetration of these air currents,

which contribute increasing the temperature and drought [6].

Another theory of global climate change on the planet is anthropogenic impact on nature as climatologists believe. Scientists have proven that the changes that we are currently witnessing and which are projected in the future are largely a result of human activity: we burn fossil fuels, emissions from the transport industry and the scale of intensive agriculture are increasing. A significant increase in production emissions «warms up» our atmosphere, it rapidly increases the number of greenhouse gases (carbon dioxide, methane, nitrogen oxides, chlorofluorocarbons, etc.).

It should be noted that the «greenhouse» gases of our planet operate on the principle of hothouse: it passes visible light to the surface, and heats radiation kept in the middle. As a result, the temperature on the Earth's surface is suitable for life. But the more «greenhouse» gases in the atmosphere, more heat is delayed near the Earth's surface.

So, human activity strengthens the «greenhouse» effect, resulting in increasing the surface air temperature, and from the agronomic point of view, the Forest-steppe of Ukraine becomes a classical zone of arid climate and, in general, zones of risky agriculture are expanding.

It is likely that the influence of cosmic and anthropogenic factors on the planet climate is complex, droughts (spring, summer or autumn) will become a frequent phenomenon. Therefore, today global warming is seen as a fact, and the main problem here is the lack of moisture, its accumulation, preservation and rational use.

So, first of all, it is necessary to develop adaptation measures to the negative effects of weather that should organically enter the technology of agricultural production. Secondly, it is the introduction of technological measures for the accumulation, conservation and rational use of moisture, especially in the conditions of drought.

The measures of first group that can withstand climatic problems can be: the development of new zoning of the territory; the use of drought tolerant varieties and hybrids of crops adapted to a significantly less vegetative period; introduction of new (niche) drought-resistant crops; application of antistress chemical, biological and microbiological preparations, complex microfertilizers; pouring and composting; the use of humates, minerals (bentonite, etc.); control of the phytosanitary state of crops, and so on.

According to the National Academy of Sciences of Ukraine, over the past decades, the actual displacement of the boundaries of the country's natural and climatic zones is 100-150 km to the north. Vegetation conditions in the traditional subzone of the Northern Steppe (Dnipropetrovsk, Kropivnytsk oblasts, etc.) already correspond to the Southern Soil subzone. The subzone of the Northern Steppe gradually shifts in the territory of Cherkasy, Poltava and other regions, which traditionally were in the Forest-steppe zone [7, 10].

In such circumstances, the existing zonal set of agricultural crops is changing. First of all, in addition to the main crops (winter wheat, corn, sunflower), there are so-called niche cultures (hen, lentil, safflower, sorghum, millet, etc.), which have

high drought tolerance and export capacity. In connection with the warming in the south of Ukraine exotic cultures began to grow: kiwi, persimmon, banana tree, zisifus (Chinese date or unabi), peanuts, sweet potatoes, black pepper. Olive trees are sailing.

Secondly, in conditions of high dryness of the climate, moisture determines the level of productivity. Therefore, due to the increasing role of moisture as a limiting factor in harvesting, the stereotypes of the evaluation of efficiency of agricultural systems and technologies for growing crops are changing. Studying and implementation of the production of technological receptions and systems of agriculture, which allow receiving planned crops at the level of existing water supply, are becoming urgent.

The need to accumulate moisture in the soil in the autumn-winter and spring periods is growing, which can, with rational costs, to a large extent, ensure the physiological needs of agricultural plants during vegetation, in periods between the rainy days when drought occurs.

Firstly, it should be noted that the most significant for saturation of soil with water can be considered precipitation, reaching its surface (each millimeter of precipitation accounts for 10 tons of water per hectare).

Over the last 20 years, the average annual temperature in January and February has risen by 1-2° C, which has led to changes in the rhythm of seasonal phenomena - the fall rainfall significantly increased in the autumn-winter period. Therefore, one of the important sources of water supply in the soil is the flow of water from melting snow. In this regard, the role of snow retention is greatly increasing.

Let's consider the main elements of an intensive agricultural system in the context of moisture conservation and rational use of moisture [11]. Among them: the structure of sown areas, scientifically grounded alternation of crops in crop rotation, rational soil tillage systems, taking into account their impact on the conservation and rational use of moisture, plant care techniques, fertilization, pest and disease control, and the use of modern agricultural machinery.

An important role in regulating moisture provision of crops belongs to crop rotation. Agricultural crops are significantly different in their susceptibility to soil moisture and have a different effect on the water regime of the soil. For directional regulation of water regime in a soil-plant system, it is necessary to alternate crops in crop rotation, in which the rational use of plants of soil moisture is combined with the subsequent restoration of its reserves in the corresponding layers of soil.

It has been found that under such crops as corn and winter wheat and after occupied vapors, the reserves of productive moisture in deep layers of soil are sufficiently well recovered. Therefore, it is expedient to place these crops in the crop rotation after cultures with a deeply penetrating root system that dries the soil to a greater depth in order to restore the moisture reserves in these horizons.

Exploring the impact of soil cultivation on its water regime, it should be noted that the traditional cultivation of soil, the main species of which is plowing, for many

decades, has been able to provide humanity with food, but at the same time created a lot of problems associated with soil erosion, deterioration of their quality and drying [12]. The task of the modern soil cultivation system is to intensify production and simultaneously preserve existing natural systems, maximize accumulation and rational use of moisture setting in the soil. The plow goes to the background, while to the foreground comes out tools that only loosen the top layer of soil, which helps to maintain more moisture in the arable layer, reduce the sowing and, even more important, save energy.

Positive results, despite the weather cataclysms, have those farms that take into account climate change, and instead of deep plowing, carry out deep soil fracturing or its surface (shallow) cultivation, which has a greater effect on the accumulation, preservation and use of moisture. Its annual moisture content is 30-50 mm higher than of plowing, which is especially important during drought.

Fertilizers play an important role in the productive use of moisture. Each ton of soaked manure during the years of its operation in multi-crop rotation gives, in addition to 1 cwt in terms of grain, and every quarter of mineral fertilizers in standard tukes, when introduced into the main field crops (winter wheat, corn, barley, millet) - on average up to 1.5 cwt of grain. It is clear that the soil moisture plays an important role in fertilizer efficiency. For example, it is known that each additional millimeter of soil moisture can increase by 0.5 t / ha of crop, and in the period of drought additional 2.5 mm of water leads to an additional increase in corn yield by 0.5-0.7 t / ha [5].

It should be noted that in conditions of drought, the use of organic fertilizers, due to which the organic component of the soil increases, improves its water regime.

In conditions of climate change – global warming and increasing the frequency of drought, the study of moisture-saving agricultural systems, one of which is organic farming [1, 8], which agrotechnical techniques contribute to the accumulation, conservation and rational use of soil moisture, are becoming relevant.

One of the technological elements of this agriculture, which helps to improve the water regime, is soil protection, moisture-preserving, shallow soil cultivation at a depth of 4-5 cm, which creates a vertical orientation of aeration pores, preserves the natural structure of the soil, its capillarity, formed by the roots that is decomposed, and rainworms. The accumulation of moisture is also facilitated by the observance of scientifically grounded crop rotation, the introduction of perennial legumes, siderates, the use of humus, the use of trench remnants, and the unproductive part of the crop. Due to this, the organic mass increases in the soil, which makes the soil more loose and enhances the ability to retain moisture. Mulching of the field surface with plant residues also contributes to lowering the soil temperature and moisture evaporation. So, for organic farming, the moisture content of the soil in different periods of vegetation on average is 28-32% higher than the soil on which intensive farming is conducted.

The application of the organic farming system also contributes to the growth of

the water resistance of structural aggregates. The coefficient of water resistance of structural aggregates for the organic farming system was 10, and for intensive – 5.2.

With the prolonged use of organic technologies, the tendency of changing the parameters of the humus as waterproof part of the soil is also revealed. In the layer of soil 10-20 cm the total humus content for the organic system was 5.26%, for mineral – 4.70%. In individual fields, due to more intensive humification of organic residues, it reached a difference of 1.57%. Especially tangible process of soil formation on eroded lands, the yield of which, after a certain period after the introduction of the system, reached the indexes in plain fields.

The modern complex of agricultural machines and mechanisms for continuous and inter-row tillage of the soil complements the system.

It is logical that the increase of soil fertility positively influences the productivity of agricultural crops. But if under the condition of moisture lack at this level of fertility can not be high yield, the use of intensive methods will not increase them. But when grown products are certified as organic, there is an opportunity to get an additional 30-50% or more of its implementation.

Consequently, the widespread introduction of organic farming is the optimal response of the agro-industrial complex to global warming, as the technologies of this system allow more efficiently to accumulate and use moisture through crop rotation, small-scale tillage, organic fertilization and growing of siderates, the use of modern machines and mechanisms for soil cultivation. It allows to receive environmentally safe products, to store and even increase the soil fertility (to preserve the land).

Consequently, in conditions of increasing the climate drought, it is necessary to use systemic and science-based measures to adapt agrarian production to new climatic conditions. Confrontation with the constant deficit of moisture in agriculture is achieved at the expense of its accumulation and preservation by constantly applying modern energy resources and saving technologies of growing crops, minimizing soil cultivation, shortening the terms of spring field work, and generally adhering to the regulations for the use of all technological operations.

These measures contribute to the sustainable development of the agrarian sector of Ukraine, as they are based on the principles of the golden rule of ecology, which must be implemented at all times at the level of farms, - global problems of ecology are solved locally.

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MARKETING STRATEGIES OF ENHANCING COMPETITIVENESS OF THE ENTERPRISES OF BUDGET GENERATING BRANCHES OF THE FOOD SECTOR

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The technological level of business process in enterprises of budget generating branches and activities of the food sector cannot be permanently audited to radical changes due to traditional production and sustainability technologies. Similarly, the objective possibility of creating unique or newest food products does not always

exist, and the whole assortment of finished products is practically mastered by the leading business entities. Therefore, it seems appropriate to consider providing reputation and establish close and well-established relationships with customers as mainstream competitive advantages for enterprises of budget generating branches of the food sector.

In determining this task, it is advisable to agree with the opinion of Markina I.A., Andryeyeva N.M., Golovchenko O.M. that it is important to establish the requirements of consumers to producers on properties, quality, cost and other competitive characteristics of their products [1, p. 153]. A set of expectations and needs of consumers can be presented as follows: consumers want peace and security; consumers are very grateful to those who can take care of their everyday problems that they themselves difficult to handle; many entities grow and prosper because they are more comfortable for their consumers; consumers want personal attention and communication; consumers want quality. Sometimes consumers want to be partners of the company; consumers want to be able to turn things or products that are not fully satisfied; consumers want to bring joy and pleasure; consumers want to live in an atmosphere of the relative predictability of businesses entities or consumer markets, services and products.

According to Aranchiy V.I. and Ihnatenko M.M., consumer's expectations and demands form the reasons for the purchase, which include security reasons, affection, comfort, pride and novelty [2, p. 55]. The motive of security is determined by the businesses entities reputation, a sign of good's quality, money back guarantee on the purchase. The attachment motive is formed by the quality of service, an effective system of discounts. The motive of comfort is determined, first of all, by the ease of operation, goods quality, and high-quality products. The motive of pride is determined by belonging to a certain social class and status, possession of rare things. The motive of novelty is formed the consumer's desire to buy new goods.

The decision of numerous of the above aspects appears to ensure proximity to customers, establishing trust, personal relationships with customers, individualized marketing, satisfy and retain loyal customers. In practice, these trends, according to Marmul L.O. and Rusnak A.V., can be implemented through the development of branding tools, the improvement of the trade organization, brand and assortment policy, measures for the enterprise public mission formation and the industry as a whole [3, p. 269].

The essence of branding is to create long-term consumer advantage to the brand. The use of branding in a competitive environment caused by the need to distance themselves from competing products facilities management. The objective necessity of applying to brand on the market for food and other goods is explained by the fact that in each country' region there are manufacturers who simultaneously try to enter the markets of neighboring regions and, at the same time, they are experiencing pressure on their domestic market by competing manufacturers from these regions. Forming a unified system of creation and distribution of advertising media is a part of branding. Its task is to determine the place of the trademark in the consumers' minds.

Thus, branding forms the psychological commitment of consumers to a particular brand of goods. The psychological commitment to trademarks is based on the fact that consumers have a limited ability to perceive and analyze marketing information. As «taking a decision on what to buy», apparently brain full of logical calculations considering all «for» and «against» compared with one another [4, p. 238].

Instead, people are exploring information about products and goods exclusively, and only then make decisions based on very large and general representations and their feelings about which product is best for them. These general ideas and sensations determine the degree of adherence to this or that brand. The pride of a stable brand is the loyalty of consumers; low vulnerability to competitive marketing activities and crises; higher profits; inelasticity with increasing prices; increase profitability and efficiency of marketing communications; additional opportunities to promote the brand.

The essential difference between a trademark and a brand (trademark) is that the trademark allows identification of the products of one or another manufacturer. While the perception of a trademark is accompanied by various associations, images, and expectations of consumers, which ultimately determine the consumer choice. According to Ihnatenko M.M., the development and perfection of branded trade in the market is the most reliable tool for the branding development and the formation of psychological commitment to the brand [5, p. 267]. Branded trade carries out two important organizational functions in modern conditions: firstly, it allows to fully control the channel of sales of products; and secondly, it provides a continuous flow of funds, improving the turnover and financial position of business entities and the industry as a whole.

In our opinion, branded trade can solve the problems of forming a psychological commitment to the trademark and satisfy consumer motives by using a high culture of service, offering the most diverse product ranges, the freshness of sold products, and tasting. The task of branded trade is to establish effective feedback from the consumer with the manufacturer on quality issues, prices, product ranges as well.

Along with the considered directions, the tools of general communication influence should be used to form the consumer's commitment. This requires the constant presence of developed combinations of information broadcasting of institutional advertising in the product sales field. The objectives of the advertising information are to inform consumers of the new product arrival on the market, lower prices and the introduction of discounts system, lotteries, and raffles, etc.

The objectives of the speech advertising are the formation of the brand advantages, change the product perception properties, the conviction to make a purchase. Repeated advertising is intended to support product awareness and place of its purchase, maintain a commitment to the brand, recall the need to purchase goods in the near future. Institutional (prestigious) advertising should form and maintain a favorable image of the businesses entities, which affects the competitiveness of budget generating branches of the food sector.

According to Romaniuk I.A. and Levayeva L.Yu., except of planned advertising campaign is necessary to implement a set of the following measures: firstly, the constant development of various forms of communication with consumers, for example, conducting consumer conferences, participating in exhibitions, fairs, seminars, holding tastings in the largest retail outlets, contact phones availability for direct communication of consumers on quality issues, the goods range of businesses entities and express claims [6, p. 48]. Secondly, it is important to promote the use of mass media to disseminate commercially sensitive information on products and businesses entities of budget generating branches of the food sector based on establishing a long-term mutually beneficial relationship with the heads and specialists of leading experts and media.

The proposed measures are able to create sustainable, long-term, trusting relationship between businesses entities and consumers in their systematic, consistent and regular use. They can provide the consumers psychological commitment to the manufacturer' brand, improve the businesses entities reputation. They can also create significant competitive advantages and increase the products competitiveness, potential for enterprises of budget generating branches of the food sector.

However, considering the formation of businesses entities reputation, it seems necessary to highlight some aspects in more detail [7, p. 85]. The image components are organizational and managerial culture of businesses entities, internal social and psychological climate, image of businesses entities from consumers (quality, design, trademark popularity, service, discount system, price, corporate style), business image of industries (business reputation, honesty, reliability, loyalty to partners, information openness, business activity), social image (sponsorship, patronage, participation in solving environmental problems, employment, health care, assistance to specific individuals), and the image of industries for state structures (products importance for the region, participation in regional social programs, adherence to laws, jobs creation).

Positive image improves the competitiveness in the market by attracting customers and partners, as well as facilitating access to resources. In our opinion, the social image of budget generating branches of the food sector is also an important tool for consumer opinion forming, as information about facilitating industries to social programs will always have a response to domestic consumers. Thus, the development of these areas will strengthen the reputation of the businesses entities of budget generating branches of the food sector among consumers and the degree of their commitment. It should be noted that the consideration of the businesses entities image as a derivative of several components corresponds to the modern understanding of the marketing role in the market activities management of businesses entities and the allocation integrative function as the main function [8, p. 49].

Integration marketing pays special attention to the market actors, which affects the activities of businesses entities of budget generating branches of the food sector. The basic principle of classical marketing is market orientation, which in the framework

of integration marketing is interpreted not as customer orientation, but as a focus on all groups of influence: on staff, suppliers, sales partners, competitors. However, the ultimate effectiveness of marketing depends on the degree of integration of individual measures and the effectiveness of coordination between them.

In our opinion, this understanding of marketing confirms the validity of the chosen method of studying the competitiveness of businesses entities of budget generating branches of the food sector as a system of interdependent factors of competitiveness, as a system actually used in the management practice businesses entities competitiveness. In analyzing the competitiveness of a separate business entity and developing reasonable management decisions, it is necessary to use a wide set of indicators that characterize the effective activity of the business entities and it is an indicator of effective work and interaction of all units. This circumstance allowed us to develop a system of indicative management of the decisions system adoption to increase the competitiveness of budget generating branches of the food sector.

The proposed system combines a set of solutions that are both internal and external orientation action allows you to create an integrated approach to decision-making to ensure competitiveness as summarizing the characteristics of the businesses entities of budget generating branches of the food sector in the market and can be used as part of operational management and control. Sustainable competitiveness of the budget generating branches of the food sector will be ensured through the use of all the paths of certain organizational and economic principles and the formation of significant competitive advantages on the basis of the proposed set of methods.

However, it should be noted that the development budget generating branches of the food sector as a whole is largely dependent on unregulated domestic facilities management tools impact factor - aggregate demand in the market [9, p. 141]. The elasticity of demand for population income and high potential demand suggest that increasing the consumers living standard will lead to an increase in aggregate demand and supply, will ensure the efficient operation of all production system elements, allowing them to develop within the cluster of competitive budget generating branches of food sector (the most sustainable form of economic interaction).

In modern conditions, there is a need to change the orientation and evaluation criteria for food products produced by agricultural enterprises belonging to the budget generating branches of the food sector. The competitiveness of any product can only be determined by comparison, and therefore it is a relative indicator. It is a characteristic of the goods, reflecting its difference from rival products on the degree of satisfaction of social needs competition. Competitiveness is determined by the combination of properties of these products, which are part of its quality and importance to consumers that determine consumer spending in the purchase, consumption (use) and waste products.

The competitiveness assessment of goods (services) of enterprises belonging to the budget generating branches of food sector begins with the research goal definition: if it is necessary to determine the product position in a number of similar, then it is

enough to conduct their direct comparison of the most important parameters; if the aim is to estimate the prospects of good sales in a particular market, the analysis of the information should be used, which includes information about products that will come to market in the future, and information about changing the current standards and legislation in the country, the dynamics of consumer demand as well [10, p. 189].

Regardless of the research purpose, the market research conditions are the basis of the competitiveness assessment, which should be conducted continuously, both before the new products development and during its implementation. The task is to distinguish the group of factors that influence the demand formation in a certain sector of the market: changes in the requirements of constant customers of products are considered; directions of similar developments are analyzed; areas of products possible use are considered; circle of regular customers is analyzed.

Long-term forecasting of market development takes a special place in its study. The products, which will be conducted by analysis or emerging requirements for future good, are selected on the market research basis and customer requirements. Next, the nomenclature of parameters is determined. The analysis should use the same criteria that the user operates when choosing a product. A comparison is made for each group of parameters shows how these parameters are similar to the corresponding option needs.

The competitiveness analysis begins with a normative parameters assessment. If at least one of them does not correspond to the level that is punished by norms and standards, then a further products competitiveness assessment is inappropriate, regardless of the comparison result on other parameters. At the same time, the excess of norms and standards and legislation cannot be considered as an advantage of products, because from the consumer's point of view it is often useless and does not increase the consumer value. Exceptions may be cases where the buyer is interested in some exceeding the existing norms and standards, based on their rigidity in the future.

The results of competitiveness evaluation use to develop a conclusion about it; to choose the ways to optimally increase the product competitiveness to solve market problems as well [11, p. 85]. However, the fact of the product high competitiveness is only a necessary condition for the product implementation in the market at a given volume. It should also consider the forms and methods of maintenance, advertising, trade and political relations between countries and etc.

The following management decisions regarding the set of ways to increase it can be taken as a result of the products competitiveness assessment: the change in the composition, structure of materials (raw materials, semi-finished products), component parts or product design; change the order of product design; change in production technology, test methods, production quality control systems, storage, packaging, transportation, installation. An important direction is the changes in prices for products, services, maintenance and repair, spare parts; changes in the order of products on the market; changes in structure and size of investment in the development, production, and marketing.

It is also important to change the incentive system of producers, change the products export and import structure by volume, types, channels of implementation. Overall, the strategy of improving food quality is an important part of the strategy to increase the enterprise's competitiveness belonging to budget generating branches of the food sector. The objects of its forecasting for the future are indicators of quality and value of food products, inferior to similar indicators of competitors' goods.

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PRINCIPLES OF TRANSFER OF EUROPEAN VERSUS CZECH RIGHTS AND OBLIGATIONS ARISING FROM LABOUR RELATIONS

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Legal relationships define the legal theories such as social relations (Aganaba-Jeanty, 2014), which are regulated by law, i.e. normative system generally binding and enforceable by the state. In the event that legal relations are linked to the labour process especially for dependent work, we talk about labour relations, whose participants are holders of rights and obligations towards each other (Steel, Pierce, Berman et al., 2017). The transfer of rights and obligations arising from employment relations can occur in cases provided for by law or by special legislation. If there is a transfer of activities the employer or the employer's activities or to the transfer of tasks or part thereof to another employer, rights and obligations of employment relations in full to the employer (Jouza, 2014); the rights and obligations of the collective agreement to the employer at the time of the effectiveness of the collective agreement, but not later than by the end of the following calendar year (Van Camp, Sloan, El Bassiouny, 2016). For tasks or activities, the employer shall be regarded tasks related to ensuring the production (Bellairs, Halbesleben, Leon, 2014) or provision of the services (Škodová Parmová, 2015) or similar activities according to the specific legislation (Barret, 2015), the legal or natural person performs in dedicated facilities for these activities or usual places for their performance on their own responsibility (Mugarura, 2016), under its own name. Contractual transfer of contractual arrangements can be realized, for example by the purchase agreement on the transfer of the plant with the tangible (Kuznetsova, 2016), intangible and personal folders are undertaking of the business unit a lease contract or atypical (Koniaris, Coombs, Meslin et al., 2016). European law is enshrined on the principle of the transfer of rights and obligations arising from the labour relations of the realized on the basis of administrative and legal acts (Štefko, 2012), but also court decisions. In the case that the subject of implementation will not be undertaking as a whole or its branch, it will be necessary to consider the possibility of a transfer within the meaning of the Directive, while maintaining the identity of the economic units to be transferred (Barnard, 2016). According to the article 2 (2), 1 (b) and

directive, «transferor» means any natural or legal person who, as a result of a transfer under article 17. 1. Directive ceases to be the employer in respect of the undertaking, business or part of the undertaking or business (Barancová, 2010). The fact that the transferor ceases to be the employer, arises in connection with the disposition of company.

The authors present a comparison of the current national and European legislation, based on the essential parts of the provisions of the relevant legislation of the Czech Republic in order to analyse it in accordance with legislation, European legislation, which should be binding and having primacy over for Czech law. Czech national legislation is based on the provisions of §338 paragraph. 1 of Act no. 262/2006 Coll., The Labour Code, as amended, under which the transfer of rights and obligations from employment-relationships are occurring in cases specified by law or by special legal regulation. From the above it is clear that the definition of the transition can be defined by the Labour Code, but also by specific legislation. For the purpose of comparison of Czech and European legislation, The Czech Labour Code implies the following formulation of the legal consequences of the rights and obligations: in case of the transfer of an activity of the employer or the employer's activities or the transfer of tasks of an employer or its part is provided to another employer, the rights and obligations of labour relations are transferred in full to the transferee employer (Allaire, Backman, Alheresh et al., 2013); rights and obligations under the collective agreement are transferred to the transferee employer on the effective period of the collective agreement (Matuska, 2011), but until the end of the following calendar year (Waggoner, 2017). Czech law distinguishes between a transfer of an activity or its part and a transfer of tasks or its parts. That concept does not correspond to European terminology. The Labour Code also defines the tasks and activities of the employer for the purpose of considering the rights and obligations and sets the receiving employer. The tasks or activities of the employer are considered particularly tasks related to ensuring the production or provision of services, and similar activities under special laws, which legal or natural a person engages in facilities or in designated places commonly used on its own responsibility and under its own name. Under the successor employer, irrespective of the legal reason for the transfer, whether there is a transfer of ownership, considers the legal or natural person who is competent as an employer to continue to perform tasks or activities, previous employer or similar type of activity. The information is required: "before the transference of rights and duties, arising from labour relations, from the hitherto employer (transferor) to the employer being a transferee, both of them shall inform the trade union or the works council and consult them with a view to reaching the agreement on the determined or proposed date of transfer, the causes of such transfer, legal, economic and social implications for the employees and envisaged measures related to the employees. Where there is neither a trade union nor a works council at the employer´s undertaking, both the hitherto employer and the future employer shall inform the employees who will

be affected by the transfer and consult them on the facts laid down in subsection 1. Compared to the European legislation, it is necessary to mention the definition of transferring rights and obligations by Council Directive 2001/23/EC of 12 March 2001 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses. Based on its charter 1 article 1 (a) The Directive shall apply to any transfer of an undertaking, business, or part of an undertaking or business to another employer as a result of a legal transfer or merger; and b) Subject to subparagraph (a) and the following provisions of this Article, there is a transfer within the meaning of this Directive where there is a transfer of an economic entity which retains its identity, meaning an organised grouping of resources which has the objective of pursuing an economic activity, whether or not that activity is central or ancillary. As the text revealed, the relevant Czech and European legislation is different. European legislation is explicitly expressing the prerequisite called a contractual transfer or merger, based on other criteria to be considered for the transfer of an undertaking which is not the automatic result of a legal transfer or merger. There are a number of issues related to the interpretation of the terms in relation to transferring rights and obligations in the European legislation as applied by the European Court. As an example, we can see the Judgement of the Court of 20 November 2003; C-340/01 - Abler and Others. An Austrian company, Sanrest was providing a catering service for a hospital within the hospital; however, it was an outsourcing business activity. After cooperation was cancelled in the form of notice from the hospital and replaced with another entity under a commercial contract in the same range. The court had to decide if the employers of the first entity were supposed to be transferred to the second entity. The Court concluded that the transition was carried out regardless of the state between the transferor and the transferee company among whom there is no legal relationship, i.e. the transfer may be affected through a third party, regardless of the transfer of tangible property that was used for the activity in question. Similarly, the European legislation interpreting the above mention directive in the case of C-392/92 Christel Schmidt vs. Spar und Leihkasse discussed an employee who was employed to clean the premises and was dismissed on account of the refurbishment of the branch office, and offered the same job by another entity, however for a lower wage. The Court discussed the criteria for which there is a transfer of rights and obligations in a situation where the transfer of business (cleaning) has been the core business of the original employer, but it was a transfer of a single employee without any concomitant transfer of assets. The court verdict concluded a transfer of an undertaking under the Directive and stated that it is not important providing the main economic activity, but the activity support (optional). Furthermore, it is not a priority, given that the activity is carried out by only one person and that was not transferred any tangible assets, does not preclude the classification of the subject operations in the transfer of the business or its parts. Due to the above mentioned, the authors suggest a change in Czech legislation in

order to reflect the European conception based on the current European law.

European legislation related to the rights and obligations arising from employee relations.

Principles of European legislation. Council Directive 2001/23/EC of 12 March 2001 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses. In its article 1(a) it states, that the directive shall apply to any transfer of an undertaking, business, or part of an undertaking or business to another employer as a result of a legal transfer or merger. In 1(b) it says that subject to subparagraph (a) and the following provisions of this Article, there is a transfer within the meaning of this Directive where there is a transfer of an economic entity which retains its identity, meaning an organised grouping of resources which has the objective of pursuing an economic activity, whether or not that activity is central or ancillary. The directive replaces Council Directive 77/187/EEC of 14 February 1977 on the approximation of the laws of the Member States relating to the safeguarding of employees' rights in the event of transfers of undertakings, businesses or parts of undertakings or businesses due to better clarity and rationality. The aim of the Directive is to define the significance of the transfer of economic units with implications for industrial relations, especially in order to protect workers' rights. According to European legislation, the legislation is included in the directive, which applies to public and private undertakings engaged in economic activities with the aim of making a profit or not this goal. The principle of preserving the rights of employees, arising from a contract of employment or employment relationship existing on the date of transfer are transferred to the transferee, The Member States may specify the transferor and the transferee after the date of transfer, being both liable for obligations that arose from a contract of employment or from an employment relationship prior to the date of transfer or existing on the date of transfer. In this sense, it is the principle of automatic transfer of rights and obligations under the contract, court decisions, administrative decisions or other actions and legal acts, including the principle of protection against dismissal of employees by the Directive, provided by the transfer of an undertaking, business or part of an undertaking or business does not involve any grounds for dismissal, but this does not prevent dismissals for economic, technical and organizational reasons, related to changes in the workforce. There is the principle of information and adversarial obligations, according to which the transferor and transferee are required to inform a representative of their employees affected by the transfer on the date or proposed date of the transfer, reasons for the transfer, its legal, economic and social implications for the employees and possible measures with regard to employees. A transferor is required to communicate such information to the representatives of their employees-for in advance before performing the actual transfer. If there are not any representatives of the employees for the reason not depending on their will, the employees must be informed in advance directly to the date or proposed

date of the transfer, about the reasons for the transfer, its legal, economic and social implications for the employees and possible measures with regard to employees. The transferor shall notice all rights and obligations transferred to the transferee by the transfer.

Principle of the automatic transfer of rights and obligations. The principle of automatic transfer means that the present employer transfers all the rights and obligations to another employer only on the basis of law and conditions specified in the law, but not in situations where the transferor or transferee themselves negotiate their own terms. The principle was defined by the Czech Supreme Court, arguing that there cannot be a legal significance of a delimitation in the area of labour relations, as no relevance is granted to the will of the parties. Concluding the Delimitation agreement is only important to specify the conditions under which the transition occurs; so that there is the transfer of rights and obligations ex lege, the contractual arrangement supposed by law must precede to the legal transfer or merger as defined by the Directive in Article 1, an economic entity must be transferred. The entity is defined as organized clusters of funds whose aim is to pursue an economic activity as a principal or ancillary, which retains its identity. As the above-mentioned definition reveals, it is related to a transfer of companies or it parts as separate organization units but also the transfers of tasks or activities to be performed by the transferor without transferring a company or its part. The contractual transfer can be realized in many different contractual arrangements, e.g. the purchase agreement, agreement on transfer of the business as a whole, with all tangible, intangible and personal components its parts thereof as a separate organizational unit or by a rental or innominate agreement. European law is anchored on the principle of transfer of rights and obligations from labour relations, which can be realized on the basis of administrative acts, legal acts and court decisions (Dagan, 2017). If the object implementation is not business as a whole or its separate organizational unit and some assets or intangible elements of business or premises used for business or just tasks without any current transfers ownership are transferred, it will be appropriate to consider whether this really is a transfer within the meaning of the Directive when the determining factors in interpreting the definition of transfer is preserving the identity of the transferred economic entity.

Transferor. Based on Article 2, part 1(a) «transferor» shall mean any natural or legal person who, by reason of a transfer within the meaning of Article 1(1), ceases to be the employer in respect of the undertaking, business or part of the undertaking or business.

Transfers based on public decision. One group of causes related to the transfers of rights and obligations, as reported by the authors of this paper include transfers on the basis of decisions of public bodies as discussed by the European law, e.g. the judgment of the Court of Justice of the EU 172/99 of 25. 1. 2001. In this case, a transfer of an undertaking was deduced from a situation in which a public entity commissioned a third-party operating bus services to meet the public

service obligation and consequently this activity was entrusted to another carrier. Similar conclusions were made by the European Court of Justice in Case 29/91 of 19. 5. 1992, when the original employer (Foundation for assistance to drug addicts) lost its entitlement to subsidies from municipalities and then ceased its operational activities. The village then began to subsidize another entity to ensure identical tasks.

Transfers in connection with outsourcing. Another form allowing the transfer of rights and obligations is related to ensuring a task or activity through a subcontract from a third party. Under the European law, many cases have been discussed; however, the authors highlight a frequently mentioned judgment in Rask´s case. In this case, a business entity (Philips) leased manufacturing facilities to a third party for the operation of a canteen, which in the previous period was run by a business entity itself for its employees and when there was not a contractual transfer, and no property was transferred to a new operator of the canteen, it was realized by only renting space by the business owner. The European Court concluded that it is possible to perform a contractual transfer on the grounds that the directive in question will apply to the case regardless of the operation of the canteen is not the main activity of the lesser, so they can subcontract to fulfil the general criteria for legal transfer in accordance with the Directive.

Transfers in connection with the contractual transfer of the participation of the three private entities. Another group of atypical cases of transfers of rights and obligations is related to negotiations, resulting in the transfer contract, with the participation of three private entities. The authors of the paper reported the EU Court's decision in the case of the Daddy's Dance Hall of 10. 2. 1988, when the contract transfer was inferred in a situation where the landlord rented space to various entities and transfer of rights and obligations in relation to the employees concerned persons which were employed by the original tenant, which was converted to employment in connection with the tenant´s will to the lesser who completed the initial hiring and leased a new entity. Similarly, the court decided even if the original owner of the building rented premises for the purpose of manufacturing to the tenants, who ended, the lease and then sold the property to a third party (the buyer). In this case, the transfer of rights and obligations of the employees concerned the original tenant in relation to the new owner of the object (the buyer).

Transfers of an undertaking under the Directive. If there is a contractual transfer or merger, the question arises whether it is a predictable situation, i.e. the transfer of undertaking within the meaning of the Directive. In assessing the existence of a transfer of an undertaking, the authors mention the crucial decision of the Court of Justice of the EU 24/85 of 18. 3. 1986. In this case, the criteria were set to define issues of a transfer of an undertaking as an economic unit with the preservation of its identity. There were also other cases where it was appropriate to consider the type of undertaking or business, the transfer of material goods, i.e. buildings and movable assets, the transfer of intangible assets, the value of intangible assets on

the date of transfer; and also the fact whether the new employer took over most of the original staff if there was a takeover of customers to determine the degree of similarity between the activities carried out before and after the transfer and the period for which such activities were discontinued. The criterion of transfer of the undertaking, as an economic entity which retains its identity, was formulated by the Court of Justice of the EU based on the criteria, which were not interpreted into the text of the Directive, which resulted in the creation of non-compliance, including deviating from the principle of the transfer of the entity which retains its identity. It was decided to remove the criteria for the transfer of tangible or intangible assets in connection with the transfer of the company and vice versa emphasized similarity of the activities and tasks transferred. Against this loosened interpretation, the authors of this paper follow the rigid interpretation, based on a strict scale of preservation of the identity of the entity transferred, referring to relevant European law, according to which should be decided, such as the decision in cases of Rygaard (Czech, 1994), in Süzen (Czech, 1995) in Oy Liikenne (Czech, 1999) and others (Czech, 1999b), where the basis for a reasonable interpretation of the Directive can be seen, and it is possible to preserve the meaning and purpose of the legislation so that it is balanced and rational to protect the employees and at the same time not to burden the employers disproportionately. It is revealed that these ground-breaking decisions that demand the existence of a stable economic entity and characterize factors such as governance, forms of work organization, production methods, the existence of means of production, etc. The Court emphasized these criteria, such as the transfer of tangible resources for the action, i.e. the transfer of a substantial part of the material resources where without these resources it cannot be properly carried out in the activity or signs of a cautious approach to the assessment of the transition to the transfer of activities or parts of activities or tasks. In the Czech national legislation, the Labour Code does not reflect the definition set by the Directive and the scope of the Directive combines the transfer of rights and obligations only with the transfer of the activity or activities or tasks or parts of tasks without any restrictions other factors that best correspond to European legislation, the meaning and purpose of the issue.

Identification of transferred employees. Given that the transfer of rights and obligation upon occurs automatically under the law (resp. Directive) after the contract takes effect transfer of a business or a merger, for other inalienable requirement of people considered determining the employees directly affected by the transition. In difficult (atypical) contractual transactions, it will be appropriate to identify persons who belong/not belong to the transfers of an undertaking or the transferred activities or tasks. In this regard, disputed cases may occur in a situation where the employee performs more activities for a transferor, some of which are subjected to the transfer or not, and the group of persons is not defined or limited, it is always necessary to assess an individual case. People who are involved in the transferred production process will be interested in the transfer. Persons who

perform activities and tasks of ensuring the operation of the transferor will not be part of the transition, because their activities are not tied to the transferred part.

Czech legislation related to the rights and obligations arising from employee relations.

Principles of Czech legislation. As mentioned in the introductory part of the paper, Czech legislation represented by the Labour Code is not a literal interpretation of the definitions cited in European legislation, as there are obvious deviations. The transfer of rights and obligations of labour relations under special legislation occurs or occurred in the past, e.g. by the Civil Code (transformation of legal entities); Act no. 182/2006 Coll.; Insolvency Act, as amended,; Act no. 125/ 2008 Coll., on Transformation of Companies and Cooperatives; Act no. 427/1990 Coll., on Transfers of State ownership of Certain Things to Natural or Legal Persons; Act no. 92/1991 Coll., on Conditions of Transfer of State Property to Other Person and Act no. 42/1992 Coll., on Regulation of Property Relations and Settlement of Property Claims in Cooperatives. In the case of such transfers, there is a contractual transfer under the conditions foreseen in EU legislation. In connection with the reasons specified in the Labour Code, the Czech legislator significantly deviated from European legislation. The transfer of rights and obligations from employment relationships can occur under the Labour Code in the transfer of activities of the employer or parts of the employer's activities or the transfer of tasks of the employer or their parts to another employer without a fixed term of maintaining the entity.

Authors of the chapter acknowledge the relevance of the opinion of Petr Čech when the language, but also the formal legal point of view say it is possible to consider that parts of the business, although they are not important, such as individual rights, etc. belong to entrepreneurs and are used to operate enterprise or by their nature they have to serve this purpose, known as the analytical approach to an undertaking. If we admit that part of the enterprise can be a single component of business, which connects the transition to a mere transfer of the activities or tasks or parts of tasks without requiring actual transfer of the business or its separate organizational unit, we come to the irrelevance of the statement.

Contractual transfer under Czech law The Labour Code does not explicitly define a contractual transfer. Proceeding from euro-conform interpretation of domestic laws, interprets only the transfer of a business or its part of as an organizational unit based on a contract between the two entities, but under the conditions mentioned above, in which a stabilized by European law. It includes ordinary sale, transfer in the form of inheritance or corporate transformation or lease a business or its parts as separate components or nonstandard conversion, found relevant by European law as in C-392/92 Christel Schmidt vs. Spar und Leihkasse. Czech legislature, according to the authors of the paper, anchored legislation favourable to the employees in comparison with the majority interpretation of the EU Directive. In the case of the European interpretation, it cannot be ruled out that the Czech right legislative more advantageous for a weaker

party beyond the range of minimum standards of EU law. We cannot forget the labour law or the private parties and the principle of equality in the opinion of the authors, it is not an obvious reason to Czech legislature created a disproportionate imbalance in the relationship of employer and employee, for which there is no known public interest and guarantee increased protection for employees. Application practice of Czech courts approach to the issue conservatively, based on the assumptions of Czech legislation, particularly the Labour Code, i.e. a transfer is considered to be a transfer operation of the activity or task. According to the decision of the Supreme Court dated 14 January 2010, it was sufficient to convert part of the activities involving the management and payroll processing, without examining the subject of a transfer of an economic entity, as defined by European legislation or required by the Commercial Code to transfer part of the business. The practice of Czech courts can interpret the example of two relatively current court decisions, which can be stated minimum difference from European case law. According to the conclusions of the Supreme Court treaty, which the defendant (the transferor) transferred to the purchaser laboratory equipment and other movable assets necessary for the operation of dental laboratories, represents together with the fact that the licensee has become the tenant of commercial premises formerly leased defendant in which he began without interruption of the operation of the dental laboratory, instead of the defendant after the takeover of the majority of the customers and the employees mostly legal reality with which under § 338 paragraph 2 of the Act associated transfer of rights and obligations to employees of the defendant, who previously worked together in the performance of its activities (tasks) and whose employment relationship until then had not finished. It was argued in accordance with and with reference to European legislation the fact that not there is a transfer of an economic entity which retains its identity, so it can be considered an organized grouping of resources within the meaning of Article 1, paragraph 1 b) Council Directive no 2001/23 / EC, since the scope of assets that have been transferred to a purchase contract with the defendant and has been quite marginal. The court rejected the objection on the grounds that the appellant overlooks the fact that the directive is mandatory for the Czech Republic and result to be achieved is not directly applicable (cf. The provisions of Art. 249 of the Treaty establishing the European Community consolidated version published in No. 325/2002 - the Official Journal of the European Union). Range (value) of the assets transferred to another employer can be realized on the basis of an assessment of the transfer of an economic entity under the provisions of Art. 1, paragraph 1 of Council Directive no. 2001/23 / EC, which cannot be examined in isolation, but always in tandem with the what kind of undertaking or business concerned, whether the new employer was taken over most of the original employees. The court in this regard refused direct application of the Directive, however, the findings justify using an interpretation which was in conformity with European case law and the Directive itself. In another case, the Supreme Court argued that the transfer of rights and

obligations from employment relationships occur under § 338 paragraph. 2 and 3 of the Act always applies, if it was made legal act (contract) or occur when another legal fact, according to which by law entails a transfer of operations or parts of operations or tasks or part of tasks to another employer, provided that the transferee natural or legal entity it is capable of continuing to perform the tasks of an employer or employer actions or similar kind of activity, but it is clear what is the legal reason for the transfer, through which the transfer of the owner´s rights, and whether the current employer lost the ability to be the employer. If all the conditions required by the Labour Code or special laws are met, the consent of the employees' existing (current) employer is not required and the rights and obligations arising from employment relationships are transferred to the transferee employer and provided disapproval employees, i.e. the transfer of rights and obligations from labour relationships occur from the law, without the consent of the employee and without termination of employment an employee with current employer and conclude a new employment contract with the receiving employer. In the present case, the Court concluded that when the defendant on the basis of a commercial lease continued without interruption in the operation of cafes formerly operated by another person in the existing premises with all existing employees took along with interior fittings such as tables, chairs, coffee, recipes, food supplies, computer, where the majority of customers and charged cafes, i.e. the transfer took place of business (in part) by the provision of §338 of the Labour Code in respect of employees who were involved in this activity. The authors of the paper recently participated in legal consultations concerning the assessment of whether a contractual transfer is interpreted according to the definition of a legal transfer in accordance with the Labour Code, from which emerged a discrepancy of Czech and European legislation. In that case, a Czech trade corporation (person A) employing the majority of employees decided in 2012 to provide meals for its employees through a third party (person B), that would produce and deliver food, drinks and provide services. In this sense, a contract for the provision of services for an indefinite period with the possibility of termination on both sides was signed. Serving meals and drinks under the contract took place in an area of person an allocated for that purpose. In 2016, person A decided to terminate the contractual relationship in the form of notice because of dissatisfaction in the quality of food. Before giving notice, person A implemented an informal tender for a new provider of corporate catering and chose the person C, who until then mostly did not run a business in the provision of food, but with regard to its capacity (own material and staff), they signed a contract with person A and concluded that the subject matter was the same as the contractual relationship with person B. By law, there was not a direct legal relation of person B and C. Person A simply exchanged one provider for another. Between the person B and person C, there was no transfer of tangible, intangible and staff components of business. They only had in common that they provided the same activities for person A in the same area of person A using their own background, their own creation of

food and drinks, different contractors, own the means of production and production facilities for the production of food or security personnel. If this is the case, if we should put the model situations interpreted in this paper, we define this relationship as a three-way transfer through outsourcing. The subject of extrajudicial dispute between the person B and person C was the requirement of the person B, that person C should employ the manager of person B, who was responsible for managing production, business and human resources of catering. On the contrary, ordinary employees of the business, cuisine and food dispensing should be a staff of person B, whose principal activity is the provision of catering for third parties. Person C resisted to employ the manager, pointing out that among the person's B and C there is no transfer of activities or tasks, and the claim that the provision of services for people and workers need with regard to their own security personnel. Under this reasoning, the manager would be unnecessary after the transition to the new employer, burdensome to labour costs of the person C. Authors of the paper conclude that the consequences of redundancy is on behalf of the original employer because there is no rational reason for the interpretation that in the absence of preserving the identity of the transferred economic entity is no transfer is not in terms of the contractual relationship between the parties B and C, despite this an employee is transferred (in addition, it is a manager) to person C. In accordance with the case law of Czech courts and in particular with regard to the labour code suggests that this particular case would be if legal settlement was apparently formalistic interpreted as a transfer of rights and obligations from the labour relation due to the broad definition of the provision. § 338, paragraph. 2 and 3 of the labour Code, but the authors of this paper do not consider that legislation or its interpretation for appropriate and efficient.

Draft of measures related to changes in Czech legislation. In formulating proposals for changes in Czech legislation and designing ideas that would contribute to the debate over modifications to Czech legislation, the authors of the chapter assume the following premises and they further propose:

• European directive in question is binding for the Czech Republic at least by the result to be achieved.

• Czech legal standards must be applied and interpreted in a European conformity.

• Without a good reason, Czech legislation is diverged from the European Directive in defining reasons for rights and obligations transfers. As seen by the authors, it is definitely to the disadvantage of the employer.

• European legislation does not discuss the legal transfer criteria in detail based on the case law of the EU Court of Justice, which is variable.

• It is not appropriate, that Czech legislation and law is diverged from European legislation being the philosophical and inspirational source of Czech legislation.

The authors of the paper draw attention to a disharmony in Czech court´s decisions in European conformity within the proposed measures. Those decisions do not provide legal certainty with regard to the need for a judicial decision to deal with

the legislation arising from the Labour Code. Moreover, it should be considered the fact that nothing prevents the Czech legislators to provide a wider range of rights protection of employees than those provided by European legislation. They see European law as balanced, presenting the legislative amendment to the Labour Code as the only legal certainty relating to the rights and obligations of employers and employees assuming a balanced equilibrium between employees and employers. Authors of the paper also point to the imbalance between employers, when there is at least the fear of advantage of existing employers versus employers receiving and transferring the burden of their own shortcomings in business to another employer (recipient), which, thanks to obtaining a contract is forced to accept the engagement. If the Labour Code defines that the transfer is applied in transfer of any parts of activities and tasks, the range of legal protection of employees is too wide and advantageous for some employers in case of termination of activities or tasks defined for the third persons. The authors of the chapter suggest the following change in §338 of the Labour Code:

• The transfer of rights and obligations of labour relations can occur only in cases prescribed by this act or special legislation.

• The transfer by the act occurs in case of the transfer of operations of the employer or the employer's activities or tasks or their parts to another employer; in case of a transfer of an economic unit maintaining its identity seen as an organized group of resources which aims to pursue an economic activity either central or additional. Considering the identity maintenance, assesses the type of an organization, transfer of tangible and intangible assets constituting the assets of the economic entity to the value of intangible things at the time of transfer, whether the new employer was taken over most of the original staff, whether the activities carried out before and after the transfer, there is a higher degree of similarity or for how long such activities have been discontinued.

• In case of transfers of rights and obligations arising from labour relations, the rights and obligations are fully transferred to the transferee employer. By such transfer, the employees, that have been performing the activities and tasks that are subjected to the transfer, are affected. The rights and obligations of collective agreements are transferred to the transferee employer on the effective period of the collective agreement, but only until the end of the following calendar year.

• The rights and obligations of the previous employer to employees whose employment relationship disappeared to the date of transfer, remain intact, unless a special law provides otherwise.

The authors of the chapter suppose that the propose paragraph 2 of §338 of the Labour Code could be shortened by the criteria of assessing the maintenance of the identity of an economic entity transferred, as there may be a time lag affecting the postponement of tasks. However, they agree that some of the criteria are considered as long-recognized by the European law. They propose to establish legal framework of labour relations providing legal certainty for participants in these relations.

Legislation on the rights and obligations of employee relations is generally interpreted in the European legislation. Although, it would be appropriate to actually think about adding the results of a subsequent European law to the relevant EU Directive that would re-define and materialize the written legislation the European legislator not agree with the proposal. Czech legislation reports differences in the text of legal decision of Czech judicial authorities that are not unimportant. By the opinion of the authors, they report disproportionate and unjustified protection in favour of one of the parts of the employee relations and advantages for current employers against transferee employers. Some rulings of the Supreme Court, but a number of disputed issues remain difficult to grasp for employers. To improve legal certainty, more detailed provisions on the transfer of rights and obligations in the Labour Code would have contributed, as well as discussions on a possible change of legislation or amendment with a view to a comprehensive, fair and reasonable final form of agreements for all legal purposes.

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METHODOLOGICAL PRINCIPLES OF MODELING AND COMPARATIVE EVALUATION OF AGRICULTURAL ENTERPRISES COMPETITIVENESS

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One of the methodological peculiarities of modern researches of enterprise competitiveness is the identification of the processes of its modeling and evaluation. In the theory of competitiveness, the boundary between the terms «competitiveness evaluation», «competitiveness model», «modeling (model) of competitiveness evaluation» is gradually smoothed out. This is a methodological problem because modeling and evaluation differ in objects and goals, and methodological apparatus as well. Evaluation methods are used for systematic research of competitiveness, modeling methods are used to study the formation processes.

Author's competitiveness evaluation methods are beginning to be interpreted as economic and mathematical models in the scientific literature more often. As a result, the focus moves to the methodological approaches to assessing competitiveness, which has a completely different purpose, instead of developing real competitive models. Given the above, it is methodologically important to determine the differences between evaluation and modeling and to establish their interconnection as well.

Contemporary concepts of enterprise competitiveness and theoretical approaches to the quantitative measurement of objects, processes, and phenomena constitute the basis for the competitiveness evaluation. The evaluation is defined as an opinion, reasoning, conclusion about the quality, character, value of the object [1, p. 871]. During the evaluation, the economic object describes that have the quantitative values the most accurate and complete reflect its properties.

According to the foreign economists' findings, evaluation is a measure of competitiveness by giving it a numerical value. According to the high-level abstraction of the «competitiveness» concept, identification of competitive evaluation process with the calculation of indicators, which give quantitative interpretation to the sources of formation, namely, the competitive advantages, is more specific and understandable.

Instead, mathematical modeling is the process of presenting the research object as a model, which takes into account only those characteristics that are essential to achieve a specific goal. In competitiveness research, modeling techniques used to study ways to improve its level.

It is based on the identification and analysis of potential changes in competitiveness as a result of changes in factors directly influence its shape. If the enterprise raises the question of strengthening the competitive position, it means that the available benefits were not satisfied. In this situation, it becomes a necessary revision of actual and potential (future) benefits. In this case, the following are possible: 1) changing the qualitative and quantitative characteristics of existing benefits; 2) stimulating the processes of creating future benefits.

These options include a variety of behavioral schemes, or strategies to strengthen the current competitive position of the enterprise. The optimal strategy can be identified only by study the process models of competitiveness formation, considering all alternative management decisions, likely challenges of the external environment and internal risks. To do this, it is necessary to identify sources of competitive advantages (direct-action factors), as well as significant of indirect-action factors. Subsequently, functions competitiveness indicators form depending on the selected factors.

These functions, according to Marmul L.O. and Boyko V.O., are mathematical models of the competitiveness formation process [2, p. 84]. Changing the parameters of one or more factors it is possible to determine how this will affect the competitive position of the enterprise. As a result, that option will be selected, which the positive change will be the most significant in competitiveness indicators. Given the above, modeling results make clear how competitiveness will change in the implementation of each individual management action, while evaluation allows only a quantitative view of competitiveness (current, potential, planned etc.).

Another distinction between modeling and evaluation is the factors (input factors) on which the use of the appropriate methods is based. The direct-action factors of the hierarchy upper level (product competitive advantages and management areas) are the evaluation objects. Interaction mechanism of direct-action factors of lower and intermediate levels (in particular, absolute indicators of the resource support effectiveness, production, sales) and external influence of indirect-action factors are taken into account in the competitiveness mathematical model (fig. 1).

The economic-mathematical model, developed by Kuzmin A.Ye. and Melnyk O.G., corresponds to the modeling process. They account the product demand as a measure of competitiveness. Researchers determine the enterprise reputation as the main factor, which is modeled taking into account the time factor, reliability and production cost of its maintenance. By changing the input parameters (listed factors) of the proposed model, it is possible to manage the competitiveness in order to maximize it.

The simulation model is used as a model for assessing competitiveness, on the basis of which it is possible to construct a scenario forecast for the competitiveness level [4]. In this case, object modeling is the process of creating a competitive position. It is presented in the form of functional dependencies performance competitiveness of individual products and enterprises on direct-action factors. These are indicators that quantitatively describe the results of individual enterprise

business processes. Since on the simulation model basis it is impossible to measure the actual levels of competitiveness indicators, the methodology developed by the authors should be attributed to modeling, not to the evaluation of competitive positions of the enterprise.

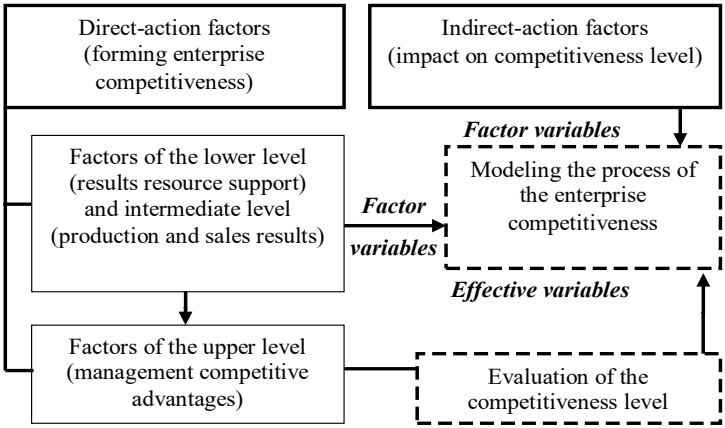

Fig. 1. Competitiveness factors used in the process of evaluation and modeling
Source: author's research.

The evaluation model is mentioned in the study of O. Nikoliuk, who divides the competitiveness factors into factor (initial conditions) and productive (direct-action factors of the upper level). The author notes that the competitiveness evaluation should answer the question: how will change the competitive position of the research object (enterprise) when changing one or another primary competitiveness factors. Initially, it is proposed to determine the actual level of competitiveness based on the synthesis of performance indicators in the integral indicator. After that it is possible to carry out «factor correction» of the obtained indicator of competitiveness by constructing a regression model, depending on its initial factors [5, p. 18].

In essence, the author's methodology of evaluation is presented in the study of Markina I.A. The interconnection of competitiveness with the mediated-action factors and direct-action factors of the lower levels (with initial conditions) is determined as the method result. In other words, using her own methodology evaluation, a competitive regression model was developed. The author recommends to use it in the management of competitive advantages [6, p. 59].

Some economists use the modeling method purely for assessing competitiveness, not to build its model. S. Savchuk proposes to put the competitive pressure on the basis of quantitative evaluation of competitive positions. [7, p. 130]. Pressure rivals are calculated by the ratio of the enterprise actual profit to the maximum possible, in other words, to the profit that could be obtained by the enterprise in a monopoly position. The first indicator corresponds to the actual economic effect achieved,

while the other is determined by maximizing the profit function. In the optimization problem considered limitations that are characteristic of pricing in the monopolistic market.

According to S. Savchuk's research, the level of competitiveness shows how much of the monopoly profits the enterprise gained, operating in a competitive environment. Business entities are identified as competitive if they are least affected by rivals, and the benchmark is functioning in a market where there are no competitors. The main disadvantage of this approach is the abstract of maximum profit that cannot be achieved in competitive markets.

According to M. Oral and A. Kettani, competitive advantages are a form of competitiveness manifestation in the volumes of manufactured products and cost characteristics of resources [8, p. 27]. Scientists associate competitiveness with the deviation of the existing competitive advantages from the existing opportunities for enterprises to create them. They propose such opportunities to quantify the decision on the basis of optimization tasks. Commenting on the highlighted approach, we note that researchers accounted the maximum possible results (obtained by optimization). In general, the method of mathematical modeling is used in this case as a method for assessing competitiveness.

Summarizing the results of the comparative analysis of the evaluation and modeling processes, it should be noted that the competitiveness evaluation involves the quantitative measurement of competitive advantages [9, p. 257]. Instead, modeling competitiveness is based on the allocation of factors that shape it and the formalization of causal relationships between them. The purpose of the evaluation is to determine the competitive position of the enterprise relative to its rivals. The purpose of modeling to substantiate the decisions on choosing the directions of competitiveness management.

The problem of modeling can be interpreted as follows: determine how much should change the initial values of controlled factors of direct and indirect actions to achieve the desired level of competitiveness. Potential changes in competitiveness in case of certain adjustments can be calculated only on the basis of research models. At the same time, it is important to keep compliance competitiveness indicators with evaluation indicators that are used as productive in the model of its formation process [10, p. 352].

Quantitative evaluation of competitiveness should be viewed as a tool for creating and filling information database management processes of its formation. Then, the identification of the most competitive rivals and factors, which provided them with better market positions than the analyzed entity, must be added to the goals of the numerical measurement of competitiveness (fig. 2).

In addition, according to Marmul L.O. and Romaniuk I.A., treatment evaluation results allow defining the most important factors of competitiveness [11, p. 48]. Script forecasts competitiveness indicators are based on mathematical modeling.

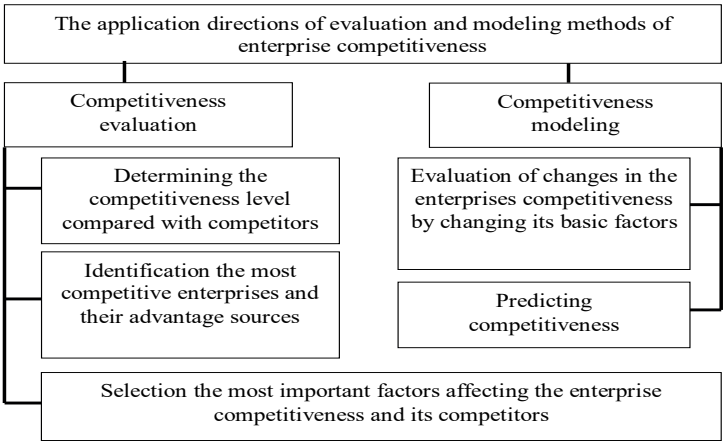

Fig. 2. The application directions of evaluation and modeling methods in the research of enterprise competitiveness

Source: author's research.

As noted earlier, the evaluation methods are the basis of a systematic study of enterprise competitiveness. It should cover the following sub-processes:

1) Identification of the competitiveness factors of the upper level (competitive advantages);

2) Assessing the competitiveness level;

3) Comparative analysis of the enterprise competitive position from its competitors. The analysis and systematization data results of the enterprise competitiveness, obtained at each of the selected stages, are the basis for a generalization of the current state, problems, development trends and prospects for changing the enterprise competitiveness.

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FOOD SECURITY AND THE VALUE OF THE VEGETABLE CROP IN AGROINDUSTRIAL PRODUCTION

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The objective of the actual research is to determine the role of the vegetable crop in solving the problematic issues of the formation and development of agroindustrial production and the needs of state regulation of food security in the country. Vegetable crop is an important branch of agriculture, which occupies a significant place in providing people with dietary products and canned vegetables throughout the year. Vegetable crop as a branch of plant growing is engaged in the cultivation of vegetables in open and sheltered soils. However, the amount of concentrated foods is increasing recently in the human diet [1].

The main task of the vegetable crop is the growing of vegetable and melon crops and the efficient operation of the vegetable industry in order to ensure uninterrupted supply of consumers' needs for fresh and processed products. Vegetable crop is one of the most labor-intensive agricultural sectors in the country, which produces

extremely important and valuable food products for the people.

According to the criteria of attractiveness and priority of the branches of the Ukrainian economy, some authors identify the strategic branches that provide the vital activity of the state: energy, transport, machine building, science; priority sectors of the economy: agriculture, food industry, trade, from which the food security of the state depends; infrastructure: industrial and social [2].

There is a need to study the problem in the theoretical and methodological aspects, the development of which could form a new agrarian policy, based on the responsibility of the state for the development of agriculture to the level of food security of the country's population, great opportunities for food exports [3, p. 65].

In today's conditions, the role of agroindustrial production in the country's economy and social welfare is not so much its share in the formation, as the social significance of the industry in ensuring the vital activity of the population, primarily agriculture. Therefore, in a strategic vision, the mission and objectives of agroindustrial production should be determined not only in terms of food security of the country, but primarily as an economic basis for the development of rural areas [4].

The essence of agroindustrial production is difficult to reveal that, not proceeding from the general theory and practice of integrated development of the entire national economy, according to which, one of the characteristic features of this formation is the relative closure and completeness of the process of complete reproduction of the final product of agricultural origin. At the same time, this closure is relative, since in general this complex and its branches carry out and interconnection with other industrial systems of the economy. However, this does not mean that he needs to include all sectors and activities that have something to do with agriculture. Then you can consider all economic activity as agroindustrial production, because food is irreplaceable for all types of human activities. The criterion for the existence of agroindustrial production can be expressed by the degree of interconnection of inter-branch relations: at the specific weight of the cost of industry for agricultural products; share of agricultural raw materials in the structure of the cost of processing enterprises; quantitative alienation of the agricultural sector of an industrial product from its general production. In our opinion, agroindustrial production of the country is a set of interconnected branches and sub-sectors of industry, agriculture, servicing and circulation, which operate on the basis of inter-branch links in the field of production, transportation, processing, storage, processing and marketing of agricultural products. Thus, agroindustrial production is a combination of agroindustrial sectors, as a whole, and its product subcomplexes.

The main causes of food dependency of the country are: food shortages and low level of solvent demand, which causes the imbalance of the domestic food market on demand and supply; the dependence of the domestic market on imported food supplies, not the competitiveness of the national agro-industrial complex; low competitiveness of products in quality or price in the conditions of sufficient food production of their own production [5, p. 108].

Food security requires the establishment of a monitoring system, which is tasked with determining its actual state, forecasting internal and external threats to food security. On this basis, measures are being developed to locate and neutralize negative factors that affect or may in the future affect the level of security. The food security monitoring system focuses on the following areas: agroindustrial production, food market, food consumption, food supply, quality and safety of food [6, p.10].

Materials of surveys of consumption of the population of the country's main food products show that in 2017 consumption of such basic food products as fish and fishery products (1,8 times less compared to a rational consumption rate). Such important food products as: meat and meat products; fruits, berries and grapes also do not meet the normative indicators for a rational norm of their consumption. The above indicators show that in recent years (since 2015), vegetable production has a higher demand from the population than meat, dairy and fish products. This is due to the economic crisis in the country and the poverty of the strata of the population.

All intermediate links (from manufacturer to consumer) are combined for the sole purpose of meeting the needs of consumers, taking into account their time, price, quality, quantity, and assortment requirements. When the requirements of consumers become a priority for all stages of product promotion, enterprises must create conditions for optimal management of material flows [7, p. 25–30].

Despite the fact that the rate of consumption of vegetable and melons is 100%, in individual cultures it is not fulfilled [8].

Thus, the production of agricultural products for the period under study tended to increase, compared with the base year, with the exception of milk. The reason is the rise in prices for material and energy resources and ineffective inter-branch economic relations. In addition, a certain proportion of the rural population refuses to grow vegetable crops on private plots, considering it economically unprofitable. We believe that the pricing of agricultural production should be based on free pricing of mutual combination of the economic interests of producers and processing companies of agricultural products through the implementation of integration measures. The very nature of prices is that commodity alone should receive income from own production.

Producers permanently lose their purchasing power and running costs of production. The wording of the producer price of products is a form of socialization of trade and interbranch economic relations. Indeed, in this case the role of social factor is increased.The goal of each manufacturer is to get maximum revenue from sales and therefore it is in constant search for a profitable market offers [9, p. 114].

The pricing policy in the agrarian sector should be based on free pricing combined with state regulation and increased antimonopoly control over the prices of material and technical resources, energy carriers and services for commodity producers.

The formation of a pricing mechanism in the agrarian sector should be based on the definition of a price that would help to ensure the equivalence of exchange and provide agricultural producers with an income level sufficient for production. In

the market conditions, the regulator of production is the profit for the total advance or borrowed capital advanced for a certain period. Lacks of pricing negatively affect the motivation of agricultural producers. Insufficient purchasing power of domestic consumers leaves prices for agricultural products low. Due to the lack of equivalence of inter-branch exchange, agriculture loses its assets, sharply reduced opportunities for not only extended but also simple reproduction [10, p. 94–95].

Thus, the crop area under vegetable crops in 2017 (compared with 2000) decreased by 99,0 thousand hectares, and the yield on the contrary – increased by 96 c/ha. Due to the low solvency of agricultural enterprises, there was a decrease in profitability in the cultivation of such crops as: potatoes, sugar beets and open-field vegetables. The Fund for the Consumption of Vegetable Products in Ukraine reaches 7,3 million tons, per person – 161 kg. Due to the dynamic structural changes in the sectors of primary and deep industrial processing of agricultural raw materials, where the fixed capital of value added is formed, there is a misbalance of inter-branch relations. Most of the domestic producers of vegetable products remain with the problem of processing of cultivated products on their own without significant state support.

The main tasks of the state in the field of food security are: ensuring stable physical and economic availability of food products; compliance with a high level of quality and safety of food products and agricultural raw materials; dynamic development of all branches of the agrarian sector of the state economy, ensuring a high level of their competitiveness; guarantee of food independence of the state; formation of a healthy type of nutrition of the population [11].

One of the decisive factors in improving the efficiency of crop production is the intensification of production, which aims at increasing crop yields through the use of high-yielding varieties, improving the culture of agriculture, applying scientifically-based fertility standards in the crop rotation system, taking organic and mineral fertilizers, protecting agricultural crops from borax yans, pests and diseases, high-quality and timely implementation of all technological operations [12, p. 52].

A strategic factor in the socio-economic development of society is the stable food supply of the country's consumers. In our opinion, due to the low solvency of processing enterprises, mainly the processing of agricultural products from tolling raw materials over the purchased predominant.

That is why intersectoral economic relations are crises in the areas of processing, storage and distribution of finished agricultural products to the consumer. We believe that one of the important factors that unites industries in agroindustrial production is the processing industry. For this, interdisciplinary exchange, as a leading methodological principle, should be integrated into a whole system that will envisage strategies and tactics.

To ensure the competitiveness of canned vegetables can be primarily due to technological, organizational, economic and social factors, such as: improvement of standardization and quality of introduction and management of modern technologies;

improvement of methods of technical control and mass self-control at all stages of service of the population; establishment of affordable prices, as well as powerful motivation of labor for all categories of workers in this sphere and activation of the human factor; carrying out the appropriate personnel policy; creation of proper working and living conditions for a person [10, p. 20].

To improve the operation of canneries, it is necessary to constantly monitor the level of inventories, look for rational methods of commodity supply and increase the percentage of implementation of the trade turnover and profit plan [13, p. 21].

It is very important to reduce the cost of work and establish a moderate price for socially necessary services. The main mechanism for improving agricultural production and achieving the corresponding synergistic effect is the integration orientation of agricultural production in a vertically integrated type.

Only vertical integration can ensure the unity and continuity of auxiliary and technological actions and make the best use of integrated economic resources.

State support is indispensable for the effective functioning of agroindustrial production, ensuring food security of the country, stimulating rural development, preserving the environment, improving the quality and ecological safety of agricultural production and equivalent pricing. There is a lot of discussion about state support and interference in the economic activity of agricultural enterprises.

In the conditions that arose in agriculture for many years, another way of overcoming the acute shortage of financial resources by agricultural producers in the conditions of deindustrialization of production, large debts and limited or completely lacking access to long-term loans was simply not due to the excessive removal of the state from the effective regulation of incomes of the agrarian sector. Financing of agriculture in modern conditions is carried out in the form of an inequivalent interbranch exchange [3, p. 5].

State regulation of the agrarian sector should be considered as a process of state influence on reproduction processes and economic entities of the industry in order to create the necessary conditions for their effective functioning on a market basis and implementation of state socio-economic and environmental priorities, guaranteeing food security of the state. During the years of independence in Ukraine, a number of legal acts, concepts, strategies, target programs and projects aimed at ensuring the effective development of the system of service cooperation in the agrarian sector of the economy were adopted. The main objective of the planned activities was to create a favorable economic and legal macro- and micro-environment for the effective functioning of agricultural service cooperatives.

State regulation should establish such inter-sectoral relations between the spheres of production, harvesting, storage processing and trade, providing vertical coordination or integration of partners. The basis of such relations should be based on the mutual commonality of the economic interests of participants of one product vertical [14, p. 64-65].

It is in the state regulation of the agrarian sector of the economy that there are

significant problems associated with the lack of experience in using mechanisms for regulating interbranch relations.

To improve the operation of canning plants, it is necessary to constantly monitor the level of inventories, to seek rational methods of commodity supply, to increase the percentage of implementation of the plan of turnover and profits [10, p. 21].

State policy should be based on optimal growth rates of various sectors and sectors of the national economy, with macroeconomic proportions in the fields related to agroindustrial production. It should be possible to achieve not only the structural balance in economic policy, but also the correction of intra-industry proportions of interaction between branches and spheres of agro-industrial production.

The regulation of the production of agroindustrial production in a market economy is the main task of achieving the equivalence of inter-industry exchange.

For the effective development of the field of vegetable crop, modern market conditions require the most effective structural state policy and more substantial financial support.

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RESOURCE POTENTIAL OF THE AGRARIAN SECTOR OF ECONOMISTS AS AN OBJECT OF SCIENTIFIC RESEARCH

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Complex issue researches in search for opportunities for effective and rational use in production process of own resources, opportunities for positive progress of business entity have a particular importance since their solution permits implement to the fullest extent of using economic facilities, rational distribution of available costs and increasing of products and services qualitative characteristics, competitive advantage and it`s stability and quantitative increase of interested consumers. The resource capacity of agriculture forms as a distinct types of resources, that are subordinated to enterprises own use. Such a set represents a material security inproductive capacity. The amount of last factor depends on more than just amount

of own resources, but also on material resources of other business enterprises and organizations that play any role as agricultural producers.

The diversity of «resource potential» requires a variety of approaches to the disclosure of content and directions for improving the mechanism for its formation and use. The theoretical concepts of the development of the resource potential, its structure and properties, which are the basis of its use, are multidirectional, therefore there is an objective need to find new approaches to ensuring its effective use.

The adoption of measures to build capacity is oriented towards the prospect and is based on actual conditions of development of relevant factors, that is, specific requirements. The needs of customers have particular importance and influence their quality. In addition, very important prerequisites are related with competitors, because the investigated potential of the enterprise may lose its value exactly under their load. Also, internal preconditions related to the guidelines adopted within the enterprise should be taken into account.

Solving important problems of the country's development depends to a large extent on the scale and nature of the transformation processes, the effectiveness and activation of which are closely interrelated with the most full use of all components of available resource potential. Insufficient utilization of the main components of available resources leads to deformation of the production structure, constraints and reduces the efficiency of production activities, which requires the development and implementation of well-considered measures to create a mechanism for ensuring the conservation and rationalization of the use of resource potential.

Under the resource potential of the country they imply a set of interrelated natural, industrial, labor, financial, investment, innovation, infrastructure and information resources, the use of which provides an economic effect. Like the economy in general, resource potential is a dynamic system characterized by a change in the proportions and relationships between its constituents in both time and space. Being in functional dependence, the change of some components of the resource potential leads to the modification of others, causing changes in the proportions of functional and territorial nature. The analysis of economic literature has shown that the range of definitions of resource potential of economic entities is rather voluminous – from a fundamentally narrow understanding of it as the annual volume of production to general categories.

The Resource Potential, Strategy and Competitiveness are the three basic components of an organization that determines the formation of strategic management. The implementation of the enterprise in the conditions of a market environment necessitates the conduct of their worthy competitive work, the need for the formation of certain competitive advantages. Their content depends on the external environment and opportunities of the economic entity - its resource potential. This aggregate forms the material basis of production potential, the size of which depends not only on the amount of labor, material and land resources of the enterprise, but also on the material resources of other enterprises and organizations

directly necessary for the production of agricultural products.

The research of the prospects of the company's activity gives an opportunity to reveal the essence of the notion of a strategy of ensuring competitiveness through the prism of a set of thought-out management decisions, which focus on the prism of the formation of resource potential and ensure the qualitative development of its main competitive principles and promote its growth. The process of developing and implementing the strategy is carried out in accordance with the rules of organizational development and accumulated own resource potential.

The evaluation of resource potential of an enterprise can be defined as the sum of the actual values of the components. For example, the potential of agrarian enterprises is proposed to measure the cost of reproduced resources.

The questions of the effectiveness of their engagement are important and permanent for all kinds of resources. The essence is to give an assessment of the effectiveness of one or another type of resource and determine the useful result of the enterprise, compared with the cost of obtaining this useful result.

The positive result of enterprise activity from the use of resources is called an effect. Two important indicators which called the effect are: profit (revenue) and profitability. The calculation of these indicators and their comparison with the size of the resources used determines the rate of effectiveness of the use of these resources. Consequently, this economic category characterizes the useful result of the enterprise. These indicators are actively used both in general and in its individual components to analyze the effectiveness of the operation of the enterprise.

To determine the size of the resource potential, the most common two methodical approaches are: integrated assessment of production resources in monetary terms and on the basis of determining the area of comparable agricultural land.

The provision of agricultural production resources can be characterized by absolute and relative indicators. An absolute indicator is a resource utilization coefficient, which reflects the correlation between the actual value of resource potential and its normative need.

It should be noted that the opportunities for economic growth of an enterprise are not always characterized by the presence of these resources. Resource potential of the enterprise is explained by four main factors:

- real possibilities of a business entity in various spheres of its activity (including unrealized opportunities);
- the volume of available and own resources used in production;
- the ability of staff to use resources and ability to manage them rationally;
- the kind of activity and specialization of a concrete enterprise.

All economic work in agricultural production, in essence, is to find the best solutions to economic problems. Non-operational, or poor-quality, processed economic information leads to a decrease in the level of business activity. For example, untimely response to changes in macroeconomic indicators leads to a decrease in production and inflation. Econometric calculations and an analysis of

the microeconomic factors of social and economic phenomena and processes are even more influential on the development of the economy. Data collection at micro level and their analysis and estimation of econometods is the basis of successful management of economic activity.

Using of mathematical modeling as one of the methods of financial literate planning allows to correlate quantitative correlations of various indicators and factors, to find their interconnections and to search for the tendency of financial and economic results. The economic-mathematical model as a mathematical generalization of the factors of financial analysis characterizes the structure and regularities of the change of the investigated economic phenomenon on the basis of mathematical calculations. Economic-mathematical modeling can be carried out both by functional and by correlation links, such actions allow to calculate and switch from average to optimal values. In turn the use of computer technology in the financial planning of the enterprise significantly affects the growth of its scientific significance and reasonableness, enabling the development of a significant number of variants of plans, focusing on changing competitive conditions of the environment, etc.

Mathematical and statistical research is a necessary vector in obtaining in-depth knowledges of the mechanism of the phenomena and processes studied. Correlation and regression analyzes are widely used to study the intensity, type and form of causative influences.

Determination of relations in the form of regression and its comparison of quantities with values obtained by substitution in the regression equation of values explain the variables, give an opportunity to better understand the nature of the phenomenon under study. This affects the identification of factors that affect the economic process in order to obtain the desired results. The multivariate correlation-regression analysis of financial stability of a particular enterprise was carried out by us on the financial statements of the company for five years. Net income was taken as a performance indicator (y). The most simple form of dependence is linear, that is, the dependence of the species:

$y0 = A0 + A1X1 + A2X2 + A3X3 + \ldots + AnXn,$

where y is the resultant indicator;

A0 is a free component of the equation;

A1, A2, A3, …An - coefficients of the multiple correlation;

X1, X2, X3, ...Xn are quantitative characteristics of the factors that influence the performance index.

Correlation-regression analysis was carried out using the module «Multiple Regression». According to the results of correlation-regression analysis, the regression model has the form:

У = -6224,148 + 0,14x1+ 0,125x2– 1,479x3+ 0,843x4+ 0,006x5+ 0,524x6+ 0,118x7+ 0,039x8+ 0,004x9+ 0,006x10.

Table 1

Output data for conducting multiple correlation-regression analysis of financial stability industrial agricultural enterprise «Zlagoda», ths. UAH

Indexes	Year				
	2013	2014	2015	2016	2017
X1 – revenue from sales	27865	31367	48118	62415	76537
X2 – cost of sales	22944	26967	36146	50387	69302
X3 – administrative and marketing expenses	1861	2344	2655	5264	7020
X4 – gross income	4921	4400	11972	12028	7235
X5 – fixed assets, ths. UAH	5722	5693	9615	16322	26040
X6 – finished products and goods	42	54	112	38	17996
X7 – cash ths. UAH	325	632	802	1225	1537
X8 – current and long-term liabilities	7800	9105	13095	14325	26720
X9 – accounts receivable	1609	1026	4006	2795	3927
X10 – operating costs	48208	51949	53572	57073	88913

Source: compiled by the author for f. №1,2 industrial agricultural enterprise «Zlagoda»

The most influential factor according to the built model is the administrative costs – the management of the company must pay attention to the reduction of administrative and cost optimization, since each of them increase by 1 UAH, reduces net profit by 1,479 units. After all, the correct management of them can affect the value of net profits in the future. This conclusion is confirmed by the situation in 2017, when administrative expenses amounted to 7 million UAH, therefore the company received almost 3.5 million UAH of net loss, and the level of loss in production and financial activity in 2017 was 5%.

As a conclusion we note that the implementation of financial planning requires an analytical approach in determining the goal of the enterprise development or its components, as well as the level of implementation of the planned goal. Therefore, the current and perspective activity of the company is connected not only with the development but also with the implementation of the plans.

The balance of indicators of financial planning in enterprise is a prerequisite for their qualitative development, since the excess of planned or actual indicators relative to the normative values under normal business conditions of an enterprise indicates the unsatisfactory preparation of planned financial developments and the need for their recalculation. In comparison to planned, actual and normative indicators, not only the coefficients of tensions of financial plans, but also their level of risk are determined.

Consequently, the effectiveness of the use of resource potential influences the

financial and economic outcomes of the enterprise. The potential of an enterprise should be characterized by a set of indicators, using a value or a natural estimation. Resource potential of agriculture is formed by the size of certain types of resources at the disposal of enterprises. In today's market conditions, the achievement of a high level of development of agrarian enterprises is possible through the implementation of such actions aimed at improving the quality characteristics and efficiency management process concerning the resource potential of the economic entity. Thus, a complex model of formation and provision of the potential of an enterprise indicates that at different stages of its occurrence it acts as a result of the interaction of the resources that it provides. The resource potential of the agrarian sector is formed by combining different sizes of individual types of resources belonging to the enterprise.

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SYSTEM APPROACH IN METHODOLOGY OF MANAGEMENT OF AGRARIAN ENTERPRISES ECONOMIC DEVELOPMENT

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The results of the research suggest that the relations between economy, human and nature are systematic. Such a point of view is fundamental for the formation of a methodological basis for the management of economic development of subjects of agrarian economics, which is based on a system approach. The system approach in managing the economic development of agrarian enterprises means the use of a set of mechanisms and methods of influencing the subject of management on an object that is considered as the integrity of interconnected elements to use the existing interdependence and interconnectedness the most efficiently to achieve the set of agricultural production goals: economic, environmental and social.

In the management of the economic development of agrarian enterprises based on a system approach, it should be taken into account that the agrarian economy as a system in its development deals with the modification of certain coexistence of its parts, created both natural and artificial way. This coexistence (proportions)

determine the coordinated interaction of structural elements, that is, it unites them into a single unit that performs a certain function. „Coordination of many measures - writes E. Soroko - the establishment of their unity, multiplicity are actually a process of structural harmonization" [1, p. 125], which can be called the objective law of system development.

Recently, when modeling the economic development of agrarian enterprises and the system of agrarian economics in general, special attention is paid to the reproduction of natural resources, which depends on a complex of various factors, in particular those outside the economic system of a particular agrarian enterprise. In the set of activity goals of the subject of agrarian production one of the main (if not the most important) is food security, which should be carried out in the global system of economic relations, which includes the consideration of social aspects of the development of society. Still the prevailing motive for the activities of agrarian enterprises remains the need to create vital goods, which takes place in conditions of competition, inherent in a market economy, which constantly attracts attention to the problems of economic efficiency.

As the main goal of managing the efficiency of an agrarian enterprise, like any other, is to maximize the welfare of the owners of the enterprise in the current and prospective periods, the coordination of diverse interests needs a solution of a set of tasks that are too difficult in the system of „resource processing - profit generation", namely:

- ensuring maximization of the economic effect at a certain resource potential of the enterprise and market conditions, which is achieved by optimizing the structure of resources and their rational use;
- compliance with optimum ratio between the level of effect and the permissible level of risk which on the one hand does not reject the possibility of making managerial decisions in the continuum of „aggressive – conservative" economic policy and on the other hand requires justification of the optimality parameters of the mentioned relations;
- reducing the use of artificial incentives to increase production, such as: advertising, fashion, price discounts, etc., due to the availability of resource constraints on the Earth;
- gradual replacement of the definition of the current state of the enterprise on the basis of indicators of profitability and cost of production by definition on the basis of detecting deviations of values of actual parameters from the normative (harmonic).

The last task is perhaps the most relevant within the concept of managing the harmonious development of agrarian enterprises, since it involves the establishment of a measure. When the quantitative parameters change beyond the limits of the measure, there is a jump-like transformation of the system: self-decay or rebuilding, after which it is not possible to provide such an effect on the system which will allow a positive result. The complexity of the agrarian production system is

complicated by its management due to the weakening of organizational relations, which is observed at the decrease of stability. Based on the methodology of the system approach it is advisable to formulate a number of principles for managing the economic development of an agrarian enterprise:

- observance of the universal law of the social and historical reality of unity and struggle of opposites: the emergence within the integrity of contradictions, the mutual transformation of which causes the appearance of a new quality;
- compliance of the production structure with the goal of sustainable development of the society harmonized with the natural environment;
- finding a reasonable compromise in the process of coordination of the participants interests;
- purposeful management of separated integrity, taking into account the parameters of harmonization.

The nature of the mentioned principles lies in the presence of the structural complexity of production systems associated with the use of natural resources, which, firstly, causes the problem of harmonizing the development of society and nature (co-evolution) and, secondly, - means the possibility of alternative varieties to the development of systems of management. In the agrarian sector of Ukraine we are already dealing with such forms of economic activity as agricultural holdings („Mriya", „Astarta-Kyiv", „Myronivsky Hliboproduct", etc.), industrial enterprises with the inclusion to the structure of agrarian production (the group „Metinvest"), large joint-stock companies, farms, cooperatives, state-owned enterprises, micro-enterprises based on households producing honey, nuts, berries, snails, crocus, medicinal herbs, kraft products, etc., which use different strategies: import substitution, export expansion, niche markets, organic farming, clusters. In the process of co-evolution the important task is to maintain natural diversity. V. Belous writes that „... the socio-economic system will be able to ensure rational interaction with the environment only if it has a diverse subsystem of rational use of natural resources and protection of the environment" [2, p. 57]. It should be understood that the integrity can not be preserved if all elements of the system change simultaneously, structural complexity will increase and interconnections will be diversified. Something must remain constant so that the system retains its characteristics - natural cycles, technological gaps, the relationship between costs and price, supply and demand, and so on. The properties that the system saves, changing its other characteristics, are called invariants [3, p. 11].

Finding structural similarity as an invariant of the system can reduce unproductive management costs, since resources, including time, will be used only to preserve the important characteristics of production activity, neglecting all others. Many researchers consider such an invariant as the harmonic proportion [4; 5; 1; 6]. No wonder N. Wiener put forward the idea that the processes of management and communication in machines, living organisms and society are similar [7]. The first who drew attention on the invariance of systems was L. Bertalanffi, who concluded

that diversity has a limit and that the nature of the interconnections between the components of the system leads to the emergence of a certain function [8, p. 147].

Knowledge of the social system invariant makes it possible to understand which social processes can be changed and which, like invariants, will be preserved, regardless of the impact on them, or destroyed together with the system. Proceeding from the fact that the laws of nature can not be changed, their action must be taken into account when making managerial and political decisions. For example, tax administration for subjects of agrarian production, the characteristic feature of which is the presence of a large time gap between the start of the production process and the receipt of the final result, should be different from taxation of enterprises that produce and sell products in a permanent manner. Social processes as a product of conscious volitional activity of people differ from biosphere, but they are also subject to the laws of the development of the universe since man is part of the biological system and its economic activity takes place in the natural environment.

Based on the previous achievements of many scientists and guided by the results of their own empirical studies, an attempt was made to systematize the invariants of the socio-economic-ecological system important for the field of agrarian production:

- integration - the unification of parts into one whole;
- combination - multivariate combination of parts of the whole;
- attractors - points, plural points, boundary lines, planes or fractals, to which or within which the dissipation coincides;
- disintegration (natural selection) - elimination of non-viable elements;
- uneven development - non-linearity of the process of change;
- cyclicity - the repetition of phases of development in a certain sequence.

The mentioned invariants of the agrarian production system are kept for a long time, in particular, the person's tendency to unite efforts (integrity) with different intensity manifests itself in human communities, as well as in the aspiration of people to create integrated biomechanical systems, which are increasingly moving away from natural biocenoses. Animals and plants that are domesticated by a human being without it will no longer survive in the natural environment. The combination of factors of production, organizational forms, product proposals, etc. is a characteristic feature of innovative processes in the agrarian sector of the economy, which are accompanied by spontaneous and discrete changes in the paths of economic life, an imbalance, „... which change forever and replace the previous state of equilibrium" [9, p. 73-74].

The presence of attractors is a means of preventing excessive loosening of the agrarian production system and this applies not only to such issues as the structure of production, the range of products and the volume of its offer but also, for example, the definition of the degree of entrepreneurial freedom which can not be absolute and in the process of complicating economic relations is increasingly limited. Therefore, issues of economic freedom and state regulation at each stage of economic development find new solutions.

Using a system approach to managing the economic development of agrarian enterprises allows us to see the relationship between those elements that, at first glance, seem not to be interconnected, say, productivity of labor in agriculture and inflation. Governments, sometimes weakening control over prices, do not think that their increase will lead to a drop in demand for certain foods (meat, hard cheeses, gourmet fish products, etc.) and, consequently, reduction of supply which leads to a decrease in labour productivity.

Acceleration of changes, increasing of economic processes uncertainty and natural environment instability, as well as the existence of contradictions between the economic interests of various social groups and state, leads to finding compromises in the production systems management. According to Moiseyev opinion, social and economic development will depend on how much humanity will be able to find the necessary compromise between the trends of reasonable coherence of interests of various social entities, without which it is impossible to ensure the progress and survival of the homo sapiens species, and individualism, nationalism, ambitions and ignorance [10]. It is clear that the growth of uncertainty and acceleration of changes will cause increasing of the state's activity in resolving the conflicting problems of life goods competitive production; at the same time, in the regulatory process, systemic diversity as an attractor of the agrarian economy should be preserved, since its availability allows the system to produce variants of adaptation to changes in the environment.

The adaptability of the agrarian production system, whose significance in the context of food security provision, will only increase, can be manifested in several ways:

- inertia, with which the system has the ability to maintain the existing state with the growth of external influences;
- reproducibility: the ability of the system to return to its original state after some surge;
- plasticity, which means the presence in the system of a set of properties that allow it to move from one state to another under the influence of external pressure, while retaining its purpose.

Yet, in the presence of systemic disturbances, the level of adaptability may not be sufficient, which will cause the system to become unstable. In this case, the indicators of economic activity of the agrarian enterprise deteriorate, stagnation and recession begins. The value of the study of the agrarian enterprises economic activity as open complex unstable systems and the quantitative correlations between elements of production systems (enterprises) of the agrarian economy is to provide managers with tools that can predict the moments of entering the company into a critical area of the economy functioning in order to prevent its decline and maintain a balance between economic, biological and social invariants of the system.

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ANTI-CRISIS ACTIVITIES OF AGRO-FOOD SPHERE ENTERPRISES USING PROGRAMMED-TARGET APPROACH

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Studies have shown that the using of fuzzy logics methods helps to make optimal managerial decisions in order to overcome the financial-economic crisis of enterprises.

The methods of making managerial decisions are recommended to conduct according to the following stages:

1. Evaluating enterprise's condition by means of fuzzy logics;
2. Comparing the evaluation results of model enterprises and other ones.
3. Forecasting the volumes of sales and sales volume sensitivity.

With the help of scripted forecasting of agro-food sphere enterprises' development the following variants of events can be distinguished:

1. Deteriorating or improving the financial condition of enterprises;
2. Overcoming or implementing the threat of enterprises' bankruptcy;
3. Effective or ineffective information provision to overcome the crisis;
4. Effective or ineffective ensuring of enterprises' innovation development.

The scientifically substantiated block diagram of the system of developing and implementing anti-crisis actions based on fuzzy logics using programmed-target approach is shown in Fig. 1. Raising the level of information provision and ensuring enterprise's innovation development is impossible without improving its financial condition. Improving the financial condition is a prerequisite to overcome the probability of bankruptcy.

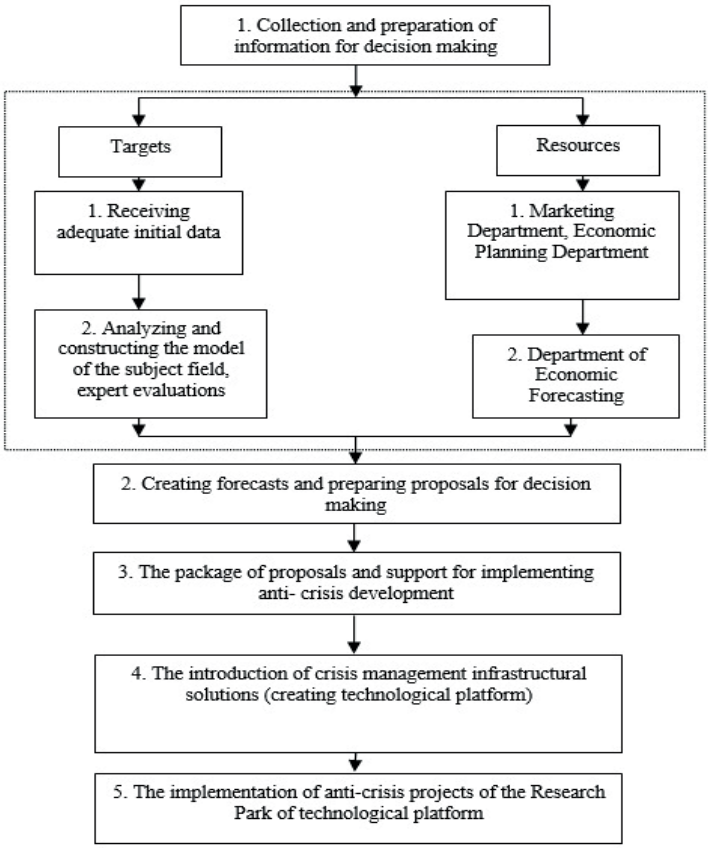

Fig. 1. The methods of developing and implementing anti-crisis measures based on fuzzy logics using programmed-target approach

The directing of the studied changes was aimed at: improving the financial situation; overcoming bankruptcy; raising the level of information security; raising the level of using innovative potential. However, anti-crisis solutions must be implemented in the complex that is overcoming the crisis of enterprises in agro-food sphere must be systemic.

Let us consider the constituents of the block diagram in more details. Using the methods of programmed-target approach requires the detailed coordination of objectives, measures and resources in crisis management [2, 3, and 4].

The structure of the element "Collection and preparation of information for decision making" is considered in Fig. 2.

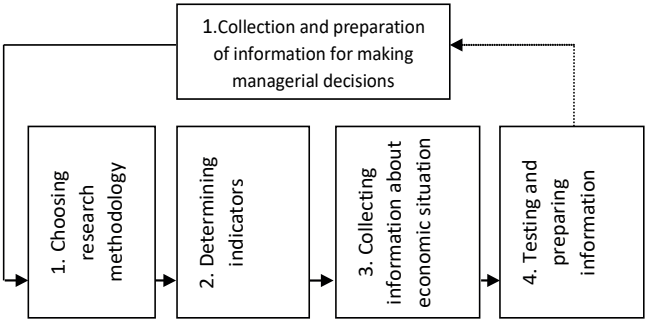

Fig. 2. The structure of the element "Collection and preparation of information for decision-making"

The creation of information base and organizational- information provision for making crisis managerial decisions requires the development of the subject area ontology: choosing research methodology, determining (fuzzy) indicators (indices), gathering information about the economic condition (crisis, the level of economic security), testing and preparing the information for further processing.

It should be noted that using the methods of fuzzy logics requires mutually coordinated qualitative and quantitative indicators of crisis condition level or economic crisis of agro-food sphere enterprises.

Testing the quality of initial economic information that comes in the system of crisis management decision-making is important in the implementation of these decisions.

Differentiating between the determined targets and structural subdivisions of agro-food sector enterprise, which are responsible for the implementation of these targets, is suggested in the unit, separated by a broken line (Fig. 3).

The analysis of the sub-system shown in Fig. 3 testifies that the absence of competent communication reduces the quality of managerial decision making that is why the definite technological base formation is necessary (standards, technical profiles, tools of technological platform).

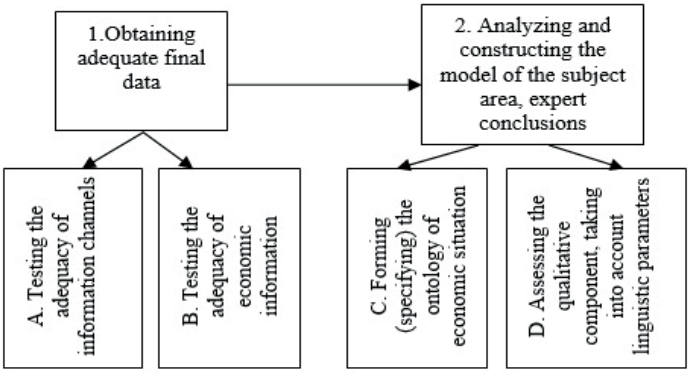

Fig. 3. The elements of economic information support in the system in crisis management decision-making

Getting the adequate data (prepared quantitative and qualitative information) requires, firstly, the testing for the correspondence (adequacy) of information channels for ensuring anti-crisis development of agro-food sector enterprises, secondly, checking for accordance with the requirements of making managerial decisions of directly collected and prepared economic information (Fig. 4).

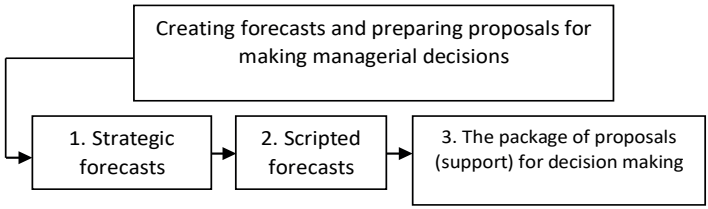

Fig. 4. Creating forecasts and preparing proposals for making (anti-crisis) decisions

For the needs of ensuring anti-crisis economic development, the formation of the model (the financial position, the probability of bankruptcy, information provision, and ensuring of innovation development) has been suggested, on the basis of this model the corresponding expert conclusions are made, and organizational-methodical base of proposals for further making anti-crisis decisions as to using economic resources is developed on the basis of structural sub-divisions of agro-food sector enterprises (Marketing Department, the Economic Planning Department, and the Department of Economic Forecasting).

Based on the created model of crisis management and expert conclusions the strategic forecasts for developing both enterprise and agro-food sphere on the whole are made.

Strategic forecasts, as researches show, are characterized by many "soft" (qualitative) indicators, that is why it is difficult to formalize them quantitatively.

Based on the strategic forecasts, divergent trajectories of enterprises' development are made considering the sensitivity to the factors of external and internal environment (scripted forecasts).

The formal completion of the phase of making forecasts and preparing proposals is the package that is the formal support of making (anti-crisis) decisions. The using of formal rules will of linguistic variable will enable to form the necessary volume of requirements for the goals' implementation taking into account the limitations of available economic resources.

Fig. 5 shows the technology solutions' implementation as to the formation of innovation anti-crisis infrastructure.

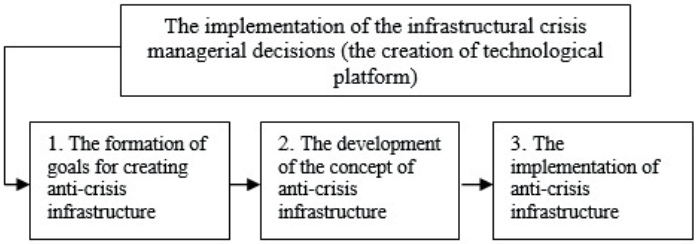

Fig. 5. Anti-crisis infrastructural decisions

The optimization of the system of agro-food sector enterprise crisis management requires creating the infrastructure of the technological platform to overcome the crisis with further developing the concept of anti-crisis infrastructure and its practical implementation.

However, practical implementation of anti-crisis projects and innovation development based on the technological platform requires the using of tools of research park and clustering [1, 5, 6] (Fig. 6).

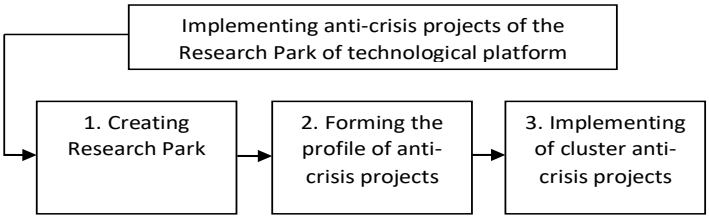

Fig. 6. The support of anti-crisis projects of the Research Park

Studies have shown that based on the leading enterprises of the agro-food sector, for example, the LLC "Hlobyne meat-packing plant", the innovation cluster is the most effective form of integrating economic relations within the technological platform (Fig. 7).

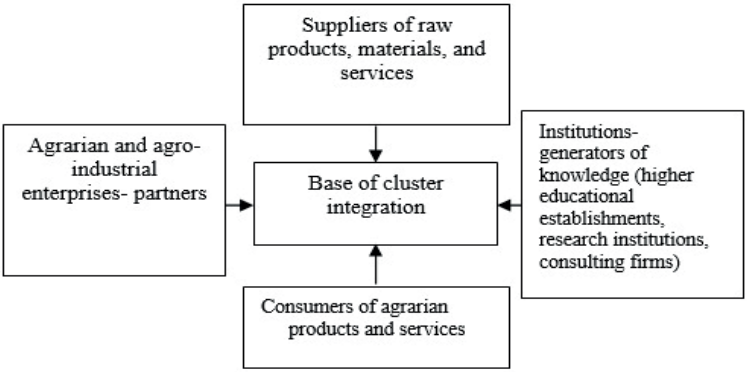

Fig. 7. Project integration of enterprises-partners within innovation cluster to overcome crisis

The implementation of anti-crisis projects of innovation development at enterprises of agro-food sphere is recommended together with using organizational-methodical base to ensure the formation of innovation anti-crisis infrastructure (the concept, methodical support, etc.).

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INTEGRATION OF PRODUCTION MECHANISM OF AGRICULTURAL AND GRAIN PROCESSING ENTERPRISES

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The marketing departments of any enterprise have a purppose to figure out and develop an up-to-date plan of applying plant-growing technologies in the crop rotation of agriculture enterprise's work. Each crop rotation can be considered as a technological project, which should make some profit and positively affect grain processing technologies effectiveness. The purpose of the plan is to maximize the total profit of agricultural and grain processing enterprises from such projects for the whole period of planning. Herewith, profit must be maximized both through the use of intensive technologies, and increasing the output of processing products due to grain quality upgrade. Grain quality should be satisfactory during the planning period, and should not decrease in comparison with the initial state by the end of the planning period [2. 3]. Thus, the initial and final qualitative levels of grain should be within the technologically acceptable range. However, the problem statement may be more general.

For example, the initial state may not correspond to the permissible level. This problem is widely occurring in practice. So, the purpose is both to improve qualitative indices at the final planning interval and maximise profits.

Each technology is characterized by a vector of material costs (including seed and planting costs, mineral fertilizers and plant-protecting agents, etc.), labor costs, etc. The technology is gradually chosen for each production cycle.

The task of the marketing researcher is to find such system of resource management of current and potential grain suppliers, by choosing the technology (through consultative or administrative intervention), that maximizes profits for the whole period of planning, with specified limits on the quality characteristics of grain raw materials [1, 6].

We emphasize that management of the grain product components, which determine the consumer quality (content of protein, gluten, etc.) are performed at each stage. The aim of this management is to select the technological method of grain production [5]. Each such selection transfers the grain quality from one grading scale to another one. Finally, each such choice produces commodity output, the expression of which is the index of gross income.

Each plan is characterized by a combination or a sequence of technologies. Their number is equal to the number of periods included in the rotation cycle of crop rotation, which is of great interest to the grain processing enterprise. Each plan is characterized by a vector of the grain quality initial state, a similar vector of the quality final state, and the profit index as the sum of profits for each stage of the

rotational period. The plan providing maximum total profit should be selected. As we can imagine, the number of such plans is extremely large, that is why it is very difficult to make a choice. However, this issue can be solved if united to a certain class of economic and mathematical models.

Having determined the organizational parameters of the active marketing impact on grain production according to the given high-quality requirements, it is necessary to define the technical prestates to solve the problem specified in the concept.

Here is a scheme for determining and estimating the optimal plan for a given period of time as a part of a model that can be classified as a task of dynamic programming. The general statement of such tasks is as follows: a controlled process is taken into consideration, where the system is transferred from the initial state s0 to the state s as a result of the management X (X1, X2, ..., Xn). Management can be divided into n stages, and the decision is taken gradually at every stage. Management, which transfers the system (object) from the initial state into the final, is considered to be a combination of n stage-by-stage controls. The index of effectiveness of the investigated controlled system is a target function. It depends on the initial state and management.

$$Z = F(s0,X)$$

Several assumptions have been made according to Bellman's principle. First of all, the state sk of the system at the end of the k stage depends only on the previous state sk-1, and the management of the k stage Xk and does not depend on the previous states and controls. This statement is called the "absence of aftereffect". It is represented in the form of equations:

$$SK= g(S_K\text{-}1, X_K), \quad k = 1, 2, \ldots n$$

Secondly, the target function is additive from the effectiveness index of each stage. Also the effectiveness index of each stage is a function of the system state at the previous stage and management at this stage:

$$ZK = f_K (S_K\text{-}1, X_K), \quad k = 1, 2, \ldots n$$

Then, in accordance with the accepted additivity of the target function, the latter is defined as

$$Z = \sum_{k=1}^{n} f_k(s_{k-1}, X_k)$$

The task of the stage-by-stage optimization is to determine the optimal

management X that transfer the system S from state s0 to state s, in which the target function accepts the highest or the lowest value.

We will prove that the optimization model of plant production planning connected with the determination of optimal sequence of synergetically acceptable technologies can be solved by methods of dynamic programming.

The model must meet the following requirements:

1. The optimization task is considered as a n-stage process of management. The process of choosing technology from a possible selection is taking time. The decision is made at the beginning of each year, that is, the process can be divided into stages, where the stage number is the number of the year.

2. The target function is the sum of the target functions of each stage. The effectiveness of enterprises activity will be evaluated in the form of a total effect throughout the planning period, that is, the target function of the model will be equal to the sum of the target functions of each stage.

3. Absence of feedback. In the model, the choice of management at each stage depends only on the state of the system before this stage and does not affect the previous stages.

4. The state sk after k stage of management depends only on the previous state sk-1 and management Xk (in case of the aftereffect absence). The very this state for agricultural production is somewhat approximative. The fact is that lots of substances in the soil change during the periods which are longer than one year. The period of their decay does not always fit into the planned cycle. However, according to many experts in agriculture, such a phenomenon can be neglected, especially when the intensive technologies are applied. In addition, it is very difficult to achieve a continuous change of states, because then the task becomes so wide-range that its solving will become an independent problem. Therefore, we can say that the state of land resources really depends only on their state at the beginning of the planning period and the application of a specific technology and does not depend on the previous states. Once again, we emphasize that it is not rude in terms of the agriculture theory.

5. At each stage, the management Xk depends on the finite number of control variables, and the state sk depends on the finite number of parameters. The technologies of crop cultivation are the managements of our task. A great number of technologies are limited and countable. The state of resource potential and product quality really depends on the finite number of parameters.

The tasks of dynamic programming can be solved by means of computing schemes related to the principle of optimality and recurrence relations. The principle of optimality, formulated by Belman, is: “an optimal policy has the property that whatever the initial state and initial decision are, the remaining decisions must constitute an optimal policy with regard to the state resulting from the first decision”. With regard to the model of technology selection in the concept of active marketing impact on grain production with a preset quality load, Belman principle

is interpreted as follows: within an optimal trajectory, drawn by technologies in the graph, any part of that trajectory will be optimal as to the beginning and the end [4].

Let's consider the possibility of dynamic programming model development from the point of view of availability and authenticity of planning and economic information that has been used by agriculture and grain-processing enterprises. First of all, it is information concerning costs.

1.Cost calculation of agriculture production technologies. Production costs at agricultural enterprises are calculated as follows. Each technology in crop production is reflected in the technological cards. The main purpose of drawing up a technological card is direct costs planning per unit of production and 1 hectare of area. Two parts are distinguished in the technological cards: technological and economical. The technological part contains all kinds of works to be done over production cycle starting with soil preparation and all the way down to harvesting. For each type of work, a specialist from the available funds defines the park of machine and tractor units capable of getting technological process done.

Unit choice includes, for example, selecting of tractor, the type and quantity of working machines and couplings, the choice of speed modes. Further, reference books determine indices that characterize productivity, energy, labor and material resources.

After units having been chosen and their required quantity determined, required quantity of primary and secondary workforce is being figured out taking into account enterprise's capabilities. Then, all elements of direct costs are planned out and their sum is being calculated per 1 hectar and 1 ton of main produce in the economic part.

2. Modelling of the technologies influence on the soil fertility. The interdisciplinary character of ecology and economic models impose additional problems on a researcher requiring the introduce of a block describing the processes that are studied within the natural sciences disciplines into the model. Thus, the task of our research is to properly represent the combination of agro-chemical soils characteristics in order to take into consideration the influence of different technologies of resources usage on grain quality changes and its yield capacity as well.

In general, there is a great variety of factors that affect plant growth such as solar energy, heat, humidity, CO2, soil type, fertilizers. But, first of all, research institutes take these factors into account while developing typical technologies for various climate zones and secondly, when cultivating crop, a farm can affect only the last factor, i.e., many nutritional elements. So, only soil fertility indices will be taken into account in the model.

At the present stage, various methods have been developed that allow to calculate the amount of nutrients in the soil, depending on the used technology and the applied fertilizers. Production functions to figure out yield capacity of various crops depending on availability of above-mentioned components of soil fertility have been developed.

3. Modelling of the grain quality yield depending on the resource supply of the

agrarian enterprise (including agro-climatic resource). The estimating methodology of agrometeorological factors for forecasting yield qualities of winter wheat grain has been developed by M.O. Kindruk at Odessa Institute of Selection and Genetics.

So, the above-mentioned concept while solving marketing tasks of grain processing enterprise allows to unite production means of agriculture and grain processing enterprises within the framework of the economic model.

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MEAT PROCESSING INDUSTRY IN UKRAINE: MONITORING THE STATE AND TRENDS IN THE DEVELOPMENT

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The world food and financial crisis, which led to rapid changes in the economic situation in Ukraine, updated the interest to the world trends in the food industry. Meat processing industry specializing in the production of meat products, which are strategically important foodstuffs, is a central issue in this respect.

O.V. Sykachina [2] defines the concept of «meat» as a functional product that provides people with the healthy diet and ability to work. Its nutritional value is due to the flavor characteristics, chemical composition, energy importance and the quality of digestion. The above-mentioned aspects influenced the choice of the topic of this study. It is the issue of the meat processing industry in the context of the main world trends of the food industry development.

Many researchers, both theorists and practitioners in Ukraine (O.V.Bodnar,

O.M.Varchenko, MV.Hladii, I.M.Demchak, M.P.Denysenko, S.L.Dusanovskyi, M.V.Zubets, N.G.Kopytets, V.M.Nykytiuk, M.V.Prysiazhniuk, P.T.Sabluk, O.M.Shpychak and others.) have focused on the study of the topical issues of the meat market reforming, production technologies and the quantities of cattle and poultry. Although a considerable amount of research has been devoted to the burning issues in the field, many of them are the one-vector studies, and few attempts have been made to conduct complex scientific research.

The purpose of this work is to study quantitative and qualitative indicators of the real state and trends of the domestic meat industry development and to identify the factors that determine the prospects for its further improvement.

The functioning of this branch of industry is increasingly affecting the national economy, because food security of the country as a whole depends on the state of its production development. The meat processing industry plays strategic role in the country's economy. This industry can actually function successfully in all regions of the world with a moderate climate regardless of the presence or absence of the appropriate natural resources. Demand for meat products will never lose its relevance, as the consumption of meat and meat products is a vital prerequisite for normal functioning of the human organism.

Modern technologies of the meat production are distinguished by the utilization of the innovative approaches, therefore their products are highly competitive. The main purpose of the industry is to provide the human organism with the required amount of meat products - a rich source of proteins of animal origin, many possessing high nutritional value. The steady increase in the indices of the meat products consumption indicates an increase in the living standard of the population and the level of food security in the state. The concept of rational nutrition primarily depends on the production of specific types of meat, although it also implies the mentality and economic preconditions for the consumption of meat by different nations. The production of meat and meat products is a long-run process and therefore involves the consolidation of the efforts of many specialists (stockbreeders, entrepreneurs, farmers specializing in the production of fodder, cattle slaughter, meat processing for the wholesale and retail trade). Consequently, this sphere of production is an integral part of the food complex sector and, at the same time, it can not exist without a well-developed raw material base.

As for cooperation between enterprises in the production and processing of food products, recent studies have shown that the functioning efficiency of the domestic processing enterprises depends on the stability of raw material supplies and the level of relationships with meat producers. However, for Ukraine, the issue of creating raw material potential within the meat processing industry has been pressing for several years. The designation of the strategically important vectors for the meat processing industry development and their profitable functioning should be based on the objective analysis of its present state through revealing competitive advantages and disadvantages in the context of internal/external factors of influence on the branch.

The domestic market of meat and meat products is directly related to the objective assessment of the state of the raw material supplies. If we resort to the historical background of this branch, it becomes clear that after Ukraine gained independence, the industry has never stopped to struggle actively for survival. The agro-industrial complex seeks to minimize the reduction of livestock and reduce the loss-making effect of the cattle breeding sector.

Now the reduction tendencies in cattle farming remain strong. According to the official data of the State Statistics Committee, in May 2018 (as compared to March of the same year), the total number of cows in all categories of farms in Ukraine decreased by almost 1% and amounted to 2190.3 heads (compare, in March 2018, this figure was 2186.2 heads). This decrease in the number of cows is observed in all regions of Ukraine. If we compare these data with those of the similar period of 2017, it becomes clear that the number of cows decreased by 1%.

As far as poultry meat is concerned, this vector now is quite stable at the food market. The stability rating is secured by keeping to the following demands: stabilization of market conditions; ensuring the profitability of commodity producers; increasing production capacity; adaptation to the new conditions of the global challenges; protection of the internal market from the probable risks; ensuring the competitiveness of the domestic producers in the world and domestic markets.

The rapid development of poultry farming in Ukraine is due to the needs of the population in the consumption of dietary and affordable food. However, it would be unfair to consider that Ukrainian poultry farming is interested in meeting the needs of the domestic market only. In the future, we hope to increase the rates of poultry meat export. If we analyze the domestic market, it is worth noting that there are only two types of farms specializing in livestock breeding for the purpose to meet the needs of the meat processing industry. These include small private farms and agricultural enterprises/complexes.

The study has revealed that there were no noticeable changes in the structure of livestock products production in 2016 and 2017. Speaking about the period from 2011 to 2015, one should pay attention to the fact that in 2011, 82% of the poultry was grown at state agricultural enterprises. At this time, the production conditions for the commodity producers were rather complicated. The increase in feed prices, naturally, led to a rise in prices for meat, while the purchasing power of the population remained at the minimum level. For a long time, the shortage of meat raw materials had caused an increase in imports. In particular, in 2017, the import figure in Ukraine was 170 thousand tons. This situation affected the formation of both wholesale and retail prices, which led to a reduction in production volumes at some enterprises.

Today, the leading producers of meat and meat products are Australia, Brazil, India, the People's Republic of China, Poland, Russia, and the USA. However, we can not assume that this situation is permanent because this segment of the market is developing dynamically due to the changes in the geopolitical environment,

the conjuncture of the world meat market, and the emergence of new companies-participants of the global level. According to A.Loza, the President of the Association of Pig Breeders of Ukraine, in the next half-century the production of meat in the world will increase 4 times. The expert explains it by the fact that the population on our planet is gradually growing and it causes an increase in the demand for meat products. The other argument is an increase in the number of middle-class population in India and China, which has given rise to an increase in meat consumption.

For a long time, the world-recognized leading producers of pork have been the EU countries (Denmark, Spain, Germany, France), China and the United States. They show a steady growth rate of meat production. On the other hand, the biggest pork consumer countries in the world are Austria, Spain, Lithuania, Germany and Poland. According to the official sources (The Economist), the consumption level of pork in these countries is 50 kg per capita per year. Our country is still very far from such indicators. In view of the financial situation, the average Ukrainian consumes about 40 kg of pork per year. This index is 85th in the world ranking. According to the Report of Food and Agriculture Organization of the United Nations, in 2007 an average Ukrainian consumed 45 kg of meat per year, including 17.4 kg of poultry, 15.3 kg of pork, 11.4 kg of beef and other kinds of meat. For comparison, an average Austrian consumes 66kg, a Serb - 64.8 kg, a German citizen - 55.6 kg, a Pole - 51.2 kg. In the overall rating, Ukraine falls behind Belarus, Russia, Gabon and Ecuador. Luxembourg consumes the most meat - 136.5 kg, the United States - 125.4 kg and Australia - 121.2 kg. It turns out that on average every inhabitant of the planet consumes 38.7 kg of meat (in particular, 14.9 kg of pork, 12.5 kg of poultry meat 9.5 kg of beef, and 1.9 kg of mutton).

Here is a more detailed analysis of the Ukrainian domestic meat market. It has changed significantly over the years of independence. In the early 90s of the twentieth century, the meat industry developed with the support of the state. There were state standards according to which producers manufactured identical by their characteristics and prices products. In the then economy, the market mechanisms were missing, and, therefore, demand did not affect the supply. The cost of raw materials was high, and the purchasing power of the population was low. Coherently, these factors significantly changed the demand structure and stimulated the strategic planning of not only sales of products but also the provision of raw materials. Over time, the supply of raw materials from the CIS countries began to grow, a large number of foreign companies appeared on the domestic meat products market. In 2008, when the feed and energy resources prices increased significantly, livestock breeding appeared to be not profitable. The livestock indicators dropped, and prices for meat grew. As a consequence of the rising prices on raw materials, the profitability of the production of these products decreased greatly.

In recent years, the political and economic crisis has negatively affected the functioning of the Ukrainian livestock complex. Thus, in recent decades production

of mutton, veal, beef and lamb has been growing slower than that of the pork and poultry. Production of pork has decreased and beef production exceeded it.

Naturally, such a demand for this type of meat can be explained by economic factors (relative cheapness, fast poultry breeding) and non-economic factors (dietary properties, fast in cooking, etc.). In the developed countries, the production of broilers is 70% of the market, and turkeys - 10%. Broilers are mostly sold in separate parts (shins, thighs, wings). In 2018, the largest share in the structure of meat processing production was chilled poultry meat. The main determinants of demand are its low prime cost in comparison with other types of meat and significant consuming demand, in view of the low purchasing capacity of the population.

If we take into account the purely physiological characteristics of chicken meat, it has significant advantages. It does not contain high levels of fats and carbohydrates. Choosing between frozen poultry meat (9%) and chilled (52%), the consumer chooses the latter because of the better nutritional qualities of this kind (the meat had time to «mature» naturally). This fact is explained by the technological specifics. The poultry carcasses pass the stage of disinfection in the very cold water, after which they enter the stage of rapid cooling. Then the poultry meat (already juicy, fragrant and soft in consistency) is distributed immediately through the retail network. Instead, the poultry meat that was subjected to deep freezing does not mature as it should, therefore, it gets tighter. This is due to the fact that under the influence of low temperatures, the liquid within of the cells, transforms into ice crystals. As a result, the chicken loses its original flavour, and its vitamin-mineral composition is washed out with meat juice.

Thus, the monitoring of the state and current trends in the development of the domestic and foreign meat processing industry shows that in the near future the population will continue to favor only those products that have been produced according to all quality standards, that is, those belonging to the category of healthy food. This means that these products contain «the necessary set of nutrients that have an attractive organoleptic, guaranteed safe low calorie and are produced in an assortment that can meet the needs of different categories of the population».

The increase in the production of turkey meat in Ukraine, which has become increasingly popular in recent years, is also due to the tendency of the Ukrainians to eat properly, to choose only ecologically clean and rationally selected dietary products.

The market is negatively affected by the reduced purchasing power of the population. In particular, it concerns reducing the growth rate of the production and consumption of turkey meat. However, experts argue that positive trends will continue, and further growth in this industry in the next few years will be 6-7%. In general, in 2018 the Ukrainian processing industrial enterprises received 1,702.9 tons of livestock and poultry live weight. This figure is 4.2% higher than in 2017. In total, 463,9 thousand tons of live weight of cattle and poultry were purchased that year (it is 27,2% of the total volume). Recycling enterprises of Ukraine utilized 1228.1 thousand tons of self-raised livestock and poultry for processing (by 6.6%

more than in 2017).

The functioning of the Ukrainian meat production market is under the slogan of the environmental friendliness. The primary factors of its development are the reduction of beef production against the background of the growth of demand for natural and dietary meat (for example, turkey), taking into account the increase of investments in domestic production, introducing advanced technologies and increasing the number of livestock.

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ECONOMIC LEVERS IMPROVEMENT OF RATIONAL LAND USE OF AGRICULTURAL ENTERPRISES

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Problems of land use include, first of all, rational land use. Rational land use means the maximum involvement of all lands in economic circulation and their effective use for the main purpose, creation of the most favorable conditions for high productivity of agricultural land and obtaining of maximum production at the lowest cost per unit area. But today the most important common problem is sustainable development, the essence of which is to achieve a harmonious balance between the population, consumption and the ability of the land to support life.

In domestic and foreign literature a sufficient attention is paid to the study of multifaceted issues of improving economic levers of land use, preservation, reproduction and use of land and resource potential. These problems, in particular, are partly considered in the works of: B.M. Danylyshyn, I.K. Bystriakov, D.S. Dobriak, V.V. Horlachuk, P.F. Kozmuk, A.S. Lysetskyi, L.Ya. Novakovskyi, A.Ya. Sokhnych, M.F. Tymchuk, A.G. Tykhonov, V.M. Tretiak, M.M. Fedorov, V.S. Khorev, and other domestic and foreign scholars.

Scientists emphasize that one of the most important factors influencing the efficiency of land use is globalization [5, 7]. So, analysts from the US Department of Agriculture have re-evaluated forecasts of world grain production. Expectations for a decline in world wheat production and record harvest of corn have come true.

Looking at each culture in detail, we could notice that in USDA's next report, world production forecasts in 2018/19 continue to decline: they now stopped at a mark of 730.9 million tons. Compared to the previous marketing year, the production decline was more significant - 27.8 million tons (for reference: in 2017/18 world production was 758.7 million tons). The main reason for the decline in production, and as a consequence – the world trade turnover, was the decline in production in Australia (-1.5 million tons) and Russia (-1 million tons). The reduction in production for wheat amounted to almost 1 million tons. Forecasts for Ukraine have come true. In addition, American analysts, referring to the IGC, mark down prices for stock exchange contracts for wheat from $ 4 to $ 15 per ton.

The production of corn was 1068.3 million tons. However, even this did not prevent agrarians from around the world from harvesting 34 million tons more than the past in this marketing year. The forecast reduction is negligible, as opposed to a drop in expectations for the United States (-1.2 million tons) and Russia (-1 million tons) in Canada (+0.2 million tons), the EU (+0.2 million tons, and a number of other countries, the forecast is growing, which will not prevent the growth of world trade volumes (+ 0.85 million tons), which, according to forecasts of American experts, is 158.6 million tons and can become record in recent years. The situation is

such that the decline in forecasts of export to Russia (-1 million tons) may be offset by growth in the United States (+1.5 million tons). In addition, forecasts continue to grow experts on the global consumption of corn in 2018/19 marketing year. In the latest report, they estimate it at 1107 million tons, which is 43.4 million tons more than in the previous marketing year. If we take into account this latest forecast figure, then the increase in consumption in the last five years can reach 12.08% or 119 million tons.

Along with wheat, barley is picking up the tendency to world production decrease. According to the latest data, production in 2018/19 was 141.25 million tons, which is 3 million tons less than the previous marketing year. The main reduction of expectations is observed in Russia (-1 million tons). Taking into account the general trend of production, forecasts for world trade volumes are also decreasing – from 1 million tons to 27.53 million tons. The rating for Ukraine remained unchanged (Table 1).

Table 1

Ukraine's place in the world grain market in 2018/2019 marketing year, million tons

Culture	Production	Consumption	Export	Final stocks
Wheat				
Ukraine	25,50	9,20	16,50	-
World	730,92	745,60	180,80	260,18
Maize				
Ukraine	31,00	-	25,00	-
World	1068,30	1107,17	158,60	159,35
Barley				
Ukraine	7,60	3,50	4,30	0,95
World	141,25	142,98	27,53	17,43

It should be noted that Ukraine holds 9.2% of world wheat exports, 15.8% of corn and 15.6% of barley. But this is not the limit.

Increasing the efficiency of land use in agriculture is facilitated by the intensification of crop production through progressive farming systems, advanced technology and crop production technologies.

Describing the process of intensification, it should be noted that agriculture is developing not by increasing the amount of cultivated land, but on the basis of improving the quality of cultivation, by increasing the size of the selected areas. The funds of agriculture intensification are as follows: complex mechanization and automation of production on the basis of its electrification, chemical planting and livestock farming, development of agricultural land reclamation, organizational and economic measures (specialization and concentration of production, the introduction

of progressive forms of organization and remuneration), the widespread use of scientific achievements and best practices [1, 3, 6].

Rational and efficient land use in agricultural production can be achieved if the measures of soil fertility are consistently implemented and protected from erosion and other destructive processes. Based on national interests, society must use the land in such a way to pass it on to next generations being improved.

The diversity of natural conditions necessitates the introduction of scientific management of agriculture, which involves increasing the soil fertility, improving the quality of agricultural land. Therefore, the main component of the system of agriculture is the farming system.

Crop rotation is an important part of the land use system. The practice of modern agriculture shows that the development of theoretical and practical foundations of biological agriculture focused on the selection of more productive crops, their placement after better predecessors, the determination of the impact of different ratios and alternation of crops in short-rotation for the soil fertility, its phytosanitary condition and crops per different levels of intensification.

Crop rotation improvement involves increasing its anti-erosion efficiency by introducing repeated crops for feeding, as well as improving the composition of precursors to leading crops.

Adherence to the crop rotation allows raising productivity of arable land by 15-23%, without any additional costs of material and technical resources, advanced resources, through the full impact of highly efficient productive varieties and hybrids, organic and mineral fertilizers, and soil cultivation with pesticides.

Violation of the scientific basis of crop rotation leads to accumulation of infections in the soil, increasing pollution of crops, the spread of pests of agricultural crops, deterioration of water and nutrition regimes. Under such adverse conditions, there is a need for increased fertilizer and pesticide application standards, which in turn generates environmental problems of soil and groundwater contamination by chemical elements and compounds harmful to human health.

The scientific principles of crop rotation are aimed at optimizing the positive factors in their interaction with the soil and among themselves. Outside the crop rotation, in the conditions of a permanent culture of agriculture, the influence of negative biological, chemical and physical factors, causing the phenomenon of grounded plants and, consequently, the decrease of plant productivity [8, 10, 11] increases.

Each implementation of crop rotation requires agronomic, organizational and economic substantiation, and includes the following requirements:

1) the most favorable placement of the leading crops by the best predecessors;

2) ensuring the most even and rational use of production and labor means during the growing season;

3) ensuring the successful implementation of the production plan at the lowest cost of labor for its production;

4) provision of agro technically substantiated structure of sown areas and implementation of all measures provided for by the system of soil cultivation, control of pests and diseases;

5) rational use of the land fund of the economy in the conditions of the zone;

6) harmonization of the projected system of crop rotation taking into account the limits of investment in the industry.

Given the different levels of water consumption of field crops and the peculiarities of soil and climatic conditions, the optimal set and the ratio of grains, technical and fodder crops should be observed, which ensures the rational use of moisture reserves.

For example, in the crop rotation of Poltava region, depending on the specialization of farms, it is recommended such a specific gravity of individual crops: cereals 45-65%, technical – 10-30%, feed – 20-40%. In the group of grain crops, winter ones should occupy not less than 50%, peas – no more than 20%, sugar beet – 10-20%, in order to withstand the established period of return to the previous place. Net pairs, as one of the factors guaranteeing the harvest of winter wheat, should occupy not less than 10% of the total area of arable land.

The system of crop rotation is developed taking into account the prospects of the enterprise development after the planned structure of the crop area. The structure of the sown areas of individual enterprises is improved on the basis of the achievements of agricultural science, best practices, and also under the influence of other factors.

Improvement of the structure of crops must be carried out in two ways:

- replacement of less productive crops and varieties more productive, without changing the system of farming;

- restructuring of the economy, namely, the deepening of inter-farm and farm specialization, changing the composition and combination of industries, the relationship between agriculture and livestock. This causes organizational changes in the economy, including the structure of crops.

In improving the efficiency of agricultural production, its analysis is of great importance and is based on optimal solutions. The use of economical and mathematical methods makes it possible to find the rational structure of the production of an agricultural enterprise, to calculate the optimal structure of its sown area or area of a separate group of crops, to determine the best composition and use of the machine-tractor and car park and other activities. The actual and optimal structure comparison reveals significant reserves of production increase and cheapening of all products types of the agro-industrial complex. Small optimization tasks can be solved manually using conventional computing means.

The urgent condition for improving the efficiency of agricultural production is the availability of labor resources, rational use of them and the even distribution of them by industry.

Highly developed agrarian production requires, respectively, highly skilled personnel who would possess methods of development and development of market

production. This testifies to the need to create appropriate conditions for the training of agricultural workers and their consolidation in the countryside.

Formation of personnel potential of agricultural production is carried out under the direct and indirect influence of various factors related to the nature of the development of the socio-political system, forms of ownership, industry specificity of the agrarian sector of the economy.

Payment for the team products in plant growing can be carried out not in each crop separately, but in general for all crops attached to it.

The amount of remuneration for products accrued by the team at prices, as a rule, is not adjusted to the changes in technology that occurred during the year, compared with the technology provided by the technological card.

When changing the structure of the crop area against the foreseen in the task of the brigade (link), the calculation of wages can be carried out in accordance with the rates, specified immediately after the sowing.

However, in cases where individual technological operations were performed or not performed from the reasons independent of the members of the production unit, the amount of wages for the volumes of such works in the final calculations for the products need to be adjusted.

The objective assessment of the personal contribution of the executor to the final results of the production involves close contacts of the direct supervisor with the subordinates, a clear definition of the criteria and indicators under which the promotion is carried out.

In the task-and-bonus plan, bonuses have been distributed to save on direct costs up to 70% of the savings achieved. It takes into account those direct costs, the use of which depends on the specific staff of employees. In excess of the established costs of the staff, they are reimbursed in full or in part at the expense of the funds provided for remuneration and bonus.

Positive role can be played by bonuses for overcoming the tasks of production, increasing the productivity of agricultural crops against the level achieved in the previous 3-5 years, increasing the production of feed, performing and over fulfilling the production tasks provided for by the contract, improving the quality of products and other indicators of work, depending on the industry, specialization, nature and conditions of production.

In the economy, it would be expedient to use the practice of advanced agricultural enterprises of the district, when the funds for labor remuneration (tariff fund and additional payment for products), additional payment for products and high quality of work, as well as bonuses are combined for the payment of workers, workers on progressively increasing prices for products, at which, as the yield increases, the price per unit of output increases.

According to the specialists and managers of these farms [2, 4, 9], in this order of remuneration the employee's interest in the final results is substantially increased, the payment system in plant growing becomes simple and effective.

An integral part of the final calculation at the end of the year may be the direct employee participation in profit. The essence of profit participation lies in the fact that a separate, predetermined portion of the net profit is distributed among members of the labor collective, depending on certain indicators. A properly selected system of remuneration will be effective under the condition of rational organization of labor as employees of the management apparatus, as well as workers of certain branches, including the field of plant growing.

Thus, the management of economic and social factors will lead to an improvement in the effectiveness of land resources.

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STATE OF DEVELOPMENT OF THE MEAT AND MILK PROCESSING INDUSTRY IN UKRAINE

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The agro-industrial complex is one of the most powerful and dynamically developed sectors of the Ukrainian economy. The effectiveness of its functioning influences not only the development of domestic and foreign markets, but also the overall state of the economy as a whole. The agro-industrial complex of Ukraine includes food and non-food sub-complexes, each of which has its own raw material base and markets. The following branches belong to the food complex: fruit and vegetable canning, grape growing and wine making, oil and fat, meat and dairy products, sugar beet, grain products, and potato products industries.

The processing industry maintains strong links with agriculture, machine building, which supplies processing technological equipment to the chemical, microbiological and food industries. There is a close connection between the processing and food industries. Processing industries supply raw materials to the food industry for their further processing, in particular alcohol, oil, starch, sugar, meat, milk, etc. The links of processing enterprises with agriculture are the most effective. The process of interaction between agriculture and processing industries is based on the organizational and economic technological unity of production, storage and processing of crop and livestock products. The processing industry complements the food industry and supplies raw materials and semi-finished products for their further processing. The active processes of international integration update the task of increasing the role of the processing industry, its economic growth and competitiveness on the domestic and foreign markets [1].

The processing industry is one of the most important components of the national system of any state, and its function is to optimally meet the needs of the population of the country with high-quality, economically and physically accessible food products with the predominant food self-sufficiency of the state and adjustments for participation in globalization processes [2].

Due to the fact that the country's economy has not been in the best position in recent years, the current state of its production today is characterized by a high level of fixed assets wear, their physical and moral obsolescence. This is especially true for the industries belonging to the processing complex of the country which suffered the greatest losses.

The only way out of such a situation is to transfer all production through an

innovative development model to a qualitatively new level of functioning. That will help stabilize the development of the economy, transform the domestic processing enterprises into competitive exporters of high-quality products, and expand the niches for domestic commodity producers in the international market for goods and services [1].

The meat and milk processing industries are priority and strategic ones for Ukraine. Strengthening of globalization processes and Ukraine's integration into the world community put forward new requirements for the development of the meat and milk processing industries: compliance with the international standards of quality, and safety; transition to an innovative model of the industry development and active introduction of modern resource-saving technologies of production based on the integrated use of raw materials.

Meat processing industry plays a significant role in providing food security in Ukraine, supplying the consumer with fresh meat, offal, sausages, smoked and canned meat, as well as semi-finished products. The market for meat and meat products is the most important segment of the country's food market, sustainable development of which is of strategic importance. The meat processing industry is the basis of the food complex of Ukraine, though it is now under rather difficult conditions [3].

The milk processing industry at the present stage of development is no less important for the Ukrainian economy. Significant rates of economic downturn in recent years have negatively affected the development of the industry, revealing low competitiveness of domestic dairy products producers in international markets. Ukrainian milk processing enterprises have recently got a chance to enter the markets of Europe; unfortunately they are not yet able to do it. The ratio price to quality of domestic dairy products does not allow them to meet the needs of the demanding European consumer [4].

The development of the meat and milk processing industries should be guided by maintaining the balance between the raw material base and industrial capacities, as well as between the volumes of the final product production and the possibilities for its realization. Inconsistency in the volume of raw materials and the size of production capacities leads to breaking the rhythm of work, excessive prolongation or reduction of the production cycle duration, ineffective utilization of production capacities, irrational transportation costs.

The Ukrainian meat and dairy products market is quite competitive, and in order to operate successfully and maintain its position, enterprises need to have such competitive advantages as the corresponding raw material base, a wide range of products, adapted to the needs of the consumer, production of innovative products, use of modern technologies, etc. In view of the above, only highly effective enterprises with strict control of product quality will be able to stay in the market. Therefore, under the current market conditions, businesses are faced with the need to develop and ensure further growth of their competitiveness [5].

The competitiveness of products of the meat and milk processing enterprises can be achieved by reducing their production costs and improving quality, namely: through the development and introduction of new technologies; development of rational processing technology, use of domestic raw materials in their production. In the complex of measures aimed at increasing the competitiveness of products, special attention should be paid to improving the mechanism of resource saving management at processing enterprises, which will provide the opportunity to form stable competitive advantages [6].

The main ways of increasing the competitiveness of products and processing enterprises on the whole in the context of resource conservation are:

- use of less energy consuming equipment;
- systematic analysis of the structural and technological parameters of machines and apparatus, strict inventory of resources, their availability, and costs;
- assessment of energy consumption for lighting, ventilation, cooling, heating, etc.;
- search for energy-saving ways of production, including sanitary processing, modern non-waste technological processes, innovative engineering methods and systems;
- application of the latest resource-saving technologies with deep, complete and complex processing of the main and secondary raw materials;
- generating moral and material interest of employees in the effective use of labor tools, and conscious attitude to the enterprise resources;
- developing an appropriate resource conservation strategy; adjusting corporate culture of the enterprise, taking into account the goals of resource conservation [7].

Difficulties in the operation of meat and milk processing enterprises are caused by the following factors:

- livestock reduction and territorial dispersion of agricultural enterprises and private households, resulting in shortages of raw materials;
- production material intensity, which can be explained by the use of raw materials of agricultural origin, which already contains certain production costs;
- complexity of the technological process, and the need to increase the degree of raw materials processing which leads to an increase of investments in technical re-equipment of production;
- a short period of sale of certain types of finished products and a variety of products produced [8].

The results of the analysis of the state of the meat and milk processing industry indicate that the domestic market is experiencing a sharp decline in demand and supply. At the same time, the pace of decline in demand far exceeds the decline in supply. The decline in demand for meat and dairy products is primarily due to a decrease in real incomes, as well as an increase in taxes and other payments, limited export opportunities for processed products. This is due to the factors of political, economic, and social nature, low wages, a decline in production and, consequently, an increase in the number of unemployed, a low rate of correlation between labor

productivity and capital use, etc. The supply of goods, in its turn, decreased due to a reduction in domestic production and drawbacks in the management and marketing systems: a low interest of employees in the efficient use of resources and an increase in sales, a weak material and technical base of the processing enterprises and trade organizations, insufficient development of market infrastructure, volatile tax environment [9].

Therefore, the current conditions for the development of the country's economy as a whole have put forward a number of tasks and measures aimed at increasing the competitiveness of meat and milk processing industry products in Ukraine, minimizing the negative impact of external and internal threats to its growth, among which:

- identifying priority directions for technological development;
- development of the concept for the industry technological modernization, distinguishing clear principles, criteria, directions and mechanisms of use of resources for an innovative upgrade of technologies;
- development of the mechanism of customs incentives for innovative industries, in particular by reducing rates of customs tariff for import of investment equipment not manufactured in Ukraine, or the parameters of which are much higher than in the domestic analogues;
- development of a system of specialized refinancing of commercial banks for the provision of long-term loans for the purchase of investment equipment and innovative equipment;
- introduction of differentiated taxation of commercial banks operations by reducing tax rates for long-term lending for high-tech projects;
- improvement of the export support mechanism by simplifying and speeding up customs procedures, optimization of the VAT refund mechanism, and insurance legislation enhancement;
- introduction of a preferential implementation regime for innovation activity;
tax and depreciation bonuses for resource conservation;
- transition to the program and target-oriented nature of the implementation of a complex of investment projects, financed by the state budget, and aimed, in first place, at technological updating of production and innovation development;
- improvement of the national system of standardization and certification, its approximation to the world standards, phased introduction in Ukraine of the technical regulations of the EU and industrially developed member states of the World Trade Organization (WTO);
- development of the technical regulations that accelerate the disposing of energy-intensive equipment and apparatus, which do not meet current ecology requirements;
- expansion of organizational infrastructure (legal, informational and consulting) of the producers support under the conditions of Ukraine's membership in the WTO;
- development of the programs of preferential taxation for the enterprises engaged

in agricultural products processing and growing at the expense of investments.

The comprehensive accomplishment of these tasks and provision of measures will only allow to form a highly developed processing industry for the agro-industrial complex, provide the country's own food security, increase the competitiveness of meat and dairy products in the domestic and foreign markets, break down barriers to the promotion of processed products of agricultural raw materials to new European and world markets [10].

Thus, modern meat and milk processing enterprises are characterized by insufficient material and technical base, which leads to a decrease in the competitiveness of products both in the domestic and foreign markets. Today, the conditions of competition require the introduction of modern high-performance equipment and the latest technologies, active involvement of scientific and human resources, and use of resource-saving technologies. Introduction of an effective management system for resource conservation at meat and milk processing enterprises will enable not only to ensure the competitiveness in the domestic and foreign markets, but will also have a positive effect on the overall state of the agro-industrial complex of Ukraine and the economy as a whole.

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METHODOLOGICAL MANAGEMENT INSTRUMENTS OF INNOVATION AND INVESTMENT DEVELOPMENT OF REGIONAL ENTERPRISES

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In order to establish common approaches and standards for conducting an assessment of the innovative state of the Ukrainian economy and each individual enterprise, an appropriate methodology that establishes a unified procedure, the main methodological principles for conducting an examination of strategic priority directions of innovation activity and medium-term priority directions of innovation activity at the national level is approved based on the results of the forecast analytical studies of the trends of world scientific and technological development, realization of priority directions of innovative activities in Ukraine, comparing them with the real needs of the Ukrainian economy, the capabilities and state of the country's innovation potential, and allows for appropriate substantiated conclusions and suggestions as to the appropriateness of approving priority directions of innovation activity.

The process of expertise of the priority directions of innovation activity should be based on the results of analysis on the following criteria for assessing aspects of socio-economic development:

a) globalization criterion (world markets for high-tech goods and services, forecast of market growth and the emergence of technological niches);

b) legal criterion (principles of state innovation policy, compliance with priorities of economic development of the state, requirements and norms of the current legislation);

c) scientific and technical criterion (costs for performing scientific and technical works, financing sources estimation of scientific and technical works on the priority direction of innovation activities, assessment of the technological structure, the number of scientific developments elaborated);

d) the volume of innovative investments relative to the annual level of depreciation;

e) social criterion (the share of employed in the high and medium-tech sectors in

the priority direction of innovation, growth of labor productivity);

f) environmental criterion (degree of environmental safety, degree of environmental risk).

Each of six criteria has been analyzed using a group of parameters (both quantitative and qualitative) that characterize it.

In order to systematically meet the above criteria, these criteria, in our opinion, should be divided into a group of "internal" criteria that measure the contribution of the assessed R&D direction to solving the actual social and economic problems of the state, and a group of "external" criteria that determine the scientific technological priority. The group of "internal" criteria, in turn, is divided into three sub-groups focused on:

- the person (his/her health, environment of life, education, culture, etc.);
- the nature (environmentally friendly technologies, renewable energy, etc.);
- the society (improvement of global development conditions, socio economic development of the country, defense, communication, etc.).

As for "external" criteria, we offer to pay attention to:

- potential of technology industrial use;
- obviousness of industrial use results of technology for several sectors of the economy;
- availability of the potential of general development (interest of wide circles of science, business and state structures in the development of selected technologies);
- possibility of using selected technologies by the forces of small and medium enterprises [1, 3].

On the basis of our standard statistical indicators of the system identified by us and the analysis of this knowledge area, we suggest to supplement this list of indicators with the following criteria indicators, which, in our opinion, will provide an opportunity to create a coherent systemic methodology for assessing innovation and investment activity:

- staffing potential (share of science and technology institutions graduates in the age group of 20-29 years; % of population with higher and secondary education at the age of 25-64; % of population continuing postgraduate education at the age of 25-64; % employed in the average and high technology (hi-tech) production from the total number of employed; % of employed in hi-tech service from the number of employed);
- resource support for innovation activities (expenditures for non-profit state and higher educational establishments R&D in percentage terms to GDP, expenses for research for business in % of GDP); the number of applications for patents in the European Patent Office, per 1 million population; the number of applications for hi-tech patents in the US Patent Bureau for 1 million people);
- organizational component of the innovation field (the share of independent small and medium innovative enterprises – % of the total number of small and medium enterprises);

- share of small and medium innovative enterprises in cooperation with other firms – % of the total number of small and medium enterprises;

- share of innovation costs (in % of total sales);

- general economic contribution of innovations to the structure of GDP (venture capital in the hi-tech sphere in % of GDP, new capital in % of GDP;

- sales of new market products in % of total sales;

- IT market in % of GDP;

- home access to the Internet;

- value added in hi-tech production.

The research and synthesis of the accumulated experience in the development of quantitative evaluation methods indicate that most authors characterize the organizational level as a rational (expedient, optimal) combination of production elements [2, 4, 5]. Therefore, a logical question arises about the assessment of such a level from the point of view of rationality and efficiency of the adopted organizational decisions and management methods under given conditions (technique, technology, etc.).

There are three methodical approaches.

The first approach is based on the use of rationality and progressiveness of applied forms and methods of organization as a criterion and the use degree management of labor tools and objects [2]. This approach is substantiated by the study of weaknesses in the criteria and methods for assessing the problem of the inequality of organization and management levels through different points of deduction (for different enterprises the ideal set of forms, methods and means of organization and management appears differently) and the relativity of the notion of progressive forms and methods of organization and management (which is progressive under certain conditions of production, may turn out to be inappropriate for others). The same position is expressed in the writings of other authors, where the organizational level of production refers to a set of indicators characterizing the system of regulation, regulation of labor processes and rational use of material elements of production. At the same time solving problems of increasing the efficiency of production causes the need for the distribution of indicators into two groups: those related to the cost of scientific and technological progress, and those that characterize its result.

The second approach is based on identifying the state progressiveness degree of production organizational development. In this case, it is proposed to construct an optimal production state model, its base model and a progressive standard.

There is an approach to assessing the technical level of means and methods of production using standards in three dimensions of social labor productivity: in the system of interdependent enterprises, the efficiency of labor resources and funds use at the enterprise and the progressiveness of the technical and economic level of production in comparison with the advanced enterprises of this branch in our country or abroad. One of these indicators is considered to be the most important, and the other two are considered as a system of additional restrictions.

The third approach suggests that measuring the scientific and technical level of R&D with the help of a system of partial indicators is not permissible at the initial development stage of the quantitative estimates method. To determine the aggregate, it is necessary to rank the partial indicators by the degree of their significance. In our opinion, such an average weighted estimate has an advantage over the arithmetic mean where all the shares can be measured or summed up, that is, they are considered to be equivalent. Methods for expert assessments and statistical method of correlation and regression can be used to determine the coefficients of significance [5].

Only by means of comprehensive study of the scientific and technical level of the production preparation processes trends, its quantitative assessment, the impact on the indicators of production efficiency can be substantiated, identified the main directions of improvement. A comprehensive approach to assessing the scientific and technical level of R&D involves the need for a systematic analysis, which is to study the method of organizing elements of preparation for production into a single whole, as well as the influence of the system functioning processes as a whole on its individual components.

The methodology of system analysis is related to the need for a clear allocation and study of such logical elements as a purpose or a number of goals, upon reaching which the problem will be solved; alternatives to solutions, that is, the choice of the way through which the goal, resources and time needed for each goal can be achieved; model (models) that allows you to model the relationships between goals, alternatives, and costs; criterion (criteria), by which the purpose and costs are compared for evaluation and the choice of the optimal solution.

The comprehensive approach includes a complete list of works (from the inspection of the functions of preparation of production to the implementation of their optimal option):

1. Functions inspection of the enterprise innovation in order to identify their feasibility in specific production conditions.

2. Assessment of the organizational and technical level with the help of the selected and justified system of indicators, which allows measuring it quantitatively. Tendencies investigation of changes in the values of organizational and technical level indicators, comparative analysis to determine the reserves of its increase.

3. Production efficiency estimation, including justification of production efficiency indicators and calculation of their characteristics.

4. Influence determination of the organizational level of R&D on the efficiency of the enterprise by constructing correlation models of the production efficiency dependence on the organizational level indicators.

5. Identification of reserves for raising the scientific and technical level of R&D.

6. The main directions substantiation of organizational improvement of preparation for the production of new products, taking into account the research prospects of the enterprise.

7. Development and evaluation of possible options, selection of the optimal ones and their implementation.

The research of existing methods testifies to the presence of estimation with the help of a single indicator of the system of partial indicators on the basis of the generalized indicator obtained by the reduction of the system of partial indicators by different methods.

On the basis of the conducted research of these methods varieties of labor and cost determination, the conclusion can be made that some of them are not fully justified, others require the availability of such data, which usually do not have a forecast of costs, while others are justified economically and mathematically, but too cumbersome and sometimes unrealistic in connection with the establishment of dependencies on a small number (three to five) previously issued samples of products of this class; the fourth – do not allow to coordinate the complexity of design with technical parameters of products and the amount of invested funds approved in the technical task.

This indicates the need to select and apply effective methods, or rather, the criteria for choosing the most optimal options for innovation and investment development of the enterprise, the justification of labor and costs for the preparation and production of new products.

Each enterprise develops and uses its own tools for managing innovation and investment development, but as domestic practice has shown, most domestic methods do not give the desired effect in the process of their use. Therefore, currently works are underway to create in the process of synthesis a new system of evaluation criteria that more objectively will cover trends in the field of investment management in the process of scientific and technological development of the country and enterprises in particular.

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THE ROLE OF ENVIRONMENTAL MANAGEMENT IN THE ENTERPRISES OF THE AGRICULTURAL COMPLEX

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Management has covered almost all areas of modern business doing, including production management, human resources, finance, etc. Compliance with and implementation of the legal, technical, ecological, economic, socio-psychological regulations developed by the legislation in the process of production activity requires the establishment of a system for the administration of ecology-based works and projects and bears responsibility for the results of their implementation. The effective functioning of this system is workable under the following important conditions:

- formation of the unified environmental policy and target program;
- availability of the appropriate skills and experience in this area to guide environmental management system;
- clear understanding by the employees of the company of their tasks, responsibilities and rights in the process of implementing the target program;
- development and introduction of unified methods in the enterprise, processes for implementation of environmentally oriented target program;
- creation of facilities and conditions for the implementation of the target programs [2].

Therefore, the necessary condition for the transition to sustainable economic development is the ecologization of production. It involves limiting and reducing the nature consuming processes in production and transiting to the use of environmentally friendly technologies that minimize environmental risks and negative impact of the production on the environment.

The environmental activities of the company include the following interrelated and interdependent areas:

- rational use of the resources;
- ecologization of the production technology;
- protection of the environment.

The interconnection of these areas forms a new management structure – environmental management system of the enterprise. The ecological management is understood not only as a market instrument that promotes the development of production and a receipt of additional profits but also as the most characteristic and significant manifestation of the modern industrial ecological culture, culture of entrepreneurship and the market.

When solving environmental problems, traditionally various methods of neutralizing pollutants formed during the production process were used. The

technical and technological aspects were in the focus of attention. In modern conditions, with increasing environmental requirements for production technology, management comes to the fore and becomes the crucial factor that determines the further effective development of the company. Thus, when solving environmental problems of the company more attention is paid to management policy and culture, which find reflexion in the styles and methods of management. All these aspects, in general, put forward new requirements for managing the business doing of all types and, accordingly, the managers' knowledge quality and competence at all levels in the field of ecology. It is highly recommended to take into account environmental aspects in the management of production, the development of new products, marketing operations, personnel and finance.

Eco-management will help restore a balance between emissions of the harmful substances in the environment and ecosystem of the enterprise.

Environmental management of the enterprise is a part of the overall management system, which includes organizational structure, planning, sharing the responsibilities, practical activities, procedures, processes and resources necessary for the development and implementation of the environmental policy objectives, its revision and adjustment [5, 7].

The peculiarity of the ecological management implies, first of all, the development of the environmental tasks on the basis of relevant strategies and programs and their implementation by creating profile structures and monitoring the results at all levels. The main issue is that environmental problems are continuous and global by nature and affect the interests of several generations.

Eco-management is an integral part of the overall management system of an entity, which determines its functioning in terms of the generally accepted management principles. Among them:

1) the principle of consistency, which defines ecological management as a complex of interconnected elements that ensure the best implementation of the objectives of the enterprise's environmental management;

2) the principle of standardization, which implies the regulation of the organization of environmental management. The objects of standardization are the technological operations, technological processes of production and control; methods of management; means of technological equipment; forms of documents; classifiers of technical and economic information; material and labor regulations etc.

3) the principle of evaluation, which emphasizes the need for continuous measurement and monitoring of the environmental management system and its organization;

4) the principle of obligation and policy, which determines the company's individual environmental policy and guarantee the implementation of environmental commitments;

5) the principle of availability, that is, ensuring freedom of access to information and the ease of coordination of environmental management;

6) the principle of development, which involves continuous improvement of the environmental management and monitoring the level of the most effective systems at an enterprise, the introduction of all new and progressive achievements in the field of production preparation rational forms;

7) the principle of continuity, which provides for the rational arrangement of the processes to ensure constant attention to the protection of the environment [4].

Thus, the integration of environmentally significant areas of activity into one single management system can lead to the effective implementation and functioning of the environmental management system and promote the increase in the efficiency of the enterprise's activities in the agro-industrial complex on the whole.

Nowadays, scientists insist on introducing environmental management to agricultural enterprises without delay. Ans Kolk draws attention to the need to strengthen environmental awareness and responsibility of business owners, consumers, workers of the business services [1].

The concept of an environmental management system was first clearly defined and explained in the Standard of the United Kingdom, issued in 1992. The principles laid down in that document have been translated into a series of standards, recommended worldwide. Planning the environmental management system is the most essential condition for its successful operation. Every large enterprise, whose production has a harmful impact on the natural environment, develops individual environmental programs, plans their phased implementation in accordance with the enterprise's financial capabilities and performs necessary procedures for their approval by the state environmental authorities. Therefore, the introduction of the environmental management planning procedures implies, first of all, their adaptation to the existing standards of such planning. In terms of these requirements, the planning of the environmental management system of the company should include the identification of the environmental aspects of its activities, establishing compliance of the organization with legislative and other requirements in the field of environmental protection, the formation of target and planned environmental indicators of the organization and the development of the environmental management programs.

Implementation of the environmental management system is a complex process that entails a change in the structure and production relations within the enterprise and requires significant temporary and material resources. In this connection, it is necessary to determine the feasibility of implementing a standardized environmental management system adapted to the current needs of the company.

The effectiveness of the environmental management system of the enterprise can be achieved only in case of the correct and consistent implementation. Taking it into account, I. Smolensky highlights the following stages of environmental management:

1. Preliminary analysis of the real situation. Identification of all state requirements for environmental management of the enterprise and those elements of it, which

have been already utilized by the enterprise.

2. Development of a declaration on the environmental policy of the enterprise, which reflects in detail all the ecological aspects of its activities.

3. Creation of the structure of duties and responsibilities distribution in the system of environmental management.

4. Assessment of the company's environmental impact.

5. Development of ecological goals and objectives of the enterprise.

6. Identify the stages of production, processes and activities that may affect the state of the environment and develop a system for monitoring these processes.

7. Development of the environmental management program and appointment of the person responsible for its implementation.

8. Making up and publication of a detailed description of the enterprise environmental management system.

9. Establishment of a registration system for all ecologically important events, types of environmental actions, cases of environmental policy rules violation.

10. Establishing the internal audit system at the enterprise according to the recommendations provided in the Standard [6].

The development of an effective environmental management system begins with an understanding of how an enterprise can interact with the environment. Environmental aspects are most often related to non-compliance with legislative and other requirements, as well as the basic principles of state policy in the field of environmental protection and environmental management.

Having studied the ways of the ecological management system introduction and adaption to the specifics of the agrarian production, M.I. Martynchuk identified optimal stages for its implementation (Table 1).

Introduction of the environmental management system in the production process is a practical way of improving not only environmental but also economic status of the agricultural enterprise. However, the ability of this system to operate is determined and supported by the documents that can be conventionally grouped into three principal groups:

- documents that comprise the principles of the creation and use of environmental management systems (EMS);
- documents, which include the substantiation of the tools of ecological control and methods of the environmental indicators of the enterprise assessment;
- standards for product quality assessment [4].

The implementation of the environmental management system in agricultural enterprises will gradually improve the ecological characteristics and the economic indicators through the implementation of the ecological-economic, resource-saving and competitive technologies of production.

Table 1

Ecological Management System Introduction Stages in Agricultural Enterprises [3]

Stages	Measures	Documentation
Analysis and research	1. Assessment of the ecological situation in the agricultural enterprise. 2. Assessment and analysis of the industries influence on the environment. 3. Adoption of the decision on the implementation of the environmental management system. 4. Determining the environmental aspects of agricultural enterprises and definition of legislative environmental requirements.	1. Report on monitoring of the ecological measures of the agricultural enterprise. 2. Report on monitoring the impact of the industry on the environment. 3.Order on the introduction of the ecological management at the agricultural enterprise. 4. Draft text of the environmental policy of the agricultural enterprise
Creation of ecological service and training of personnel	1. Designation of authority and responsibility among top management 2. Approval of the administrative structure of the environmental management – the creation of an ecological service. 3. Training of specialists in the implementation of environmental management (programs and syllabus). 4. Establishing the mechanism of control over the work procedures.	1 Documentary support of the declared principles and commitments on the environmental aspects of the agricultural enterprise activities. 2. Development of a document circulation system and records for the ecological service. 3. Development of the instructions/guide on specialists training in the field. 4. Regulations on the control of work procedures.
Design and implementation	1. Development of the objectives of the environmental management program. 2. Implementation of the environmental management program by sectors. 3. Development of the emergency response plans for situations that can affect the environment. 4. Determination of the requirements for monitoring. 5. Implementation of working procedures.	1. Draft text of the environmental management program of the agricultural enterprise. 2. Environmental Management Program of the agricultural enterprise. 3. Instruction for an emergency response plan. 4. Development of monitoring procedures. 5. Documentary mechanism for the introduction of working procedures.
Certification	1. Conducting pre-certification audit of environmental management. 2. Choosing a certification body.	1. Report on the pre-certification audit. 2. Ordering certification.
Audit and Evaluation	1. An analysis of the measures planned by the management. 2. Conducting internal audit. 3. Periodic monitoring and evaluation of the programs in the areas of the environmental management. 4. Improvement of the environmental management program of the agricultural enterprise	1. Protocol of management measures 2. Report on the internal audit. 3. Report on monitoring and evaluation of the programs in the areas of the environmental management. 4. Development of the procedures for detection and correction of inconsistencies in the environmental management program.

The key findings of this research suggest that the role of the environmental management in agro-industrial complex is extremely important since an effective system of ecological management determines the development of enterprises on the basis of preservation of natural resources and at the same time ensure the competitiveness of its products.

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PART 3. CURRENT NATIONAL AND GLOBAL FUNDAMENTALS OF SOCIAL AND ECONOMIC SYSTEMS' DEVELOPMENT

MONETARY FLOWS IN ENSURING A STABLE CONDITION OF ENTERPRISE'S FINANCIAL RESOURCES

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Economic development on consistent market principles stipulates the process of strengthening the role of the financial instruments of economic subjects. The competitiveness and solvency of agricultural enterprises are determined by the rational organization of financial resources. The organization of enterprise's financial activity has to be constructed in such a way that it contributed to the development and efficiency of production.

The production activity of subjects in agro-industrial complex as commodity producers of under market economy must ensure stable state of financial resources concerning their formation and preservation, conducting the reproductive processes of performing financial obligations.

The functioning of the enterprise is accompanied by continuous flow of financial resources and receiving income. Besides, the sources of funds' flow, directions and forms of financing are determined and the structure of equity capital is optimized. So the formation of financial resources of commodity producers is understood as the activities directed at rational using available owned and attracted financial resources with the maximal effect, and which is accompanied by the level of profitability as to the management of all economic processes in line with this direction.

The optimal forms of financing sources determine the choice of structural construction of enterprise equity capital, the directions of its using aimed at ensuring consistently high profitability level, balance between money inflow and expenditure, which is the main goal of commodity producer and consists in proper stabilization of production. According to the formation of financial resources concerning the monetary flows, financing is divided into internal and external (Fig.1).

The internal sources of financing are conducted at the expense of monetry flows received from enterprise and profit reformation (income according to the kinds of activities). But it should be noted that in the process of enterprise reformation the monetary flows are divided by time and they are future value, because their incoming will take place during economic-financial activities, and at the stage of

the financial resources' formation they reflect their estimation in monetary value.

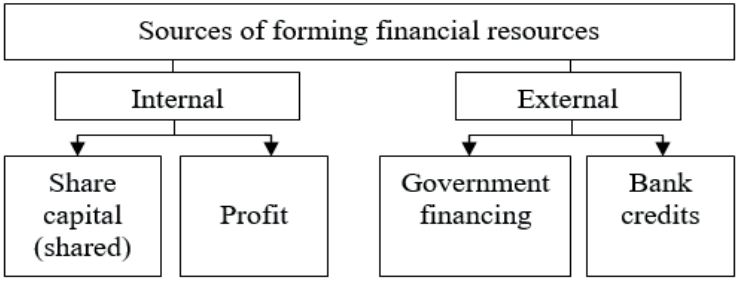

Fig.1. Formation of the sources of financial resources

The external sources of financing characterize monetary flows received by the Government financing (providing benefits, donations), bank crediting, incoming shares and money from new participants.

The enterprise is always highly interested in loans as sources of replenishing frozen capital in long-term accounts receivable of current capital. In this situation, the question of limits while using credit as a source of incoming monetary flows arises. This issue is related to the double impact, resulting from the use of credit on the financial position of the enterprise as a whole and the state of current capital in particular.

On the one hand, without bringing into circulation credit resources under the deficit of equity capital, the company must either reduce or stop the production of the corresponding kind of product that carries serious financial complications up to bankruptcy. On the other hand, the solution of the problems only with the help of credits leads to increasing the enterprise's dependence on credit resources as a result of increased liabilities. This leads to increasing the instability of the financial position, the role of own working capital is diminished, passing into the ownership of the bank, as enterprises on the whole do not ensure the rate of return on invested capital, given as bank interest.

Accounts payable refer to unplanned attracted sources in the formation of initial monetary flows. Their presence means participating in the enterprise's turnover the assets of other enterprises and organizations. A part of accounts payable is regular because it is derived from the existing order of payments. In addition, the accounts payable may arise as a result of payment failure. It is also worth identifying other sources of forming monetary flows, which include enterprise's assets that are temporarily not used for the designated purpose. Therefore, the correct correlation of owned, borrowed, and attracted sources of the monetary flows' formation plays an important role in strengthening the financial position of the enterprise.

Not all monetary flows should be identified with money as well as the assets involved in production because the aggregate value is advanced in the form of

money and, passing the corresponding production process again takes this form. Monetary flows mediate the assets' movement. The aggregate value expressed in money, is transformed in the actual monetary flows only in due course.

Therefore, monetary flows represent a value that is advanced in monetary form for planned creating and using current production assets and circulation fund in the minimal necessary amount required to ensure the fulfillment of the production program by enterprise with timely settlements reproducing their synchronicity. However, monetary flows of enterprise perform two synchronization functions: production and estimation. Conducting production function, incoming monetary flows advance the current production assets, support the continuity of the production process and transfer their cost to the manufactured product. Upon completing the production monetary flows transfer into circulation sector as circulation funds, in which they perform the function consisting in completing the circulation and transformation of current capital from the commodity form into monetary.

The efficient functioning of economic subject largely depends on the full and timely mobilizing financial resources, their targeted using to ensure the optimal conditions for the production process and allocation of production assets.

Considering the formation of financial resources from the perspective of enterprise financial activity as a managerial function, the essence of the term "financial resources" has not yet obtained generally accepted opinion from the scientific viewpoint. In order to be convinced in it, it is enough to address the recent research publications on the problems of finance and financial-credit mechanism. Some authors do not include business subjects to the financial resources at their disposal – own fixed and current assets, borrowings, bank credits, which significantly limits the notion of the financial activities of economic subjects [3].

In our opinion it is necessary to be based on the following considerations as to defining financial resources:

- the component of enterprise's production relations;
- the formation in the process of implementing economic-financial relations;
- designated using.

Thus, when it concerns financial resources, it means the movement of all monetary flows accumulated by designated purpose funds for certain expenses.

Taking into account all these considerations, it can be stated that financial resources are centralized and decentralized monetary flows of designated purpose, formed in the process of distribution and redistribution of the aggregate product, and intended for using according to the directions of enterprise's economic development.

The centralization of monetary flows is conducted at the state level, by which the functions of investing and providing certain benefits (taxation, crediting) to commodity producers are carried out with the aim of supporting and developing the manufacturing of products in agro-industrial sector.

The decentralization of monetary flows takes place at the enterprise level in the process of financial-economic activities and consists of its definite elements:

equity capital, depreciation fund, short-term or long-term crediting, indebtedness to counterparties, and borrowed money.

Thus, the main source of forming enterprise's financial resources is monetary flows movement, which is manifested in independent function concerning the process of formation, distribution and using of monetary resources in accordance with their designated purpose.

The process of financial resources formation begins at the stage of determining the structure of equity capital as to means of production income and recovery with accumulating monetary resources and their subsequent distributing in the form of incomes. The process of equity capital formation using enterprise's financial resources is the process of monetary flows' formation to ensure the main kinds of activities.

The movement of monetary flows quantitatively reflects all the stages of the reproduction process through the formation, distribution and use of monetary resources for the designated purpose. Hence, financial resources are a vitally important system of enterprise's economy, which ensures its functioning. The movement of monetary flows is the speed and scope of activities that determine the efficiency of its financial system. The cash flow cycle begins and ends with the movement of monetary flows; money circulation at enterprise is the main link in the process of capital circulation.

Based on the volume of production and its efficiency, the size, composition, and structure of enterprise's financial resources are stipulated determining the designated purpose of monetary flows. In its turn, their reproductive function, characterized by solvency, liquidity and financial stability of enterprise, depends on the amount of monetary flows in the formation of the structural sources of financial resources [4].

Equity capital of enterprise characterizes the total cost of assets in monetary, tangible and intangible forms invested in the formation of its assets. That is why the first stage of financial resources' formation depends on the chosen organizational-legal form, namely the determining of equity capital structure (statutory structure) according to its elements during enterprise's establishment or reformation. Structural construction of equity capital can be represented by its two main elements: registered and share capital, with defining the role of monetary flows for each element in the formation of financial resources.

At the same time, equity capital is the basis for the beginning and continuation of economic activities at any enterprise, one of the most important indicators because it performs the functions of detecting and regulating financial resources:

- the share of private entrepreneur or each partner in the assets of enterprise;
- the degree of influence on the enterprise's activities;
- the degree of influence on the distribution of financial results;
- the degree in financing risky investments;
- the share at distributing property in case of enterprise liquidation.

Investing depends on the following main factors: the tasks of enterprise; diversification of the production process; introduction of new technologies.

The investment process envisages the corresponding stages of monetary flows' movement and estimation, consisting in pre-investment determining the cost of investment project (supply of money), investment – the income of monetary flows, post-investment – the assessment of monetary flows in the investment project.

The system of enterprise's management of invested monetary flows is based on an assessment of their efficiency because the possibility of implementing an alternative investment option and its efficiency on the whole depends on how objectively and accurately the evaluation is conducted.

The process of implementing the main objective in invested monetary flow management is aimed at ensuring the sufficient investment support of high development rates of enterprise's operating activity. This task is implemented by determining the need in investment volumes to solve strategic development targets of enterprise operating activity according to its separate stages, high rates of expanded reproduction of fixed assets, formation of an efficient and balanced investment program for a future period.

The invested projects, intended for implementation, which are part of the enterprise's investment program must be performed as soon as possible based on the following reasons: first of all, high rates of investment project implementation contribute to accelerating economic development of enterprise on the whole, besides, the sooner a particular investment project is implemented, the faster is the additional enterprise's net monetary flow in the form of net investment income and depreciation; accelerating the implementation of enterprise investment program reduces the terms of using credit resources (particularly for those investment projects, which are financed by attracting borrowed capital); and finally, rapid implementation of investment projects that are part of enterprise's investment program contributes to decreasing the level of investment risks, generated by changing the conditions of investment market, deteriorating the investment climate in the country, inflation, and other factors.

The financial-credit mechanism of establishing and developing production in agrarian sector is characterized by the process of monetary flows' influence on reproductive parameters in the branch, which is manifested by ensuring the formation of financial resources and enterprise focusing on achieving the optimal results of its activity [2]. The necessity of crediting is attracting monetary flows concerning enterprise capital investments connected with the re-equipment of its production structure and formation of fixed assets. Consequently, agrarian processing enterprises should direct the movement of attracted monetary flows at the formation of material-technical base with further development of the main activities.

The movement of money, its speed and scale determine the efficiency of enterprise financial system on the whole. Enterprise's monetary circulation, turnover of the whole capital begins and ends with the movement of monetary flows. Therefore, the movement of monetary flows is the main element in forming the financial resources, the process of the capital circulation. Financial resources are formed before starting

enterprise's activities, creating equity capital with further investment to ensure production-economic activities, expansion and development of production. As a result of this process, the enterprise is able to be engaged in producing and marketing products to obtain incomes. Monetary flows of enterprise function as corresponding monetary funds, as a part of money for designated purposes. Ensuring economic activities with necessary financial resources and the process of expanded production are conducted through monetary funds: financing the sources of financial resources (the initial stage); manufacturing products; payment relations; economic incentives.

Financial regulation takes place through a definite system of instruments affecting the financial activity of enterprise. Consequently, internal and external impacts of financial instruments influence on the formation of financial resources are distinguished.

The external influence is carried out through the system of government support of agrarian processing enterprises in the form of budget loans, subsidies, tax rates and fees with the mechanism of their execution [1]. This part of the financial mechanism does not depend on enterprise's internal efforts must be accepted as a condition of the external environment, to which it is necessary to adapt in the process of economic activity.

The internal financial mechanism of forming financial resources is determined by the forms, methods, and instruments used by enterprise in its activities. Therefore, this part of the financial mechanism requires special attention as to its organizing and functioning.

The optimal volume of monetary flows during the formation of enterprise's financial resources depends on the result of using this financial mechanism. Moreover, separate elements as a part of the internal financial mechanism with their methods and instruments of influencing certain aspects of the financial-economic activities of commodity producers based on balancing monetary flows are suggested to be distinguished: the mechanism of forming the sources of financial resources, planning and budgeting.

From the viewpoint of creating conditions for the continuous reproduction process, cash cover is an important element of enterprise's financial mechanism. Cash cover of the reproduction process is covering reproduction expenses through the formed sources of financial resources accumulated by commodity producers. The forms of cash cover are self-financing, crediting and government financing, and the mechanism instruments are the composition and structure of its sources. They determine not only the policy of financing economic activity, but also affect the financial results of its activity.

However, there are certain factors that affect the volume and structure of enterprise's financial resources. These factors include: the form of ownership and organizational-legal form of enterprise, branch attribute, purpose and tasks of financial-economic activity during a definite period of time, and also the internal financial policy of agrarian processing enterprises [5].

The structural formation of financial resources' sources affects the balance between financial stability and financial risk of enterprise activity. Thus, based on the effect of financial leverage, there is a definite dependence between the proportion of attracted money in the structural construction of financial resources and profitability of equity capital. The larger is share of attracted money, the higher is the profitability of equity capital. Consequently, the enterprise has to balance between these factors, which affect the financial results of its activity.

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THE FORMATION OF COMMODITY CREDIT LIMITS FOR THE BORROWING ENTERPRISES

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Commodity credit for enterprises is one of the effective tools for promoting products and rational use of financial resources. It is usually a short-term credit, since it serves the process of purchasing raw materials and the sale of final products, stimulating and accelerating it, and reducing the stay time of advanced capital in a commodity form. The terms and amount of commodity credit depends on a number of factors: the type and degree of shortage of raw materials' and final products' commodity stocks; the magnitude of their accumulation; the cost of credit; the financial potential of counterparties; the trust and confidence between them; the development of commercial loan market, etc. All of these complicate the peculiarities of its practical appliance. As to the essential characteristics of the «commodity credit», there exist many different definitions of this category today. Thus, I. A. Blank notes that it «is a form of wholesale sales of products by its seller on deferred payment terms, if such a deferral exceeds the usual terms of bank settlements» [2, p. 335]. The given definition is dissonant with the notion of commodity (commercial) credit. The dictionary of financial terminology notices, that it is a loan (credit), which is provided by one acting entrepreneur to another in the form of selling goods with a deferred payment, under the obligation of the debtor (buyer) to repay both − the amount of the principal debt and interest accrued, within a certain period [16].

After analyzing modern views on debt and credit, V. S. Belozertsev came to a conclusion that commodity credit – «is a complex of organizational, economic and financial relations, which occur in the process of selling goods (works and services)

and /or their movement through the trading chain, begin at the time of making a decision on sale of goods (works and services) with deferred payment, and ends with the full repayment of debts to debtors» [1, p. 62].

So, to make a decision on the sale of products with deferred payment or its conducting by the buyer during the period, stipulated by the contract after the seller's invoice, it is necessary to know the limit of commodity credit. Scientific literature [2; 17; 5; 7; 14; 6] provides different methods for determining the limit of commodity lending between enterprises. Let's analyze the main ones.

1) Own equity ratio which, according to different sources can vary from 10% to 20%, and in some countries and in some countries reaches up to 30-40% [6, p. 20; 17, p. 142]. There is no clear justification of the percentage value in practical use of this method. In this case, the amount of the borrower's assets can significantly affect the amount of the limit, as the same amount of limit may be acceptable for some enterprise, but somewhat too large for other. It is easy to imagine a situation when LLC «Globinsky meat processing plant» sells its products not only to its own trading network, but also to the regional dealers.

Financial indicators of dealers are much «more modest» than the similar indicators of the manufacturing enterprise. If the manufacturing enterprise wants to give a commodity credit (loan) to such buyers, then a question immediately arises about the amount (the size) of such a loan. It is quite clear that 25% of the manufacturing enterprise's equity may be excessive for a single regional dealer. Most likely, the dealer will simply not be able to fully and in time repay the commodity loan. That means the manufacturing enterprise will look for another approach to determine the amount of limits for it.

2) Limit, depending on international rating. The last one is set up by international rating agencies (such as, Fitch IBCA, Moody's, S&P, etc. [15]). International ratings in Ukraine have the enterprises which need external borrowing (at the international currency markets). Eurobonds, syndicated loan, etc. can be the tools of such borrowing. Therefore, the rating is a measure of the enterprise's credibility (creditworthiness). It remains only to establish a match between the rating and the amount of limit. The opportunity of it is discussed in the work [6]. As an example, the author cites the scale of compliance of the borrower's rating to the amount of limit (table 1).

Under this calculation method, it is proposed to limit the amount of limit to the size of the borrower's assets and equity capital. Consequently, according to this method, the limit is calculated by the following formula:

$$L = MIN\{L_r; 20\%K; 5\%A\}$$

where L – estimated amount of limit; Lr – limit based on rating, according to tab.1; K – amount of the borrowing enterprise's equity capital; A − borrowing

enterprise's balance currency value.

Table 1

The compliance of the borrower's rating to the amount of limit [6]

International rating	Credit limit, ths. USD
AAA	25 000
AA	15 000
A	10 000
BBB	5 000
BB	1 000
B	500
CCC	100
CC	25
C	0
D	0

The advantage of this method is the ease of its use. If the enterprise has an international rating, it will be easy to determine the amount of limit, using the scale of credit ratings (see tab. 1).

The method includes four criteria: the size of the borrower's assets; its financial sustainability; potential borrower's quality management; general state of the economy. At the same time, the last three points provide position within the international rating.

However, there are a number of complications in practical use of this method, expressed by six following disadvantages: a) only large commodity enterprises can obtain such a rating; b) the connection between the size of the borrowing enterprise and the amount of limit is absent. Although author [6] tries to solve this issue by introducing two restrictions: 20% of equity capital and 5% of the balance currency. However, the work does not justify these restrictions; c) the calculation of limit, based on international rating system (Lr) is also absent. The authors propose an upper border of the limit based on a rating of 25 million USD. However, again, the work does not contain the justification for such calculation of the amount; d) connection between the international rating and the rating of a country. For example, due to the economic crisis of 2014−2018, all leading rating agencies have lowered the sovereign rating of Ukraine from BB to B (and S&P has lowered it to CCC). A rating of the resident enterprise of Ukraine can't be higher than the sovereign rating of the country. Accordingly, the ratings of all entities in Ukraine have also been lowered; e) in a situation when ratings of a country its enterprises are constantly decreasing, and investing in the economy by foreign companies has virtually stopped, some Ukrainian enterprises have begun to abandon the services of rating agencies. In addition, supporting the rating is an «expensive pleasure» (according to «Business» newspaper

[4, p. 31] the cost of supporting the international rating is about 100 thousand USD per year). This further complicates the calculation of the limit, using this method; f) this method does not take into account the financial capabilities of the crediting enterprise. It is possible to imagine a situation, when the enterprise-buyer (borrower) is larger than the company-seller (the creditor). So, the amount of the loan may be small for the borrower and too large for the lender (creditor).

3) The total amount of commodity credit is defined as the possible amount of current assets, directed to receivables for commodity (commercial) and consumer credit:

$$CA_r = \frac{VS_c \bullet K_{c/p} \bullet \overline{PCC} + \overline{DP}}{360}$$

where: CA_r – required amount of current assets (working capital), sent to receivables; VS_c – planned volume of sales of goods on credit; $K_{c/p}$ – coefficient (ratio) of cost and product prices, expressed in decimal fraction; $\overline{PCC}$ – average period of granting credit to customers, in days; $\overline{DP}$ – the average period of delay in payments for a given credit, in days» [2, p. 350].

The method includes only one criterion from the complete list of criteria for determining the limit: the planned volume of sales in terms of payments' postponement. Such method of calculating the limit will be useful to the enterprise for periodic planning of expenses and incomes. However, its disadvantages are: a) it does not involve calculating the limit value for each particular counterparty; b) the planned volume of sales of products in credit, which is included in the calculation of limit as a previously known value requires, in fact, a very careful and thoughtful calculation. On the one hand, it is quite profitable for the management of an enterprise to sell all products on credit, so it would not depend on the stock, (this especially applies to perishable products). But on the other hand, an enterprise needs its current assets (so called working capital), and if all products will be sold on credit, the enterprise, due to lack of it, will not be able to produce products further. Thus, in practice, calculation of the planned volume of sales on credit at minimum, requires explanations, and at maximum – a separate method of calculation.

4) Limit is an average for quarter revenue with correction coefficients. Method proposed in [3] consists of the following: limit is defined as the sum of average quarterly earnings, adjusted by certain coefficients:

$$L = BL \bullet K_g \bullet S$$

where: L – limit of credit operations; BL – base limit, defined as the average

quarterly amount of proceeds from sales and growth of equity; K_g – coefficient (rate) of grows, which is the product of the growth rates of sales revenue and the growth of equity, and is within range of [1...1,5]; S – synthetic coefficient, obtained as a probability of non-payment on the basis of the probability of non-payment on the quantitative and qualitative indicators (60% of the quantitative and 40% of the qualitative indicators).

This method is a comprehensive approach to determining the amount of limit of the borrowing enterprise, analyzing both – quantitative and qualitative indicators. It includes four criteria of the complete list of criteria, which are required for calculating the limit of commodity credit: the amount of the borrower's assets; its financial sustainability; its management quality; relationship between the borrower and the creditor.

The disadvantages of this method are: a) unreasonable value of the Kg indicator as a coefficient (rate) of growth. Because, cash inflows can grow and decrease over certain period of time, and this coefficient can only increase the final amount of the limit; b) while calculating the scale for qualitative indicators, the value of the step ranges from 75 points for classes 9, 8 and 7, to to 35 points for all other classes (while for the quantitative indicators the step constantly was 9 points). Such gradation is unreasonable; c) the list of quantitative indicators does not include those, that would characterize the dynamics of the cost of production, which could affect the final results of the calculations; d) the article [7] the methodology is not fully described: it does not contain the description of quantitative indicators' calculation (despite the fact, that qualitative indicators are fully described).

5) The method of residual value, proposed in [14]. It consists in following: 8 items are distinguished from the financial statements of an enterprise, and get added, according to the following formula:

$$L_b = DP + NP + CS + R + P + FI + MF – TP$$

where: L_b – limit of credit, DP – deferral of payments to suppliers; NP – net profit in the annual calculation; CS – sales of commodity stocks (calculation requires 70%, 40% or 10% depending on the liquidity of stocks); R – receivables (30%, 20% or 10% for calculation, depending on the quality of the debt); P – payables (calculation requires 30%, 20% or 10%, depending on the relationship with the creditors); FI – financial investments (40%, 25%, 10%, depending on the liquidity of the investments); MF – money funds; TP – tax payments.

It is an easy way to calculate, as it also relies on the ability of the borrowing enterprise. This method includes four criteria from the complete list of criteria for determining the commodity credit limit: the amount of the borrower's assets; its financial sustainability; its management quality; regulation requirements.

However, it has a number of disadvantages: a) the author [14] does not provide calculations for the density of assets and liabilities involved in it; b) expert definition

of CS, R, P and FI indicators, included in the calculation, significantly reduces the scientific value of this technique, as different experts may have different views on the same problem. Also sometimes it is difficult to figure out the quality / liquidity of an asset, due to the lack of complete information (for example, because of the great amount of commodity stocks or a large number of the debtors of an enterprise); c) the amounts of delays in payments (deferrals) and payables are essentially the same sum, which can be delayed by suppliers for a certain period. Consequently, the same quantity is included twice in the final amount of limit.

For the practical use of residual value method, it should be modified. First, we propose to replace the net profit quantity with EBITDA.

EBITDA (Earnings before Interest, Taxes, Depreciation and Amortization) – financial indicator, equal to the amount of profit before deducting taxes, interest payments and depreciation from it [3, 18]. It shows the profitability of the main activity of an enterprise. Besides, it is not affected by the credit burden, the difference in the methods of depreciation and revaluation of assets accruals. The indicator is calculated by the following formula [3]:

$$EBITDA = NP + IT - ITR + EE - EI + IP - IR + AMR$$

where: NP – net profit; IT – income tax; ITR – income tax return; EE – extraordinary expenditures; EI – extraordinary income; IP – interest paid by the enterprise; IR – interest received by the enterprise; AMR – amortization.

All indicators of the EBITDA «flow» should be taken not in the annual (quarterly, monthly) calculation, but for the credit period. Otherwise there will be a discrepancy between the purpose of the calculation and the abovementioned indicators. The purpose of calculating the limit is to reduce the risk of non-return the commodity credit, and to increase the quality of receivables.

Therefore, it is necessary to predict the EBITDA indicator for the period of credit. Secondly, in the deferral of payments, it is necessary to replace the net revenue value by the cost price of sold products, because the deferral of payments should evaluate the relationship with suppliers, the value of which is shown by the «cost price» indicator. This indicator is formed with a «+» or «–» sign, depending on the conditions of the supplier (in case of prepayment, there should be a «–» sign used before the indicator of the cost price of the sold product).

The indicator of payables should be withdrawn from the formula as it shows the amount of debt to the creditors at the moment. And the indicator of the cost price of sold products reflects the possibility of an increase in the amount of payables during the period of their turnover (K) on which payments to suppliers can be delayed, without getting penalties for a commodity credit in response. A. Yu. Novichikhin proposes to set a period of payables' turnover at the rate of: 7, 14 or 21 days [14]. The discrete values suggested by the author are not explained in any way, and their choice is determined by a subjective assessment of the relationship between borrowers and

their suppliers at the discretion of the expert who makes the calculation.

Thirdly, the method of residual value offers 70, 40 or 10% for calculating the returned commodity stocks (CS) depending on their liquidity, and it can be 30, 20 or 10% for calculating receivables (R), depending on the quality of the debt. The financial investments' indicator is calculated in the amount of 40, 25 or 10%, depending on their liquidity.

Let's mark the interests by coefficients of liquidity – K2 for commodity stocks, K3 for financial investments and K4 for the quality of receivables. Then formula (4) will look as follows:

$$L_b = \pm AC \cdot K_1 + EB + CS \cdot K_2 + R \cdot K_3 + FI \cdot K_4 + MF - TP - C_sP$$

where: L_b – borrower's limit; AC – average cost; K_1 – 21, 14 or 7 days, depending on the relationship with suppliers; EB – EBITDA indicator for the credit period; CS – the value of commodity stocks; K2 – 70%, 40% or 10%, depending on their liquidity; R – receivables; K_3 – 30%, 20% or 10%, depending on their quality; FI – financial investments; K_4 – 40%, 25% or 10%, depending on their liquidity; MF – money funds; TP – tax payments; C_sP – payments for servicing the debt for already received credit, for the duration of the planned credit.

The coefficients K1–K4 in the formula (1.6), at first, have no justification for their values, and secondly, the choice of a specific value is conducted by experts, with a large amount of subjectivism. We propose to justify the K_1–K_4 coefficients, basing on the following considerations. There is already an indicator that characterizes the period of delay payments to suppliers for K1 in the scientific literature. It is a period of payables' turnover [9, p. 383].

Thus, for a more precise definition of K_1 it is necessary to find it as the difference between the average sectoral period of payables' turnover and the period of payable turnover, and the period of turnover:

$$K_1 = \overline{P_p} - P_p$$

where: $\overline{P_p}$ – average period of payables' turnover; Pp – period of borrower's payable turnover.

If the period of borrower's payable turnover is higher than the average, it means that borrower already has the maximum delay in payments, and it is quite unlikely that suppliers will provide him an additional payment delay. In this case, we must accept that $K_1 = 0$.

There is a «±» sign before the product of a value and a K1 coefficient in formula (6),

which may be explained by the conditions of the suppliers. If in payments with suppliers the commodity credit with a delay and installments, as the varieties of contract of sale, then it is necessary to apply a «+» sign while calculating the limit, if there is an overpayment then the «–» sign. But after adding the period of payable's turnover (Pp) to the calculation (6), there can not be the prepayment in this case anymore, as prepayment is characterized by another item in the balance sheet – receivables. So while calculating the borrower's limit, it is required to use this product only with a «+» sign.

The K_2 coefficient determines what amount of borrower's commodity stocks may be sold over the period, which is equal to the term of a commodity credit.

The problem of selling the commodity stocks is an answer to the question of how much money the enterprise will receive for this product, if it sells it over the period, equal to the term of a commodity credit. That means, that K2 coefficient is also an attempt to somehow discount the indicator of commodity stocks in case of a fall in the value of goods. For example, if the given product is meat and meat products, the prices for them range from a certain average up and down over a certain period of time. Theoretically it is possible to sell meat and meat products, when the prices for them will be the highest and to receive more, but due to caution, for determining the credit limit it is necessary to consider only the lowest value in price fluctuation. Thus, this coefficient will be a lowering factor. The greater the variability (volatility) of prices, the higher the probability of price changes, therefore, the lower the given coefficient will be. Volatility is expressed by the standard deviation coefficient [3]:

$$\sigma = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(\overline{x} - x_i)^2}$$

where: σ – standard deviation; x, – random variable; $\overline{x}$ – average value for a random variable x_i; n – number of observations of a random variable.

An indicator that shows the measure of the relative spread of a random variable is the coefficient of variation, which is calculated according to the following formula [3]:

$$CV = \frac{\sigma}{\overline{x}}$$

where CV – coefficient of variation; σ – average standard deviation of the price for goods; x – the average price for this good.

Formula (8) shows what part (percentage) of the average value of a random variable (price of a product) is its average spread. In contrast to the standard deviation, it measures not the absolute, but the relative measure of the variation of the characteristic values in statistical totality.

Since for calculating the commodity credit limit, it is necessary to know what amount of commodity stocks can be sold at the end of the credit, and the coefficient of variation shows the degree of the random variable dispersion, which needs to be discarded, as was written above, than K_2 coefficient will be calculated as the difference between 1 and the coefficient of variation:

$$K_2 = 1 - CV_{cs}$$

where CV_{cs} – coefficient of variation of the commodity stocks price.

But the CV_{cs} indicator, calculated by the formula (8), characterizes fluctuations of only one type of commodity stock. And in practice it is possible that commodity stocks make up more than one type. To solve this issue, we need to use the weighted average for CV_{cs} indicator:

$$CV_{CS} = \frac{\sum_{i=1}^{m} CV_i \bullet CS_i}{\sum_{i=1}^{m} CS_i}$$

where CV, – coefficient of price variation for the i-type of a commodity stock; CS – amount of the i-type of commodity stock; т – number of types of a commodity stock. So, the sum of т types of commodity stocks CS, will make CS_i, if we add (10) to (9) we will receive:

$$K_2 = 1 - \frac{\sum_{i=1}^{m} CV_i \bullet CS_i}{\sum_{i=1}^{m} CS_i}$$

However, theoretically, the coefficient of variation may be greater than 1. It indicates an extremely high risk of price fluctuations. In this case, we should accept that $K_2 = 0$.

It also raises the question of a period, we take the sample of prices for, because if we take a sample for a few years, the price fluctuations can be very significant, meaning that the standard deviation will also be quite large, and, correspondingly, the K_2 coefficient will always be equal to zero. Such a situation would lead to an unjustified underestimation of the allowable amount of a commodity credit. So, a sampling of prices for the selected type of product should be taken for the period,

equal to the period of credit.

The K_3 coefficient shows which part of the receivables can be realized at the end of the commodity credit term. For its determination method 5 proposes to choose one of three options: 30%, 20% or 10% [14].

Receivables in calculation of the commodity credit limit mean how much money from the receivable will be returned before the end of the credit period. So, while calculating the commodity credit limit, it is necessary to consider only those receivables, the return period of which is less than the term of a commodity credit.

There also exists a receivable that, for a number of reasons, does not get returned on time (overdue receivable). That means that those receivables, which will be returned by the end of the commodity credit, will be less by the amount of overdue receivable. To calculate the share of an overdue receivables, there is an indicator – $S_{OR.}$

To calculate the K_3 coefficient, it is necessary to take the share of receivables, the term of which is less than the term of a commodity credit, and the indicator, reversed to S_{OR}, which shows the share of non-overdue receivables:

$$K_3 = \frac{R_L}{R}(1 - S_{OR}) = \frac{R_L}{R}(1 - \frac{OR}{R})$$

where S_{OR} – share of overdue receivables;

R_L, – receivables, the return period of which is less than the term of a commodity credit, R – total receivables; OR – overdue receivables. If we take the product of the receivable and the coefficient K_3 from the formula (6) and put it in (11), we receive its third component:

$$R \bullet K_3 = R \bullet \left(\frac{R_L}{R}\right)\left(1 - \frac{OR}{R}\right) = R_L\left(1 - \frac{OR}{R}\right)$$

The K_4 coefficient shows what amount of financial investments may be sold at the end of a commodity credit period.

This coefficient is similar by its nature, therefore, its calculation must be done the same way. The random value that needs to be characterized is the cost of financial investments, the indicator of which is the stock market index (such an index in Ukraine can be the PFTS index). As there is only one random variable, which characterizes the financial investments (stock market index), then while calculating K_4 we should use (9):

$$K_4 = 1 - CV_{sm}$$

where CV_{sm} – a coefficient of the stock market index variation, which is

calculated on the basis of a set daily data of the stock market index.

Similar to calculating K_2, if K_4 will be less than 0 (the coefficient of variation greater than 1), it evidences of the excessive variability of the stock index relative to its average value, indicating a high probability of a change in this index. In this case, K4 must be equal to 0. Putting the expressions K_1–K_4 into the formula (6), we will receive the limit of the commodity credit for the borrowing enterprise.

$$L_b = AC(\overline{P}_p - P_p) + EB + CS\left[1 - \frac{\sum_{i=1}^{m} CVi \cdot CSi}{CS}\right] + R_L\left(1 - \frac{OR}{R}\right) + FI \cdot (1 - CV_{sm}) +$$

$$+MF - TP - C_s P$$

where: L_b – borrower's credit limit; AC – average annual cost; $\overline{P}_p$ – average sectoral period of payables' turnover; P_p – period of borrower's payables turnover; EB – EBITDA indicator for the credit period; CV_i – coefficient of the price variation for the i-type of a commodity stock; CS_i – the value of the i-type commodity stock; m – number of types of commodity stocks; R – total receivables; RL – receivables, the return period of which is less than the term of a commodity credit; OR – overdue receivables; FI – financial investments; CV_{sm} – coefficient of the stock market index variation; MF – money funds; TP – tax payments; C_sP – payments for servicing the debt for already received credit, during the planned credit period.

The abovementioned procedure for calculating the commercial credit for a borrower is given without taking into account the principle of time value of money. To calculate the future value of the indicator, scientific literature [10, p. 52; 12, p. 16] proposes to use the following formula:

$$FV = PV \times (1+r)^n,$$

where: FV – future value; PV – present value; r – annual interest rate; n – term in years.

Thus, the present value (PV) of the financial indicator is recommended to be determined by discounting for a certain percentage:

$$PV = \frac{FV}{(1+r)^n}$$

Considering that determination of the borrower's credit limit includes eight indicators, it is necessary examine and set such values as: cost price, EBITDA, commodity stocks, receivables, financial investments, the amount of money on

the balance (money funds), tax payments during the credit period, payments for servicing the debt for already received credit.

Considering that cost price and commodity stocks increase over time due to inflation, according to formula (15), – their indices need to be increased according to the consumer price index. For the cost price index C we offer the following calculation, taking into account the future value (16):

$$C' = C \cdot (1 + i_{cp})^n,$$

where: C' – the increased cost price; C – cost price; icp – annual consumer price index; n – term of a commodity credit in years.

For the index of commodity stocks the calculation of the next type, considering (1.16):

$$CS' = CS \cdot (1 + i_{cp})^n$$

where: CS' – accrued (increased) value of commodity stocks; CS – the value of commodity stocks; i_{cp} – annual consumer price index; n – term of a commodity credit in years.

If to take into account the future value of EBITDA indicator, there are a couple obstacles to use the formula (16):

1. The formula (16) implies that indicator will always increase, but as it known from the practice, such indicator as profit (including EBITDA) is not always rising. It may decrease or remain on the same level for a long time.

2. There are always difficulties in finding the interest rates, under which the increase of this indicator will be carried out, as indicator, which characterizing the interest rate should affect the EBITDA (as, for example, the rate of inflation affects the cost price or the value of commodity stocks). However, neither inflation nor the KIBOR rate do not affect the EBITDA indicator in a way, it could be unconditionally used for a constant increase.

Considering such features of EBITDA, this indicator is proposed to be predicted with the help of a periodic function, as economic cycles, seasonality of sales, life cycle of goods or services and other factors can significantly influence the economic performance of an individual enterprise. Frequency of economic processes is caused by a change in the vital activity of people during the day, week, month, and year (there also are greater periods of cyclicity). Therefore, there is a task of selecting such kind of function, which in its form would correspond to the basic forms of periodic and nonperiodic dependencies of economic processes. The second task is to determine the coefficients of the selected function by statistical data's sampling.

Dependencies, existing in the economy have not only periodic functions but also exponential and power functions. Therefore, the following formula was chosen:

$$Yc = Ax^B + C(1-e^{Dx})Sin(Ex^F + G) + H$$

where: x – an argument, y_c – calculated function, A–H – counterparties, e – the basis of the natural logarithm.

The implementation of the selected function (20) is complicated by the fact that there are no such mathematical transformations, which would allow to linearize, and then receive the value of the A-H constants by the regression or the least squares methods [11]. Therefore, an optimization approach was used, which consists in following:

1. The arbitrary values are set for the function constants.

2. Calculate the value of y_r (20) for all values of the argument, using arbitrary values of the constants;

3. For each value of the function find $(y_c\text{-}y_f)^2$, where y_a – actual value of the function, obtained using statistical data.

4. Solve the optimal problem with the function:

5. $$\sum_{i=1}^{n} \frac{(y_{ci} - y_{ai})^2}{y_{ci}} \to 0$$

where: n – the size of a statistical sample. The sought constants will be the parameters that change.

So, let's use the proposed approach to find the A-H constants:

1. Set the arbitrary constant values of A-H.

2. Find the y_c by the formula (20).

3. Find $(y_c\text{-}y_c)^2$, where ya – actual value of the function, obtained using statistical data.

4. Solve the optimal problem with the function (21).

The first calculations using the MS Excel Solver function already showed that E and G constants in (20) are defined as zeros in the case when the amplitude of the sinusoid is less than the average value of the function by 3-20 times.

Therefore, in order to increase the accuracy of the calculation, it is recommended to set the constraint limit according to the following rule:

1. The values of the argument – Δx are located on the graph, resembling a sinusoid, which will be based on statistics. Then it is necessary to set the following restriction for the constant E:

$$E \le (0{,}5-1{,}5)2\pi / \Delta x_1$$

2. The initial values of constants B and F are recommended to be set equal to 1; Constants H – to average statistical function of a value; constant D – 0.05; A = 0.

3. The constant C is determined from the maximum amplitude of Δy, the part of the graph, defined as sinusoidal, and has the following restrictions:

$$C \le (0{,}4-0{,}6)\Delta y$$

Besides three above-mentioned restrictions for a forecasting function, we use the so-called auto-regression model [8], i.e. the dependence of the indicator of its previous values. Since formula (20) does not give the needed result if any number from the statistical sample has a negative value (the constants B and F can be fractional, and therefore, no argument value can be negative, as it gets found through the logarithm), the EBITDA indicator may have negative values. So, to the values of statistical sample a number that is greater than the negative value of the argument for the most modulo must be added.

From the results of the conducted research carried, we may draw the following conclusions:

1. The proposed optimization algorithm enables to build the function of cyclic economic processes by any pre-selected formula.

2. The proposed procedure allows to build functions of a the different by nature economic processes.

So, for EBITDA indicator, the formula (20) for forecasting values will look as follows:

$$EB' = A \cdot EB^B + C(1-e^{D \cdot EB})Sin(E \cdot EB^F + G) + H$$

where: EB – value of EBITDA for previous periods, EB' – forecasted EBITDA, A-H – constants, e – the basis of the natural logarithm.

Now we need to calculate the future value of money funds (MF') from the formula (15). Let's use the formula (16) for this. As a rule, money funds are located on the current account of the enterprise, which receives them from the bank. Thus, it is possible to increase this indicator under the average rate on deposits of legal entities (terminable and on demand). Taking into account the average bank interest, the formula for money funds will look as follows:

$$MF' = MF \cdot (1 + i_b)^n$$

where: MF' – increased value of monetary funds; ib – average bank interest on the current account in annual calculation; n – term of a commodity credit in years.

While calculating the future value of financial investments, we use the following formula (16).This indicator depends on fluctuations of the stock market index. However, in the formula (15), it is already multiplied by the coefficient, which characterizes the stock market index. So, this indicator does not require an increase.

We can use formula (16), while calculating the future value of receivables. The receivables should be increased by the percentage for which a commercial credit was given. Considering this, a formula for receivables will look as follows:

$$R' = R * (1 + i_k a)^{\pi}$$

where: R' − increased value of receivables; R – value of receivables; i_k; a – annual share of receivables (if the commodity credit was given without an interest, then i_b; b ~ 0), π − term of a commodity credit in years.

Tax payments and debt service payments do not require increasing, as they reflect the exact amount that you will need to pay over a certain period. To calculate the limit, these two indicators should reflect the amounts that the borrower needs to pay in a period that coincides with the term of the commercial loan.

Consequently, after introducing the changes we propose, to increase the values of its parameters, formula (15) will look like:

$$L = AC'(\bar{P}_p - P_p) + EB' + CS'\left[1 - \frac{\sum_{i=1}^{m} CV_i CS_i}{CS}\right] + R'_L\left[1 - \frac{OR}{R}\right] + FI'(1 - CV_{sm}) + MF' - TP - C_sP$$

where: L – borrower's limit; AC' – increased average annual cost price; $\bar{P}_p$ – average sectoral period of payables' turnover; Pp – period of borrower's payables turnover; EB' – forecasted EBITDA indicator for the credit period; CS' – increased value of commodity stocks; CV_i – coefficient of price variation for the i-type of commodity stock; CS_i – the value of the i-type of a commodity stock; m – number of types of the commodity stocks; R – total receivables; R'_L – increased receivables, the return period of which is less than the term of a commodity credit; OR – overdue receivables; FI – financial investments; CV_{sm} – coefficient of the stock market index variation; MF' – increased (accrued) money funds; TP – tax payments; CsP – payments for servicing the debt for already received credit, during the planned credit period.

After determining the total amount of the borrower's limit, this amount shows how much money can be obtained in the future (after the expiration of the term of

a commercial credit). To find the present amount, according to the formula (17), it is necessary to make a discount at the rate at which the lender (creditor) provides a commercial credit. Thus, we receive an amount that can be given right now, so that the borrower will repay it over a certain period of time, and pay interest on it at a certain rate:

$$L'_b = \frac{L_b}{(1+r)^n}$$

where: L'_b – discounted amount of borrower's credit limit; L_b – amount of borrower's credit limit; r — interest rate of a commercial credit; n – the term of a commercial credit in years.

In addition to finding the maximum amount of commercial credit limit, it is also necessary to find the maximum term, for which a commodity credit may be given.

The term of a commercial credit can be calculated, using an optimization model, the main task of which is to find extremum (maximum or minimum) of a target function with restrictions on n variables in the form t linear inequalities or equations [11]. That is, the term of commercial credit will be the variable of the target function of this optimization model.

To determine the term of a commercial credit, besides finding the borrower's limit ($L_в$) in formula 1, it is also necessary to determine the creditor's limit (L_c). We have chosen an option where the creditor's limit is determined by the formula:

$$L_c = K \square E_c$$

where: L_c – creditor's limit; E_c – equity capital; K – risk adjustment coefficient. Considering that, according to formula 1.28, the amount of borrower's credit is getting discounted (L'_b) under the term of a commodity credit, this indicator becomes a target function.

However, to solve the task of the optimization model, it is necessary to find the extremum of the target function, i.e. to set the value to which the given model strives. As it was already mentioned, this may be the maximum or minimum of the target function.

From an economic point of view, it is clear that for L'_b minimum and zero are the same, as the amount of the limit can not be less than zero. However, zero, as the value to which strives the target function, is not desirable, considering that in such a case a crediting company should not start commodity crediting at all, if even before the start of crediting, it decides to limit the amount of a credit to zero. Consequently, it contradicts the objectives of the crediting company.

It is also not recommended to choose a maximum for this target function (out of caution): it is not necessary to maximize the amount of limit for the crediting company, since the probability of non-return of a commercial credit significantly increases.

If , due to economic reasons, it is not possible to direct a target function neither to the maximum nor to its minimum, it means that the function must be directed to a certain value that does not depend on either the target function or its variable. The value of Lc should serve such an indicator, since, firstly, it corresponds will the abovementioned conditions and, secondly, it corresponds to a complete list of criteria for the commercial credit limit.

The target function of the optimization model for determining the value of the commercial credit term will look as follows:

$$L'_b \rightarrow L_c$$

The value of the term of a commercial credit п, which will be obtained as a result of solving the optimization task, will reflect the borrower's limit regarding the creditor's limit, depending on whether it was bigger or smaller before the start of solving the task of the optimization model:

1) $L'_b > L_c$ means that the borrower's financial capabilities are more powerful than financial capabilities of a creditor, п shows the minimum possible credit period for this borrower.

2) with $L'_b < L_c$ – the financial capabilities of a borrower are less powerful than the creditor's ones.

As it was already mentioned, in order to solve an optimization problem, it is necessary to impose certain restrictions on the target function (30) and its variables, which consist of the economic essence of this function, its components and the variable. Since (30) is the credit limit, i.e. – the amount of money, it has to be a positive number. Besides, the term of a commercial credit can not be less than 1 calendar day. Thus, the restrictions contain the following system:

$$\begin{cases} n \geq 1/365 \\ L'b \geq 0 \end{cases}$$

where: L'b – the borrower's limit; n – the term of a commercial credit in years.

Solving the optimal task with the target function (30) and the system of restrictions (31) can be conducted with the help of simplex method, which is an analytical method of finding solutions for the tasks of optimization models [11]. This method is implemented in the Solver («Finding Solutions») function of the MS Excel.

Thus, the definition and justification of increasing indicators as part of the borrower's credit limit, the determination of the future and present value of a certain amount of a commercial credit and the terms of its provision through the use of discounting method, gives the opportunity to reduce the economic risks of both – the creditor and borrower in such form of non-bank crediting.

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GROUNDS FOR THE NECESSITY OF IMPLEMENTATION AND DEVELOPMENT OF CLINICAL RESEARCH MANAGEMENT

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At the moment, the pharmaceutical industry in Ukraine is in a leading position both in the domestic and external markets. However, international competition continues to harshly attack the national pharmaceutical market. According to the experts, about one third of medicines in the domestic market is of Ukrainian production, while the rest is of foreign one. Therefore, strengthening the competitive position of Ukrainian pharmaceutical companies on the market is a very important challenge. It is also clear that production of effective medicines is the sole possible tool to compete in this sector of the economy. And of course, this essentially depends on the quality of the clinical research.

Clinical research is a human-made research conducted, firstly, to evaluate the efficacy and safety of the medicines and, secondly, to prove the efficacy and safety of any new drug.

The clinical research is conducted directly in healthcare facilities, contract research organizations and pharmaceutical companies, following the adherence to the Good Clinical Practice (GCP). Compliance with these rules is a guarantee to the public that the rights and safety of patients participating in the study are protected, and the results of the study are reliable. Consequently, clinical research is an integral part of the process of medicines development. The clinical research is used to determine the quality of drugs, their effectiveness, as well as further to control them. In the light of the above, there are very rigorous requirements for clinical research, i.e. compliance with the ethical aspects of their implementation, as well as professional planning, organization, monitoring and management, timely

reporting etc.

Thus, the quality of medicines and their efficacy in the treatment of patients is largely affected by the quality of clinical trials. The latter, in turn, depends, to a large extent, on the proper level of planning, organization, management and control of clinical research at a particular venue. Consequently, the system of clinical research management should be formed in accordance with the standards ISO-9001:2015.

A key component of the clinical management system is the specialists involved in planning and organizing clinical research. The main requirement for them is knowledge of the basic functions of management, the skills of personnel management and relevant processes implemented within each phase of clinical research. A clinical research specialist is an employee involved in planning, organizing, conducting and controlling clinical trials of drugs, biologics or devices on behalf of an investor. The position of a specialist in clinical research, depending on the company, may sound like an administrator, steward, controller or coordinator of clinical research (or trials). So, in order to hold such a positions, the specialist should have not only professional knowledge of clinical research, but also management knowledge and skills. Thus, lets ground the necessity of developing clinical research management as a separate, specific area of the management as a whole.

The analysis of professional publications devoted to clinical research, the study of experience of the healthcare institutions, contract research organizations and pharmaceutical companies made it possible to identify and group the main factors actualizing the need for development of clinical research management nowadays.

1. Scale of clinical research.

According to official website data [1], calculation of the number of clinical studies per 100 thousand population in 2018 in Ukraine was 3,52. In particular, during the first phase 5 % of studies were conducted, during the second – 30 % of studies, during the third – 64 %, and during the fourth – 1 %. One should admit that the number of the studies conducted is small. However, at the moment there is a tendency to increase the number of clinical trials.

Meanwhile, pursuant to the information provided for on the website www.clinicaltrias.gov, the number of trials conducted in the developed European countries and the USA is much higher. In particular, as of the date, there were 14000 clinical trials registered in the USA, 1200 trials registered in Poland, while the number of clinical trials conducted in Ukraine amounted to 200 [2].

2. Increasing the number of clinical trials locations, and the need for their timely and sufficient provision with the specialists having appropriate management knowledge.

Today there are, on the average, 7 large contract research organizations (CROs) active on Ukrainian market of clinical trials (which are applicants for 40-55 % of multicentre clinical trials), as well as 38 small CROs, performing 45-50 % of clinical trials.

Each of these CROs includes at least 5 people directly involved in the planning,

organizing, conduct and monitoring clinical trials.

Domestic applicants for pre-registration clinical trials usually do not involve CROs for clinical trials. They rather have their own structural units dealing with this issue.

According to estimates, 5 major manufacturing companies (providing up to 55-70 % of pre-registration studies) and 14 small ones are working stably at the domestic clinical research market. The structural units responsible for clinical research at each of these enterprises consist of an average of 5-10 people. Thus, we can conclude that in Ukraine at least 500 people are working in clinical research as the structural unit of the domestic pharmaceutical industries and CROs and carrying out professional tasks and responsibilities related to management functions. In other words, as of the day, these specialists require professional management knowledge and education.

Estimation of the domestic testing sites involved in the implementation of clinical trials demonstrates that their number in the last 5 years varies within 500 and 800 units. At each test site, 1 to 10 clinical trials are performed. Consequently, the number of domestic specialists involved in clinical research management is ranging from 1500 to 2000 people with various background education and work experience and who haven't obtained management knowledge at the appropriate level.

3. Attractiveness of the clinical studies for professional activities and careers.

Professional activity in the clinical studies is quite attractive not only for career opportunities, but also for a high remuneration: the standard salary per year for a beginner is USD 40000 to USD 60000; while an experienced employee (with three years work experience or more) gets USD 60000 to USD 90000 per year [3; 4]. Only one circumstance (and perhaps it is a key one) encourages staff to improve their skills, including additional management knowledge. The latter is essential for professional planning, further organization, management and control of clinical trials.

4. Recognizing management as the cornerstone of qualitative clinical research.

An overview of foreign scientific publications [5-10] clearly indicates the unity of opinions concerning the fact that:

1) successful clinical studies are based on «marketing», «sales» and «permanent client management»;

2) at the implementation stage of a randomized controlled clinical study, the most complex aspect is the introduction of a number of effective management methods;

3) management of all phases and stages of clinical research is key to the overall process of their implementation.

It follows that the quality of clinical trials depends, to a certain extent, on the proper level of their planning, organizing and monitoring. In its turn, the latter depends on the specialists with appropriate management education and skills in healthcare facilities, contract research organizations and pharmaceutical companies. This is a solid ground for introducing and developing a new direction in overall

management - clinical research management.

5. There is a need for obtaining special management knowledge for qualitative clinical research.

In 2017 and 2018 there was a two-stage survey conducted regarding the need for specialists involved in clinical trials to obtain additional management education. It was conducted in two stages:

– the first – in 2017;

– and the second – in 2018.

The Department of Clinical Pharmacology and Clinical Pharmacy at the National Pharmaceutical University conducted the first stage of the study. The research leaders (64 %), research physicians (33 %), regulatory staff (42 %), and monitors (employees of pharmaceutical companies, manufacture and contract research organizations) (57 %) were involved in the survey as respondents.

The survey made it possible to establish that:

– 68,6 % of respondents considered it appropriate to obtain special management education;

– 15,7 % of respondents considered the regulatory and normative provision of these studies and the establishment of a standard operating procedures system at all stages of trials to be sufficient;

– 7,8 % of respondents pointed to the sufficiency of periodic studies by the specialists in the field of planning, organization, monitoring of and ethical requirements for clinical trials, as well as on good clinical practice and current regulatory requirements for clinical trials;

– 17,8 % of respondents stated that it is necessary to implement the above.

The second stage of the study was conducted by the Department of Management and Administration of the National Pharmaceutical University [11]. Experts from the higher education and scientific institutions (54 %), clinical institutions (39 %) and approximately 7 % of medical centres were involved in the survey. The results of the survey are as follows:

– 75 % of respondents expressed the need for additional management knowledge;

– 15,5 % – stated that there is no need in such knowledge;

– 10 % – are not sure whether the management knowledge should be required or not.

The question «Is there a need for training specialists under the program «Management of clinical research»?» was answered as follows:

– 67 % od respondents said “yes”;

– 19 % were unable to answer;

– and about 14 % indicated the lack of such a need.

Thus, the results of the study confirm the need for introduction and further development of clinical research management as a specific area of management as a whole.

6. Lack of educational programmes for educating the specialists in clinical

research management.

The leading institutions educating specialists in the field of clinical research are the UK institutions (universities of London and Edinburgh), the Netherlands (University of Rotterdam), Spain (University of Barcelona), Germany (universities of Dresden, Berlin), the United States of America (Boston Universities, Charlottesville, San Diego etc.) and Australia (University of Melbourne). So, in the United States there are 15 universities preparing the clinical research management specialists, in the UK – 6, in Germany – 4, and in Austria – 2. The students of the above universities obtain a degree as a Master of Clinical Trials (MSc), a Master of Clinical Trials (MSc «Monitoring of clinical trials») or Medical Sciences and MS (MSin).

In its turn, the study of Ukrainian higher education market in management (073) and public administration and administration (281) made it possible to establish that at least 17 universities are preparing health care management specialists. The above results of the survey give the opportunity to make the following conclusions:

1) foreign educational institutions are preparing only masters of medical sciences, masters of clinical research or masters of monitoring clinical research;

2) domestic educational institutions prepare only masters of health care;

3) none of the educational institutions in the USA, Europe or Ukraine prepare the specialists in clinical research management. This is another reason for introduction and development of a new area of an overall management – management of clinical research.

In conformity with the draft order of 1 January 2019, the Ministry of Health of Ukraine differentiated the functions of the director of a medical institution dealing with economic activities and a medical director dealing exclusively with medical issues. The directory of medical professions includes the position of medical director, working on the development of improving the quality of evidence-based medicine, the organization of patient-oriented services, the organization of professional development of personnel, assessment of the quality of medical care, etc. The director general of the healthcare institution, in particular, is engaged in strategic planning, involving the necessary financial resources, budget formation, coordination of the institution's work, analysis of the economic efficiency of the activities; organization of work and interaction within the structural units, etc.

From 1 January 2022, it is planned to separate the management functions of the director general / chief (head) of the healthcare institution in Ukraine, in particular, in contract research organizations and pharmaceutical enterprises. Thus, applicants for the position of managers, directors who do not have management education in 07 «Management and Administration» and 073 «Management», will have to extra gain it.

In the light of the above, it can be argued that changes in the concept of the Ministry of Health of Ukraine regarding the approaches to the management of health care institutions, contract research organizations and pharmaceutical companies are actualizing the development of new areas of management as a whole, namely, management of healthcare facilities and clinical research management.

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PRACTICAL LEGAL ASPECTS OF THE USE OF PUBLICLY ACCESSIBLE ROADS IN THE MANAGEMENT OF AGRICULTURE AND FOREST LAND

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In connection with the process of issuing property to churches and religious societies according to Act No. 428/2012 Coll., On property settlement with churches and religious societies and On the amendment of some laws, such as the Law On property settlement with churches and religious societies, in media appeared news about legal litigation according to which the obliged entity (in this specific case Lesy ČR) is obliged to issue the required land pursuant to the above mentioned law. The obliged entity defended the issue during court proceedings by arguing that the land is listed as a public transport structure in the land use plan, nevertheless it should be a publicly accessible road over a dam of a pond.

The authors of the chapter state that according to Act No. 428/2012 Coll., the built-up land cannot be issued because it is considered to be a part of land which, after being subject to property injustice as a result of some of the facts mentioned in § 5, was built up or part of it was built up by a building capable of separate use (hereafter referred to as the «building»), if the building was established in accordance with the Building Law and is used as well as the part of the land directly associated with the building which is necessary for the use of the building. A piece of land built by a building, which is owned by a person other than a state or a beneficiary who is directly related to it and uses it, is also considered as a built-up land. In connection with publicly accessible purposeful roads, it can be determined whether the purposeful road may in certain circumstances be a building or not or a land built by the building as a purposeful road. The aforementioned press release became the inspiration of the authors of the chapter to analyse the aggregate modifications of publicly accessible purposeful roads as one of the types of roads alongside motorways, roads and local roads, pursuant to Act No. 13/1997 Coll., On roads, as amended, necessary for the management of forest land dealing with the definition features of publicly accessible purposeful road and its legal nature, as it has and will have an impact on the decision-making of courts in the matter of the issue of property under the aforesaid law.

The authors of the chapter deal with forest roads, one of the categories of purposeful roads, because they can demonstrate the differences in the regulation of the use of public roads according to the valid legislation, comments (Gavella, 2012). According to general terminology, it is possible to define the legal status of forest roads, see (Bonifazi, Balena, Rega, 2017), the use of forest roads as publicly accessible purposeful roads, the rights of walking and driving of motor and other vehicles on the forest roads by the owners, state (Kupková, Bičík, 2016) or possibly by the authorized users of these roads and the public, i.e. by third persons who have no private-law relationship with the forest roads, express (Mikoláš, Tejkal, Kuemmerle, Leitão, Morrissey, 2017).

The aim of the chapter is to provide an overview and analysis of the current legal regulation of the use of forest roads by the public for walking and driving with motorized and other non-motorized vehicles. The chapter focuses in particular on defining the relationship between the two laws concerned legal acts, namely Act No. 13/1997 Coll., On Roads, as amended, and Act No. 289/1995 Coll., On Forests and on Amendments to Certain Acts (the Forest Law), as amended. One cannot forget the other related legal norms, which, in the alternative, help to find out the basics of intricate legal relations.

Literature review. Publicly accessible purposeful roads. Road is defined by Act No. 13/1997 Coll., On Roads, as amended, as a road intended for use by road and other vehicles and pedestrians, including fixed equipment necessary to ensure the use and safety of the ride. From the above-mentioned terminology, it is clear that purposeful road, as one of the legally defined types of roads, is primarily the roadway and its purpose is to be used by road and other vehicles as well as by pedestrians. In the public inaccessible purposeful road in accordance with Section 7 paragraph 2 of the Act on Roads, we designate a purposeful road as a road situated in an enclosed space or building that serves to the needs of the owner or operator of the enclosed space or object. This purposeful road is not publicly accessible to the extent and manner which is determined by the owner or operator of the enclosed space or object.

Article 7 (1) of the Act on Roads specifies publicly accessible purposeful roads so that the purposeful road is a road that serves to connect individual properties according to the needs of property owners, to connect these properties with other roads or to manage agricultural and forest land. The Road Act also points to the fact that, within the limits of the special regulations governing the operations on the road and under the conditions laid down by this Act, every citizen may use the infrastructure free of charge in the usual way and for the purposes for which it is intended, i.e. the general interest of use, unless special cases stipulate otherwise in this Act or the special regulation. The user must adapt to the construction and technical conditions of the affected road. The law uses the term of general use, whose prerequisites and legal implications for the purposeful roads also formulates the legal case law. The cited provision of the Act on Roads has a considerable

importance for the issue of publicly accessible roads because the user of the publicly accessible purposeful roads can be any citizen, i.e. not only the owner or user of the real estate, but also any user who is entitled to use it free of charge and no one is entitled to demand any consideration for the use of roads even through legal private law institutes. For the rights and obligations of the parties involved, i.e. the owner of the road and its user, is stated that the use of the road is limited by the legal regulations regulating the traffic on the roads, as well as by the construction and technical conditions of the road which determine the road to road and other types of vehicles according to vehicle weight and other technical parameters and dimensions. The condition of construction according to §26 of the Act on Roads determines the quality, the degree of use of the surface, the longitudinal or transverse waves, the seals which cannot be removed by routine maintenance, the bearing capacity of the road, bridges and bridge buildings or the equipment of the road. The technical condition according to the provisions of the Act on Roads sets out technical features, i.e. transverse arrangement, transverse and longitudinal inclination, width and type of directional and elevation arcs and the integration of the road into the terrain in terms of the view or altitude. The transit route uses the statute of publicly accessible purposeful road ex lege if it fulfils the legal defining features of this road. According to Section 9 (1) of the Act on Roads, the owner of the purposeful road is a legal entity or individual who is legally obliged to tolerate the free use of property by third parties in general. It cannot be inferred from the above-mentioned that the obligated person, the owner of the purposeful road, must be only a private-law entity, the owner of the purposeful road may also be state with the right of management, e.g. the organizational unit of the state, which has the right to manage it according to another entity, e.g. in behalf of the Forests of the Czech Republic, sp, Povodí Vltavy, sp, etc.

Under Section 1012 of the Civil Code, the owner has the right to dispose his property within the limits of the legal order and to exclude other persons from it when the institute of public purposeful roads constitutes interference to the property right of persons in the public interest. According to the Charter of Fundamental Rights and Freedoms, the forced restraint of the property right is possible within the public interest based on the law and for compensation. The free use of public purposeful roads is defended by the Constitutional Court in the case of sp. No. 268/2006 of 9 January 2008 as a condition in which exist a law-based public law institute which restricts the property right, which is a necessary condition of the constitutional compliance of the consent expressed by the owner. In the case of publicly accessible purposeful roads defined in § 7 paragraph 1 of Act No. 13/1997 Coll., On roads, the ownership right is limited by the fact that the owner must tolerate the general use of the land as road (Section 19 of the Act) and allow public access there. According to the law, the land becomes the purposeful road directly when it fulfils the definition given in Section 7 (1) of the Act, i.e. when it is used to connect individual properties for the needs of its owners or to connect these

properties with other roads or to manage agricultural and forest land, where the Act On roads does not link the constraints with the provision of financial compensation. Its only constitutionally consistent interpretation is the limitation of the ownership right with which the owner of the land concerned must agree. Besides the necessary consent of the owner, the condition of the public use of a private property is also the existence of necessary and irreplaceable road need, i.e. the assessment of legitimate restrictions on fundamental rights as a necessary condition of the proportionality of the restriction. If there are other ways to achieve the objective of providing a road link between real estate without limiting the ownership right, it is appropriate to keep the property right in a different way. If there is a different choice of access to a real estate and if any purposeful road does not fulfil the role of the necessary road link, the alternative entry to the real estate through the land of another owner is purely the private interest of the property owner, which may be edited by private law institutes. If the condition of road necessity is fulfilled for the needs of the property owners, the right of access is also established to third parties, i.e. to an unlimited circle of persons from public.

The above-mentioned provisions of the Act on Roads and, above all, the key decision of the Constitutional Court of the Czech Republic, No. 268/2006 of 9 January 2008, which defines the defining features of the purposeful roads, it is possible to speak of a transport route within the meaning of § 2 of the Act on Roads. The transport route must link the property to the needs and purposes of its owners or serve to connect these properties with other roads or to manage agricultural and forest land or according to the consent of the owner it might be used by an unlimited circle of persons. The transport route must serve the so-called necessary road need, where the connection cannot be clearly regulated by the private law institute.

Road is defined by the law as a transport route that displays the features of publicly accessible purposeful road. The term transport route is not characterized by the law but through interpretation it can be deduced as a noticeable and relatively constant transport connection used by persons to walk, ride or to some of these acts. It may include a hardened part of the land by natural material, e.g. gravel, stones or parts of the land deliberately processed for the purpose of transport connection or construction (this is not a mere processing of land). The purpose of the transport route, in the case of purposeful road, will be the connection of the real estates for the needs of the owners of these properties or to connect the real estate with the other roads or the management of agricultural and forest land, express (Chen, Xie, Wang, Duan, Ma, 2017). In this context, the authors of the chapter state that Act on Roads does not consider direct connections, i.e. downs and downsides of neighbouring real estates on the road, as the purposeful road. The authors of the chapter state examples of purposeful roads such as dirt and forest roads, arrivals to operational sites and other facilities designed to meet public or private needs, e.g. sports facilities, cultural facilities, forest lands and lands of watercourses, quarries, service stations, schools or other facilities, e.g. bus stations, campuses and spaces inside factories and other

enterprises and public car parks.

Pursuant to the provisions of Section 63 of Act No. 114/1992 Coll., On Nature and Landscape Protection, as amended, it is not allowed to establish or remove publicly accessible public roads, trails and paths outside the built-up area without the consent of the competent nature preservation authority. Municipalities keep an overview of publicly accessible roads, paths and trails in the area of their territorial jurisdiction, report (Škodová Parmová, 2011); (Líšková Dvořáková, Pártlová, Krogmann, 2018).

The attributes of purposeful road do not explicitly stem from the Act on Roads but have been judicially introduced over time even with reference to the First-Republic Judicature. This is the so-called consent of the owner of the purposeful road to its public use and the existence of the necessary transportation needs. The consent of the owner of the purposeful road to its general use is currently being deduced judicially mainly with reference to the finding of the Constitutional Court sp. No. II ÚS 268/06 of 9 January 2008, when it has to be the consent of the owner of the road to use it by unlimited number of persons, with the fact that no specific form is defined for the consent, i.e. it can also be given implicitly (by factual act of the owner from which the consent to use the road can be deduced by unlimited number of people). It is also clear from the Constitutional Court's finding that the consent which was granted by the previous private owner of the road is obligatory even for his legal successor, i.e. for the subsequent successors of the purposeful road who have acquired the road by transfer. According to § 1106 of Act No. 89/2012 Coll. of the Civil Code, a generally valid conclusion can be drawn that the person who acquires the right of ownership also acquires the rights and duties to deal with the acquired object. The authors of the chapter consider that a generally applicable rule of law cannot be ruled out even in cases where the original owner of the road is a public-law body, i.e. according to the Charter of Fundamental Rights and Freedoms, Article 11, the legal protection of the property rights is provided to all entities without distinction of legal content. In the case of agreements on the issuance of property to churches and religious institutions or judicial decisions where the obliged entity refuses to issue the property, this is not a transfer of ownership within the meaning of Section 1099 of the Civil Code according to the opinions of the authors of the chapter. Nevertheless, we note that even under the provisions of Act No. 428/2012 Coll., the legal status of the purposeful roads will be maintained even after the release of the property.

The public access of the roads means an unlimited circle of persons who might use it anytime, which excludes a narrow group of persons designated by the ownership of one or more properties that are used through road, the case law insists on the public interest in the use of purposeful communication. Authorized person is, according to the judgment of the Supreme Court sp. 22 Cdo 3158/2009 of 27 June 2011, an unspecified group of users but these are not individual rights of individuals, see the similar quote in Supreme Administrative Court, 1 As 63/2013

of 25 September 2013. The range of authorized persons is unlimited but it is clear that always in a particular situation it will be a certain number of listed persons, i.e. the owners and users of the property who will use the given road. It will also be a public-law obligation if consent has been given to a selected number of persons while not excluding the others.

As has been interpreted above, the commitment of the owner of the road to stand the use of the road by third parties has public nature, which means that the owner of the road is not allowed to establish, change or invalidate the commitment to use the road through the private contract law unilaterally. The subsequent binding legal relationship does not change the reality of the existing public commitment to tolerance of use, i.e. the consent of the previous owner of the journey is also obligatory for the legal successor. If the road fulfils the attributes of purposeful road, its owner is not entitled to arbitrarily disturb the road or to prevent third parties from using it in accordance with the law, i.e. consent cannot be revoked or cancelled. According to the Law, the purposeful road is created when its owner gives consent to general use. This consent can be granted by explicit or factual and implied dedication, i.e. by tolerance of general use (not expressing a qualified disagreement when the owner is aware that his land is used so).

Also, the question of using road "since time immemorial" is connected with the problematics of the owner´s consent to originate publicly accessible purposeful road, when the consent of a previous owner can not be detected (statistically traced), but the road permanently serves to the needs of the transport connection to an unlimited number of persons for urgent transport needs, i.e. according to the case law it is as a publicly accessible purposeful road. The authors of the chapter comment that in many cases consent takes the form of dedicating the road to general use that can be traced by one of the previous owners of the road. In accordance with the case law, it can be concluded that it is a publicly accessible purposeful road when the owner (the previous owner) did not state a qualified clear disagreement with the general use of his road, i.e. the road belongs to his land, add (Do, Kim, Kim, Joo, 2017). The case law requires an active action of the owner resulting in a clear disagreement with the use of the road for benefit of the public. If consent can not be traced and the road serves to a necessary transport need for a long time, consent to the general use is assumed. If these conditions are not met, it is possible to use the road only for compensation as it would be an unacceptable restriction of the property rights which are protected by the constitutional order.

In the case of the restitution, the consent of the previous owner was not accepted by the case law, when previous owner was a public body and the case law claimed that consent of a public body has different attributes than consent of private person. However, if the person, who acquired the road by the restitution, did not express a qualified disagreement with the general use of the road within a reasonable time then the obligation to tolerate the general use passes on to him/her. For example, the judgment of the Supreme Court sp. 4 As 163/2013 of 3 June 2014 speaks in the

sense that the three-year period since the acquisition of ownership is sufficient to express this disagreement.

The authors of the chapter do not agree with the conclusion of the Constitutional Court, where the ownership rights of all entities under the Charter of Fundamental Rights and Freedoms should be of the same scope and the same protection as well as the same content of rights and obligations under the property law should be used. If the consent to the public use of the road was given by a previous public-law owner, it is not reasonable to consider this consent as inferior, states Mauerhofer (2019). The content of the owner's consent will be decisive for determining the attributes of the purposeful public road when the owner is entitled to define a circle of people who can use the road according to the extent of general use, e.g. designating a public car park in front of a hypermarket which might be used only by customers of the shop. The owner can also specify other conditions including time possibilities of using the road, e.g. to set up a road in a gardening community which links individual recreational objects and land only for property owners.

According to the case law, another feature of publicly accessible purposeful road is the so-called necessary transport need, i.e. the assessment of condition whether there is another transport connection for the benefit of the owners of the concerned property which does not interfere with the owner's property rights. When assessing an alternative to ensuring the access to property, the possibility of providing the public space of the municipality, in whose cadastral territory the concerned properties are located, may also be admitted. The owner of the concerned property need not be connected to the purposeful road that is neigh bouring with theproperty. This verdict will be valid for the access to the concerned property by motor and other vehicles but it is always appropriate to assess the attributes of the property and the purpose of its use. The determining criteria will be the length of the transport alternative, its safety, the construction and technical conditions, the compatibility of the use of alternative transport links with other generally binding legal regulations, e.g. protection of nature and landscape, construction regulations, protection of agricultural land resources, flood protection, air pollution etc., the amount of the costs necessary to ensure the viability of alternative connection, the local situation in terms of connection to local roads or access through the public area within the municipality regardless of the ownership of the lands and buildings that create the public area, note (Sutton, Wang , Schweitzer, McClure, 2017). Other comparable ways of connecting, which lead to less restrictive ownership restrictions, are priority. Alternative connections must be comparable in the sense of full compensation, e.g. winter accessibility, accessibility for collection of waste, arrival of vehicles of the Integrated Rescue System etc. The longer lenght of the alternative connection does not mean the necessary transport need of the assessed road.

From the point of view of the assessment of the transport needs and the attributes of the road or its transport alternatives, the type of land registered in the cadastral register is not decisive. The real nature of the assessed road and the possible transport

alternatives are crucial. In the case that the transport need comes to an end, the concerned road in no longer publicly accessible purposeful road. According to the judgment of the Supreme Administrative Court, No. 1 As 76/2009 of 22 December 2009, it can be concluded that factual public accessibility does not make any road publicly accessible purposeful road. The owner's consent is necessary beyond the normal tolerance of the limitation of ownership, but also by the pressing urgent communication need. The owner's consent beyond normal tolerance of limitation of the property right but also the urgent transport need is necessary.

The last defining feature of publicly accessible purposeful road is the absence of any private-law agreement under which the concerned entity would use the transport link in question. It might be agreement concluded in any form, mostly in form of rent, loan or service. As the authors of the chapter have already mentioned, the existing obligation of the owner of the road to tolerate the use of the road by third parties is of a public nature which excludes situation that the owner of the road established, changes or annuls the use of the road when it is used for the same need and extent, add (Muralikrisna, Manickam, 2017). The subsequent binding legal relationship does not change the existence of the existing public commitment to tolerance of use. This condition does not exclude the fact that the owner of the relevant public road allows the access only for selected group of persons but the owner might change this condition towards other entities using provisions of civil law, e.g. service or rent.

The authors of the chapter draw attention to the existence of special public regulations which modify the right to walk and to drive differently in incompatibility with the Act on Roads and according to the principle «lex specialis derogat priori», they are prioritized over the general norm, e.g. the territory of national parks and protected landscape areas, reservoirs, water management structures and protection zones, military areas as well as hunting territories, express (Melnykovych, Nijnik, Soloviy, Sarkki, Bihun, 2018). The authors of the chapter point out the rule of free access to the land according to §63 of the Nature and Landscape Protection Act according to which every citizen has the right to free passage through land owned or leased by the state, municipality or other legal entity unless no damage to property, rights or health of another person is caused according to generally binding legal regulations coments (Kawharu, 2011). The Act excludes from public authority built-up building plots, yards, gardens, plantations, vineyards, hop gardens and parcels intended for farm animal breeding. Arable land, meadows and pastures are excluded from entitlement at a time when crops, land or cattle can be damaged.

Legal attributtes of publicly accessible purposeful road. At the beginning of the chapter, the authors expressed the opinion that the determination of the legal attributes of the purposeful road will be significant from the private law´s point of view (the Civil Code addresses the relationship of the land and the buildings built on it in this sense) in accordance with Act No. 428/2012 Coll. It can be considered whether the purposeful road is/is not a matter or part of the land on which it is

located or eventually the assessment whether the land on which the purposeful road is can be considered as built-up in the sense of Act No. 428/2012 Coll., i.e. excluded from the issue within the meaning of Section 8 of this Act.

The Supreme Court of the Czech Republic refered to the situation when the purposeful roads are a type of land and represent a certain representation or treatment of surface, i.e. they can not be either a land or a construction in the sense of civil law as two different roads that might have a differential legal regime. If the purposeful road is not a building in the sense of civil law, but only a part of the land, it can not be considered whether the civil relations to the road and the land on which it is located differs. The authors of the chapter note that even if the opposite conclusion was valid and the purposeful road was found building and not only part of the land then it is still valid that when it is utilized so buildings build up on the land and other facilities are part of the plot including everything that is embedded in the land except for temporary buildings under the meaning of Section 506 of the Civil Code, effective as of January 1 2014. In the case there are different entities on the part of the owners of the land and the construction, the transitional provisions of the Civil Code § 3054 to § 3060 would be applied, including the legal pre-emptive right and the different legal regimes of the land and the construction. In this connection, the authors of the chapter draw attention to the problematic provision of Section 3059 of the Civil Code on the building which is located on more plots and which, in case of roads, will be a frequent case when the double legal regime will be applied only to the land on which the majority of the building is located.

The authors of the chapter express a different opinion on the attribiutes of the purposeful road formulated by the Supreme Administrative Court according to which the construction of the purposeful road is such that it is possible to clearly define where the land ends and the building starts. At the same time, the construction of a purposeful road can not be removed without its destruction/substantial deterioration of its ability/viability; we discuss separate real estate as a thing within the meaning of Section 119 (2) of the Civil Code, which is subject to legal relations. In relation to these interpreted contexts, it is also appropriate to assess the professional terminology mentioned in the new Civil Code which considers the building as a part of the land even if it had the status of a separate thing. Due to the temporary provisions of the Civil Code in the case of different owners of the building and the land, these problematics continues to be up to date.

Considering the meaning of Act No. 428/2012 Coll., which excludes issues of built-up land, it will be decisive to determine whether the purposefuel road is/is not a building which is a part of a land and is not capable of separate use, or whether a part of the land is used which is directly related to the building which is necessary to use the building and will not be excluded from issue, although it will not be a purposeful road, e.g. road equipment on another land (lighting, etc).

Forest road. Prior to the analysis of the legal regulation of the general use of forest roads, the authors of the chapter define the legislative term “forest road” for

the purpose of legal regulation of the use of forests as well as the authors define the forest road as a road because of absence in a legal regulation.

Only Implementing Regulation No 433/2001 Coll. to the already abrogated Building Act No. 50/1976 Coll., on Spatial Planning and the Building Code (Building Act) defines the technical requirements for constructions in order to fulfill the function of the forest, characterizes the forest roads as purposeful roads that are part of the forest transport network used for wood removals, transport of persons and material only for the benefit of the owner of the forest and the passage of special vehicles, comment (D'Amato, Rekola, Wan, Cai, Toppinen, 2017). The authors of the chapter draw attention to the fact that this definition is not beneficial because it does not contribute to give a clear answer to the question of what is/is not a forest road from the point of view of defining a forest road in sense of qualifying technical requirements for buildings which ensure function of forests, e.g. buildings of forest paths, ravine fencings, structures for drainage of forest soil and small water reservoirs in forests, communicates (Lukas, 2017). The authors of the chapter see anotherther inconsistencies in the nomenclature of forest roads, in the meaning of purposeful road, which is not concerned in the access of citizens to public road with regard to the subject of the regulation. The nomenclature is inconsistent, rather controversial, as the inclusion of forest roads between the purposeful roads provokes to answer where the purposeful road is located if it is not located in an enclosed area in the sense of the Act on the Roads Act of Sections 7 and 19. If the definition also states that the forest road serves only to the interest of the forest owner it would exclude other persons/the public from the definitional features. According to the Czech Technical Standard ČSN 73 6108, the Forest Transport Network, we consider the forest roads as so-called forest transport networks where transport facilities of all kinds used to interconnect forest complexes with the public transport network are possible, contribute (Chen, Pierobon, Zamora-Cristales, R, Sessions, Eastin , 2017), as well as to approach and collect wood and other forest products, to transport people and material in the context of forest management, cite (Kaakkurivaara, Korpunenb, 2017), respectively to other purposes. The forest transport network also includes forest dumps. According to this standard, the forest road is a purposeful land road which is a part of the forest transport network, conclude (Akgul, Demir, Akay, 2017) and is intended to remove timber, to transport people and material, to transit special fire trucks or medical services, etc. In this case, it is not appropriate to formulate a legal definition which indirectly supports the significance of solving a problem of forest road´s accessibility by the public, because it includes the forest path between purposeful roads without limiting her use only for the needs and purposes of the owner of the forest.

Forest road as the purposeful road. In order to meet the requirements for the public purposeful road, the forest road has to fulfil the definition features of the purposeful road as described above. In the case of forest roads, transport needs must be considered as the forest transport network presents unpaved forest roads where,

in relation to third parties, every transport need is unlimited by number so we call it a purposeful road not a publicly accessible road.

According to the definition of the forest road as a purposeful road under § 2 of Act No. 361/2000 Coll., on Road Traffic and on amendments to some laws, e.g. the Road Traffic Act, as amended, which also define crossroad as a place in which roads intersect or cross, the crossroad is not the end of dirt or forest road or other purposeful land road because the concept of a forest road is perceived as another purposeful road, explain (Yli-Pelkonen, Setälä, Viippola, 2017). The Act on Forest Roads perceives the forest road as a part of a forest which serves not only for forest management but also for the non-productive function of the forest, e.g. non-wood-based forest infrastructure or environmental, comment (Angelstam, Khaulyak, Yamelynets, Prots, Valasiuk, (2017). In terms of the priority of the owner of the forest and its economic use, but to the public interest, the use of the forest road for the needs of the owner can be completely excluded, communicate (Akgul, Yurtseven, Akburak, Eksi, Akay, 2017). The forest road is in principle accessible to the public free of charge and, under the valid rules, it is primarily designed to protect the forest, nature and landscape, say (Soltani, Sankhayan, Hofstad, Eshraghi, Arabmazar, 2016). The forest road is a publicly accessible purposeful road within the meaning of the Act on Roads, due to the utility of the purposeful road, e.g. the management of forest lands, express (Galantinho, Eufrázio, Silva, Alpizar-Jara, Mira, 2017). We specify the purposeful road in the case there is absence of a transport road which is necessary for forest management. In the case that the required attributes of necessary transport need are met, the publicly accessible is a land road, regardless of the absence of forest management functions. Concerning the above-mentioned facts, we conclude that purposeful road can be used free of charge both for walking and driving by motor and other vehicles, taking into account the rules of road traffic, the construction and technical conditions of the road and other generally binding legal regulations, see (Němec, Holátová, 2017).

Forest road as a land designated for fulfilment of forest functions. Act No. 289/1995 Coll., On Forests and on the amendment and modification of Certain Acts (Forest Law), as amended, defines forests as forest stands with the environment and land intended for the fulfillment of the production and non-production functions of the forest. Forest management means restoration, protection, upbringing and output of forest stands and other activities which ensure the fulfillment of forest functions including non-productive functions, interpret (Eriksson, Wahlberg, Nilsson, 2016). Areas intended to fulfill the functions of a forest are lands with forest stands and areas where the forest stands have been removed for the purpose of restoring forest crossings and unpaved forest roads if they are not more than 4 m wide and land on which the forest stands were temporarily removed according to the decision of state administration of forests pursuant to Section 13 (1) of this Act (forest land) and next paved forest roads, small water areas, other areas, land above the uned boundary of woody vegetation (except for land plots and their access roads) and

forest pastures and fields for game, if they are not part of the agricultural land fund and are associated with the forest or serve the forestry (other plots), because the state forestry authority can order the designation of the competence to the land intended for forest functions, add (Ioannou, Lefakis, Arabatzis, 2010).

But let's move on to what the relationship between the Forest Act and the Road Act is and whether the forest roads are, therefore, excluded from general use by the Forest Act, or whether their general use is regulated by the Act on Roads.

The authors of the chapter think that the Forest Act as regards the use of forest roads as land roads is considered to be special in relation to the Roads Act, since the existence of a special Act on public access to roads might vary (we find a direct reference in the law to the Forest Act and its provisions § 20 (1) (j)), it is related to the limitation of forest use in relation to the limitation of forest use outside forest roads, not on forest roads, because forest law regulation does not define forest management rules to fulfill production/non-production functions. The Forest Act does not only fulfill the function of a legal regulation (in what way and how much wood it is possible to extract) but also regulates a specific area of public interest namely forest protection as a unique special part of life and the relationship of men to their surroundings (Suzuki, Parker, 2016). The authors of the chapter believe that the legislator's reasoning was aimed to include the Forest Act as a legal regulation related to the right to use the forest, including forest paths for walking, riding, forest harvesting, etc.

According to the definition of lands used to fulfill forest functions, there cannot be included crossings and unpaved forest paths with a width of more than 4 m which fall under the so-called woodless cathogeory as this category is included in forest land within inventorying; paved forest roads up to 4 m in width are rated as woodless because they are so-called other lands which belong to the category of land intended for the fulfillment of the functions of the forest as well as the built-up land and the incoming roads. Limitations of forest use in the Forest Act intended for these categories should not be connected with the restriction or prohibition of the right to enter, to drive or to stand by vehicles because it is the built-up land only in the case of building plots under the meaning of Act No. 183/2006 Coll. on Land Planning and Building Regulations (Building Act), as amended, i.e. land registered in the cadastral register as a building plot and other land parcels, usually with one fencing which creates a coherent whole of residential and commercial buildings. As driveways, we characterize any roads that lead to built-up land and are used for driving by motor and other vehicles. Assuming that a purposeful communication (regarding its construction condition) can show attributes of building (whether under the Building Act or the Civil Code) which would mean that all forest roads that are buildings, respectively the land on which the building of the road is located, are built-up land and therefore are automatically excluded from the use limitation regulated by the Forest Act.

The right to enter the forest roads and the right to drive there. According to

a special regulation of the right of entry and walk on land intended for the fulfillment of the functions of the forest, respectively on forest roads which categorically define land intended for the fulfillment of forest functions according to the provisions of § 19 and § 20 of the Forest Act, we conclude that every citizen has the right to enter the forest at his own risk or to collect the forest fruits and dry woods for his own use. Furthermore, the citizen is obliged not to harm the forest, not to disturb the forest environment and to observe the instructions of the owner or the tenant of the forest and his employees. In forests, there is forbidden to enter fenced or labeled areas and wood stands where harvesting, extraction or transport of woods is carried out. However, these prohibitions are not valid within activities that are carried out during forest management, speak (Feist, Buhle, Baldwin, Davis, Scholz, 2017). Special rules are applied to organized sports events in the forest which can only take place on the basis of an announcement at the State Forestry Authority under the conditions set out in the Forest Act and with the consent of the forest owner.

In principle, the right to enter the forest roads is unlimited because, according to the provisions of Section 63, paragraph 2 of Act No. 114/1992 Coll., On the Protection of Nature and Landscape, everyone has the right to free passage through land owned or rented by the state, municipality or other legal entities, unless it causes damage to the property or the health of another person and does not infringe the rights to the protection of personality or neighboring rights.

Considering the attributes of the Forest Act as a special legal regulation in relation to the Roads Act, the authors of the chapter conclude that (in the sense of the relevant provisions of the Forest Act) riding and stalling of motor vehcicles are also prohibited on forest roads which are also lands designated for the fulfiment of forest functions. Accourding to (Statzner, Bonada, Resh, 2016) next, the right to ride a bike or horse, skiing and sledging are prohibited outside marked roads. The prohibitions mentioned above are not applied within activities carried out in forest management, as they are important with regard to driving and standing of motor vehicles, express (Kim, Song, Lee, 2013).

The Forest Act further states that the forest owner may permit an exception from these prohibitions. A written form is not required to establish a clause; the clause may be granted by the owner in written and oral form or implicitly on the basis of the factual behavior of the owner who, for example, will tolerate the entry of vehicles on forest roads, on which the entry is normally forbidden, for a certain time. This may be a general exception for an unlimited number of people or a clause appointed for specific entities. Accordingly, it is permissible that the owner, within lease or tenancy of a forest land, allows the tenant (lessee) to entrer and to stand motor vehicles of tenants (lessees) or third parties with the permit of the tenant (lessee).

The prohibition to ride and stand in the forest with motor vehicles is not applied to employees of the state forest administration body in the area of their competence in carrying out activities under this Act and to persons who perform activities

authorized by special regulations such as vehicles of a fire brigade. Exceptions to the law are also provided for the hunting rights. The Forest Act defines the obligations of the entities in the so-called forest transport under the provisions of §34.

The question of general use of forest roads, respectively lands for the fulfillment of the functions of the forest, was mentioned by the Ombudsman who (within dealing with cases of forest protection) interpreted following statements which confirmed mentioned hypotheses including the statements of the partial opinions and the final debates of the authors of the chapter.

The authors of the chapter point to the final opinion expressed by the Ombudsman in the sp. No. 512/2013 / VOP / DS of 12 August 2013, which states that the owner of a publicly accessible purposeful road is not entitled to collect any payments from its users even if it is a land intended for the fulfillment of forest functions. Charging exemptions from the statutory ban on motor vehicles entering the forest is illegal. Lands intended to fulfill forest functions are not paved forest roads that serve as driveways to built-up land; the road user of the road is not obliged to deal with the forest owner's exemption from the prohibition of entering motor vehicles into the forest, cite (Cintas, Berndes, Hansson, Lundmark, Nordin, 2017). Participants in the declaration procedure, in the case of uncertainity about the attributes of the land, are also owners of neighbouring property as they may be directly affected by their rights and obligations in view of possible legal restrictions. From the opinion of the Ombudsman, 5076/2007 / VOP / DS dated 17 June 2008, the authors of the chapter conclude that the forest as a whole can not be an enclosed area within the meaning of Section 7 paragraph 2 of the Act on Roads, therefore it can not be a purposeful communication in the woods considered to be non-public communication.

It follows from the above-mentioned facts that where the forest road is a land intended to fulfill the functions of the forest, even if it is a purposeful communication, the prohibition of entry and parking of motor vehicles is valid when the general Act on Roads provides the exemptions from the general use of purpose roads. The authors of the chapter believe that a part of the professional public cited the conclusions of the decision of the Supreme Court of the Czech Republic, 33 Odo 449/2005 dated 22 February 2005 which are not in accordance with the applicable legal regulations. They agree that the Supreme Court wrongly assessed the relationship between the Act on Roads and the Forest Act as a relationship between the special act and the general act as the Supreme Court states the following while claiming that the Forest Act is, in relation to the Act on Roads, a special regulation and that, having regard to these facts, their land, through which the part of the disputed road leads, has the attributes of the land intended to fulfill the functions of the forest and therefore the courts should judge the matter in accordance with this special law. However, this opinion is not correct, as the authors of the chapter point out. In accordance with the subject-matter of the regulation, as defined in § 1, the Act on Roads should be applied to all roads which fulfill the features specified in the other provisions of this Act and contain no provision to exclude certain roads from this arrangement.

The Forest Act does not deal with traffic problems on roads located on forest land which is confirmed by the wording of Section 7 (1) of the Act on Roads which expressly includes communication used for the management of forest land between the purposeful roads as same as the wording of Section 3 paragraph 1 letter b) of the Forrest Act states that the paved forest road be included among the plots intended for forest functions. If the paved forest road on the plot intended to fulfill the functions of the forest shows at the same time the features of the purpose road pursuant to Section 7 paragraph 1 of the Act on Roads, it is subject as well as other purposeful communications to the regime of this Act including Section 19 paragraph 1, which regulates the general use of roads Arguments of the applicants by Decree No. 433/2001 Coll is not permissible. It should not be forgotten that the Decree entered into force on 1 January 2002 whereas the applicants claimed entitlement to unjust enrichment for the period up to 14 November 2001. Furthermore, the purpose of the above-mentioned decree which specifies the technical requirements for the buildings providing forestry function and forestry terminology cannot be absent since it is stated in Section 2 paragraph 1 letter a) taken into account for the purpose of this Decree. It is clear from the wording of the above-mentioned provision that the forest road is at the same time a purpose road which is a concept operated by the Act on Roads.

At least with the effect of Act No. 152/2011 Coll., which amended the provisions of § 7 of the Act on Roads, it is unexpectiable (according to the opinion of the authors of the chapter) that the Forest Act is a special legal norm in relation to the Act on Roads with respect to the use of forest roads.

The Forest Act defines a dual regime, firstly transport roads which are a part of forest in a broad sense, respectively part of forest transport roads network and are publicly accessible purposeful roads (mainly paved forest roads) and secondly driveways to built-up lands as well as a regime of transport roads referring to the principles of forest protection and its function of preventing general use of the entrance and standing of motor vehicles.

Conclusions. The aim of the chapter was to summarize the lefal problematics of the publicky accessible purposeful roads with regards to the up-to-date valid legal case law in accordance with the question that are connected with issuing of properties to churches and religious societies, including land on which publicly accessible purposeful roads are established pursuant to Act No. 428/2012 Coll. This issue is closely related to forest lands and forest management where one of the reasons for accessibility of purposeful roads is (according to Czech legislation), inter alia, forest management as this activity is considered to be a public interest and the owners of forest lands have the legal mechanism for access to forest and other land which is not owned by them but is necessary for forestry activities. According to the finding of the Constitutional Court of the Czech Republic sp. No. 268/2006 of 9 January 2008 and the case law of the Supreme Administrative Court, the definition of the purposeful road can be deduced: a) it must be a transport road within the

meaning of § 2 of the Act on Roads, b) it must connect the real estates with each other for the needs of its owners or it must join the property with other roads or to be used for the management of agricultural and forest land; c) the consent of the owner of the purposful road to its use by an unlimited circle of persons; d) the transport road is used for the so-called transport need, or e) the connection cannot be clearly regulated by the private law institute.

According to the assessment of the transfer of the authorization for the general use of the purposeful road, the authors of the chapter consider that (according to the cited law) issue of the land on which the purposeful communication exists might be evaluated anywayif it is possible to deduce the existence of publicly accessible purposeful road according to the valid legislation and the case law; the obligation to tolerate the public authorization to the authorized entity is transferred, irrespective of the fact that the statutory body was a public body. At the same time, the authors of the chapter are aware of the fact that the above-mentioned consent of the previous owner (as a necessary condition for the duration of authorization for general use) was not deducted during the restitution, i.e. the previous owner was a public body who claimed that the consent of a public entity has a different form then a consent of a private person. However, if the person who acquired the purposeful road by issue did not express a qualified disagreement with the general use of the road within a reasonable period of time, the obligation to tolerate it then passes. If the Constitutional Court does not deviate from the pronounced opinion, it is permissible, according to the opinion of the authors of the chapter, that «the religious entity» will cancel the existing public use of the purposeful road by his active disagreement with the general use of the road. It will be of greater significance to see whether in individual restitution cases the issue of the purposeful communication will be refused because it is a building (in the case of unopaved roads created by building activities).

Free access to the land surroudings is not limited with regard to the issuance of property; the risks exist when arriving on motor vehicles.

The authors of the chapter in the final summary agree with the statements of the Ombudsman concerning the land intended for the performance of forest functions which are not paved forest roads which serve as a driveway to built-up land. The user of such a road is not obliged to obtain the forest owner's exemption from the prohibition of motor vehicles entering the forest because it is not a forest. The entitlement to use the driveway paved forest road should not be affected by the Forest Act or in connection with the issue of forest paths to religious subjects.

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METHODOLOGICAL ASPECTS OF ECONOMIC SECURITY MANAGEMENT OF THE ENTERPRISE

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The current stage of socio-economic, innovation and investment development requires a new approach to enterprise management, the development of a flexible strategy for its development, the implementation of which may provide long-term competitive advantages and the obtaining the effects of economic activity. A particular importance has the maintaining of stability and efficiency of the enterprise in the current dynamic economic conditions, that can be showed by the high level of economic security, based on taking into account all its components, principles, factors and threats. Ensuring the economic security of an enterprise is a priority task for any entity of economic activity, regardless of its organizational and legal form, because timely response to threats, their prevention and liquidation, ensuring the stable and most effective development of the enterprise, these tasks are in the area of enterprise economic security, that's why the studied category is becoming increasingly relevant both among foreign and domestic scientists.

The research of the importance, strengthening, assurance and management of economic security is devoted to the numerous works of such scientists: G. Androschuk, A. Arkhypov, O. Baranovsky, Blank I., Vyshnevskaya O., Heyets V., Glaziev S., Grandry E., Gottelmann E. Zhyvko Z., Darnopych G., Zakharov O., Kamlyk M., Kyzym M., Omelyanovych L., Singachov V. and others.

The problem of economic security research and ensuring arose in the 30's of the twentieth century. in the United States, which was associated with the global financial and economic crisis and the need to develop a rapid response measures to the threats

that arose within the national economy. Beginning from the 70's of the twentieth century the term economic security was understood as the basic components of national security and only in the early 90's of the last century, scientists focus on the study of other aspects of ensuring economic security, in particular, environmental, the determination of direct and indirect consequences of emergencies of natural and man-made origin, the growth of organized crimes,the loss of scientific and technical potential, etc.

In national scientific literature, it is accepted to select five stages of the formation of the enterprise economic security:

- Stage 1 (19991-1997) - threats to the economic security of the company arose from the side of the staff as a result of disclosure of commercial secrets.
- Stage 2 (1998-1999) - the investigation of the possible negative impact of the external environment on economic security.
- Stage 3 (1999-2002) - the study of the certain aspects of the business entities, the allocation of functional components of the economic security of the enterprise, the distribution of threats to internal and external.
- Stage 4 (2002-2005) - identification of the economic security of an enterprise with its effective functioning in risky situations.
- Stage 5 began in 2005 and continues to date - the study of the economic security of the enterprise, depending on its branch affiliation, external and internal threats of its functioning environment.

Having considered the main stages of development, we propose to focus on the study of the definition of «economic security of the enterprise», and developed approaches to managing the economic security of enterprises. We suggest to explore the most used (Table 1).

On the basis of the generalization and analysis of the study of the concept of «economic security of the enterprise», it can be concluded that scientific literature does not have a commonly accepted interpretation of the researched economic category; at the same time, there are various scientific approaches to its definition.

Thus, scientists point out protective, financial, resource and functional, systemic, strategic, informational, subjective and objective, economic and legal approaches to the definition of «economic security of the enterprise».

Taking into account the above-mentioned study on the etymology of the investigated category, and also based on its key characteristics, we propose the proper definition of the economic security of the enterprise, under which it is necessary to understand the ability of the subject of economic activity to operate stably, efficiently and rationally, on the basis of implementation of measures to prevent, overcome and eliminate internal and external threats or to ensure a reduction of their influence on economic activity and results of the enterprise to a minimum.

Table 1

Definition of the concept «economic security of the enterprise»

Author	Definition
Grunin O., Grunin S. [1]	Economic security of the enterprise is the protection of the activity from the negative impact of the external environment, as well as different variants of threats or adaptation to the existence of conditions that do not affect the activities
Dubetskaya S. [2]	Economic security of an enterprise is the state of an object in the system of its connections in terms of its stability and development in conditions of internal and external threats, unpredictable actions and difficult predicted factors
Zabrodsky V. [3]	Economic security of the enterprise is a quantitative and qualitative characteristic of the of the enterprise to reflect the ability of «self-sustaining» and development in terms of identifying external and internal threats.
Zhyvko Z. [4]	Economic security of an enterprise is a mode of ensuring the best economic effect from the operation of an entity in the form of profit or achievement of a social purpose.
Illyashenko S. [5]	The economic security of an enterprise is the state of effective use of its resources and existing market opportunities, which allows to prevent internal and external threats and to ensure its long-term survival and sustainable development in the market in accordance with the chosen mission
Kozachenko G., Ponomareva V., Lyashenko O. [6]	Economic security of the enterprise is a measure of harmonization in time and space of economic interests of the enterprise with the interests of environmental entities associated with it, operating outside the enterprise
Kovalev T. and Sukhorukov T. [7]	Economic security of an enterprise is a state of protection of the enterprise activity from the negative impact of the external environment, as well as the ability to timely eliminate various threats or adapt to existing conditions that do not negatively affect its activities.
Shavaev A. [8]	Economic security of an enterprise is the most effective use of resources to prevent threats and ensure a stable operation of the enterprise today and in the future.
Fomina M. [9]	Economic security of an enterprise is a state of the most effective use of resources for the purpose of elimination of threats and ensuring the effective and stable functioning of the enterprise in the current and prospective periods.

In addition to the concept of «economic security of an enterprise», in our opinion, the concept of «enterprise economic security management « also needs to be studied, because the mentioned term is an instrument for ensuring the achievement

of high economic results of economic activity in the case of the implementation of a consistent, logical, timely, professional management that ensures implementation of the enterprise's chosen strategy and timely response to changes in the internal or external environment.

At this stage, it is necessary to pay attention to the study of the main components of the economic security of the enterprise, under which it is understood to mean a set of basic directions of its economic security, which differ significantly from each other in its content. The analysis of professional scientific literature makes it possible to conclude that the list of components varies both in quantitative and qualitative terms.

So, for example, T. Pocropyvny, offers seven functional components of the economic security of the enterprise [10, P. 468]:

- financial, which includes solvency, structure and use of capital and profit, effective use of corporate resources;
- intellectual and personnel, provide for the preservation and development of intellectual potential of the enterprise, effective management of personnel;
- political and legal, which includes the presence of a legal service at the enterprise, the protection of the rights and interests of the enterprise in conflict situations, on the basis of compliance with the current legislation and legal and regulatory framework;
- technical and technological, which assumes conformity of applied technologies in the enterprise with the modern world analogues in order to optimize the expenses of resources;
- ecological, which ensures observance of the current ecological standards, minimization of losses from pollution of the environment) [12];
- the force, which includes the presence of appropriate services to protect commercial secrets, personal protection of employees of the enterprise, protection of property of the enterprise and the cost of these measures [11];
- information, which provides collection of all types of information about the enterprise, its analysis, processing, systematization, use, protection, etc.

According to Ilyashenko S.N., the existing components of the economic security of the company should be added market and interface components [5, P. 17-18]. Market component characterizes the market share occupied by the company, involves determining the level of competitiveness of products and enterprises, determining the intensity of the impact of the environment on the enterprise. As for the interface component, it involves the study of potential changes that arise in the relationship with suppliers, intermediaries, consumers, analysis of contract terms, identification of development trends and economic potential of the enterprise.

Matceh D.S. proposes to include to the components of the the economic security of the company anti-crisis component, which should include the development of anti-crisis measures, the availability of skills and qualifications of managers in the management decisions taken under the crisis, the cost of training, retraining or staff

training in a crisis [13, P. 177]. However, the feasibility of including this component to the economic security of the company is questionable, because in the situation of stability of the conditions of enterprise operation and the receipt of profits, in such a situation there is no need to spend money on «personnel training in a crisis», but it is better to use them to prevent and minimize risks for prevention of crisis phenomena.

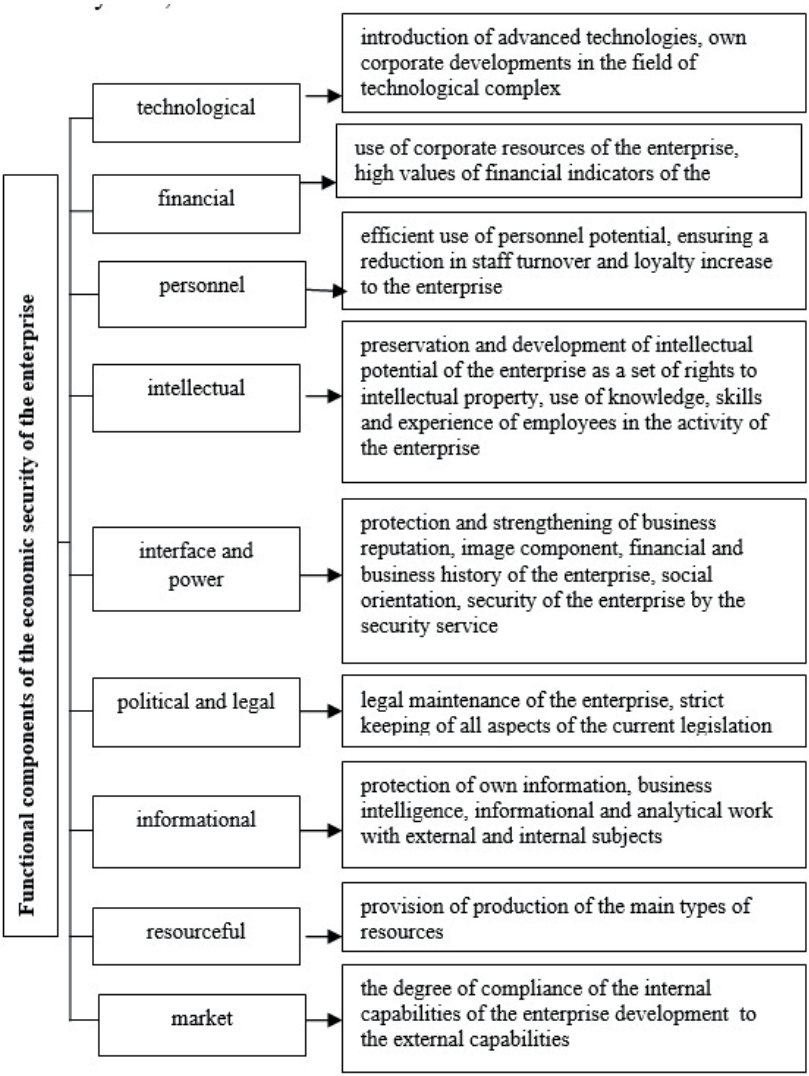

Fig. 1. Functional components of the economic security of the enterprise

Taking into account the results of the study of the components of economic security, we propose to summarize them according to the essential characteristics, which will make it possible to exclude duplication of concepts through their names (Fig. 1).

Therefore, in our opinion, the following components should be included in the components of the company's economic security [14,15]:

1) the technological component involves researching the technology market for the production of similar products, and is characterized by the level of implementation of advanced technologies, own corporate developments in the technological complex of the enterprise;

2) financial component, one of the most important and most decisive in the activity of the enterprise, can be defined as the state of the most effective use of corporate resources of the enterprise, expressed in the best values of financial indicators of the enterprise;

3) the personnel component involves the effective use of human potential or specific human capital, ensuring its development, reproduction, use in labor activities, ability to withstand internal and external influences and threats;

4) the intellectual component of the system of economic security of the enterprise involves ensuring the preservation and development of the intellectual potential of the enterprise, which in this case means the totality of intellectual property rights or its use, as well as the use and realization of knowledge and professional experience of specific human capital;

5) interface and power component. The interface component is related to the goodwill of the enterprise, its definition of its position in the external environment, presupposes the protection of business reputation, the image of the enterprise, its business history and financial stability, social responsibility. The power component of the economic security of the enterprise reflects the security of the enterprise on the security side;

6) the environmental component of the company's economic security must guarantee the safety of society, based on observance of environmental norms, modern technologies for production release, reduction of expenses related to environmental pollution to a minimum;

7) political and legal component provides for compliance with regulatory and legal regulation and all aspects of the current legislation in the business activities of all its participants;

8) the information component of the economic security of the enterprise provides for the comprehensive collection, analysis, processing of important information and its use in economic activities, as well as the protection of its own information, primarily confidential, business intelligence, information and analytical work with external and internal actors, etc.;

9) resource component provides production of the main types of resources, their required level of quality, the provision of stocks with their own working capital [14];

10) market component of the economic security of the enterprise reflects the relationship between the internal capabilities of the enterprise and external requirements of the market environment [15].

As a result of the study of the essence of economic security, its management, and main functional elements, there is a need to determine the basic principles under which the formation of economic security of the enterprise takes place. The analysis of scientific literature on this topic gives an opportunity to conclude that all the principles of economic security of an enterprise are appropriately divided into three main groups:

1. Internal principles, the observance of which ensures the economic security of the enterprise.

2. External principles of achievement of the economic security of the enterprise.

3. Principles ensuring the achievement of economic stability of the enterprise [11].

In our opinion, to the internal principles it is necessary to include the following ones: the principle of rational cost management, the principle of profitability, the principle of financial sustainability of the enterprise, the principle of balanced financing, the principle of optimizing the production structure of the enterprise, the principle of commodity policy, principle of rational inventory management, the principle of effective financial planning.

To external principles of economic security of an enterprise, in our opinion, it is necessary to include indicators influencing and checking the negative or positive influence of the state. Among the principles of the positive influence of the state on the economic security of the enterprise, we can include the following: the principle of timely detection or prevention of economic crimes, for example, decriminalizing the taxation system and overcoming the large-scale outflow of capital abroad; the principle of inhibiting sharp exchange rate changes and price levels; the principle of raising the level of capitalization of the banking system for possible long-term lending to enterprises with a reduction in interest rates on loans; the principle of minimizing public debt.

Among the principles that have a negative impact on the level of the economic security of the enterprise, the following can be attributed to the government: the state budget deficit, large external public debt, balance of payments deficit, high inflation, low domestic currency rates, low level of international reserves of the NBU, etc.

Thus, the conducted research made it possible to study the evolution of economic security as a scientific concept, to analyze existing approaches to the treatment of economic security management, to identify the main functional components and principles of the economic security of an enterprise.

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ACCOUNTING AND ANALYTICAL SUPPORT IN ENTERPRISE MANAGEMENT

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Management of production and financial activities of enterprises in the context of globalization, the widespread introduction of information technology, fierce competition and limited resources imply a high level of economic justification for management decisions at the various management levels. In this regard, it is very important to clarify scientific and practical importance of accounting and analytical support, management accounting and analysis in the enterprise management systems as well as their function in justification of these decisions.

As the bibliography review shows, the articles and monographs of recent years have not paid proper attention to the connection of management accounting and analysis with the management of an economic entity.

The analysis of the functioning of the accounting and analytical support system at Ukrainian enterprises shows a very low degree of orientation on developing and making management decisions.

Differentiation of accounting and analytical functions which are implemented in practice, sector-specific understanding of the management accounting methodology only as a mechanical set of accounting procedures, without connection with analytical functions, poor understanding of the management accounting and analysis place in the system of accounting and analytical support of enterprise management result in decreasing effectiveness of intraeconomic management. These problems determine the relevance of the research.

The concept of accounting and analytical information and its role in enterprise management was investigated by many scientists and specialists, namely: G. Brik, F. Butynets, S. Golov, N Goliachuk, K. Druri, T. Kaminskaya, R. Kostyrko, Ya. Krupko, I. Kirilov, P. Kutsik, I. Lazarishina, N. Lokhanova, L. Medved, L. Napadovskaya, V. Ozeran, A. Pilipenko, N. Prokhar, M. Pushkar, V. Rychakovskaya, V. Rodkina, I. Sadovska, N. Tychinina, B. Usach, A. Shaikan, V. Shevchuk, T. Shymokhanskaya and others.

Despite the significant achievements of scientists in the field of accounting and analytical support usage in economic entities management, the dynamism of the modern socio-economic environment, transformation processes and the need to take into account the branch aspect raised a number of problems related to the analysis of "accounting and analytical support" concept. The author considers that it is very important to continue the study of the functional content of accounting

and analytical information at the level of enterprise management and development.

Information is "a collection of data about the state of the managed system, control actions and the external environment" [6, p. 22].

In the management terminology, at the level of general definitions, the term "accounting and analytical support" that means information support for the management decision-making process is widely used [20]. Scientists investigate the accounting and analytical support of various activities of economic entities, in particular: management of enterprises and corporations [5, 9]; cost management [3]; management of labor costs [2]; innovative development of the enterprise [4]; capital [12]; analysis [5]; planning [1]; accountability [19]; economic security [16]; accounting expertise [10], etc. This testifies that "accounting and analytical support" has its thematic elements (subsystems), and therefore can be considered as a category of accounting.

The meaning of the concept «accounting and analytical support» according to the views of different scientists is given in table 1.

Table1

Definitions of the concept "accounting and analytical support"

Author	Concept meaning
H. Brik [3]	Accounting and analytical support of enterprise management is the system of information accumulation, synthesis and transfer that helps managers to make decisions, plan and control the economic entity activity
N. Goliachuk [5]	Accounting and analytical support is a component of information support for enterprise management, which allows to solve functional management tasks, provide management with complete and reliable information about business processes and relations with the external environment
I. Kirilov [8]	Accounting and analytical support is a system of data collection that comprises grouping of accounting information in the necessary context for management needs and preparationof financial statements. Herewith, analytical accounting allows to detalize information about the object in the monetary and (or) natural terms
V. Rodkina [14]	Accounting and analytical support can be defined as an interactive structure that includes personnel, equipment and procedures, combined by the information flow and used by logistical management for planning, regulation, control and analysis of the operation and development
N. Tychinina [15]	Accounting and analytical support of the enterprise development is a unity of accounting and analysis systems that are integrated by information flows and for managing economic processes while choosing (or implementing) sustainable development areas and their financing options
T. Shymokhanskaya [18]	Accounting and analytical support is an information system consisting of interconnected subsystems: accounting, financial, management (production), and tax accounting; accountability prepared for different needs; analysis of financial and economic activities and financial analysis of accountability

The table shows that there are four basic terms that are associated with the provision of management with information, while explaining the informative meaning of which the words "accounting" and "analysis" are encountered directly and / or indirectly.

Accounting and analytical system as an information resource that accumulates, summarizes and organizes information should include such basic elements as primary and consolidated accounting documents, accounting registers, internal and financial accountability.

V. Panteleev, T. Kaminskaya, V. Rychakovskaya offer similar interpretations of information support. In particular, T. Kaminskaya defines the concept of "accounting and analytical support" as "a system of accumulation, processing, summarizing, presentation and analysis of financial information, ensuring its quantity and quality for enterprise management" [7, 13].

V. Rychakovskaya points out that information connecting the accounting and analytical system performs the guiding role in the process of accounting and analytical support. This information is contained in the subsystems of financial, management and tax accounting [13].

Accounting and analytical information should provide employees of different levels of the enterprise with the necessary data. The information contained in enterprise cost records and accounting registers should be presented in the most convenient sections for a comprehensive assessment of the enterprise activity and making management decisions.

A. Pilipenko notes that "any information that arises in an enterprise management system must have a certain technological and organizational basis to support its own existence". The accounting systems available at each enterprise are offered to be the fundamentals for this [11].

However, it is necessary to take into consideration that the level of such systems organization will significantly differ from the general level of organizational culture at the enterprise and available technical capabilities. In addition, the necessity for a strategic orientation of the accounting process requires incorporating of the certain analytical functions into the existing subsystems".

As A.V. Shaikan points out, "successful activity of an enterprise in the competitive environment characterized by a change of internal and external factors is possible while developing an effective tactical and strategic management system. The effective operation of such a management system is possible only at the "good" (high) level of quality of its individual subsystems – the tactical and strategic management subsystems, as well as their coordinated interaction. On the other hand, well-run system of operational, statistical and business accounting provides the qualitative interaction of individual elements and management subsystems. And the enterprise can achieve the best indices due to excellent work and interaction of all areas and types of accounting as a unified accounting system" [17].

According to the existing interpretations and justifying the need for a close

connection of accounting and analytical system with the enterprise strategy, we offer the following definition: accounting and analytical support in management is a combination of processed accounting and non-accounting information aimed to manage an enterprise, its activities or its individual objects (costs, sales, innovation activity, etc.).

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ENERGY SAVING AND USE OF ALTERNATIVE ENERGY SOURCES AS A COMPONENT OF TECHNOLOGICAL REENGINEERING OF THE AGROFOOD SPHERE ENTERPRISES

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The global problems of our time associated with deterioration of the ecological situation are extremely relevant, since they threaten the vital activity of mankind. The global trends of intensification of production, growth of its volumes, and increase of waste products, significantly worsen the ecological situation. In addition, this is complicated by the consequences of the negative impact of environmental deterioration on the health and lives of people. That is why environmental and energy problems require urgent solutions, especially at the present stage of society

development [11].

The above-mentioned is also relevant for the social-ecological-economic condition of Ukraine, because today the problem of increasing waste products and wrong disposal, which affects the ecological deterioration of soil, groundwater and air and as a consequence, a negative impact on the human gene pool, requires searching ways of its urgent solutions, one of which is the use of energy saving technologies and the use of alternative energy sources.

The problems of energy saving, the development of alternative energy sources and the improvement of green production are the main topics of discussion at the UN conference in Stockholm (1972), in Rio de Janeiro (1992), at the World Summit on Sustainable Development in Johannesburg (2002) and meetings of the European Parliament during the past decades. According to the results of the discussion, European countries form strategic and tactical plans for the development of renewable energy sources, solving environmental problems in order to ensure the future development of mankind. However, a detailed study of the provisions declared in the respective development programs shows that not all methods and tools for solving existing problems are acceptable for Ukraine. Modern economic conditions in Ukraine can not be equated to economic conditions in France, Germany, Italy or other countries covered by the Kyoto Protocol. Therefore, Ukraine needs adapted to the domestic conditions scientific and applied developments, which take into account the current economic situation of Ukraine and its potential opportunities [15].

In conditions of deterioration ecological situation, for society became extremely important to ensure its energy needs without causing ecological damage to the environment. One of the solutions to this problem may be the use of alternative energy.

According to N.O. Perederii, the main reasons for drawing attention to alternative energy are:

1) increase of population, needs, in particular the continuous increase of the industrial needs as the major consumer of the energy industry;

2) negative impact of the cost increase of natural energy sources on industrial production and living standards;

3) quantity reduction of natural sources: coal, oil, natural gas, uranium in the future and high costs of exploring new locations;

4) insufficient attention to avoiding and minimizing the risks of environmental pollution associated with the use of natural and nuclear energy sources. In this context, the problem of global warming, which is the release of carbon dioxide (CO^2) during the combustion of coal, oil and gasoline in the process of obtaining heat, electricity and ensuring the operation of vehicles, creates the so-called "greenhouse effect" is important [12].

V.A. Skrypnychenko notes that this problem is associated with the underdevelopment of the domestic market, the low competitiveness of national output, and the weakening of government control of the economy during the past

two decades. This situation is caused by structural disparities – a considerable proportion of material-, energy- and labor-intensive production. All this requires new approaches to the solution of this problem – the development of innovative and renewable energy sources. Their advantage is the inexhaustibility and environmental friendliness. That is why the countries of the European Union are gradually switching over to the use energy of biomass, wind, sun and water. In the energy balance of some countries, the share of non-traditional sources reaches 40% [14].

The process of ecologization of domestic agricultural production is extremely important, which, in turn, solves one of the main problems of ecological production, the preservation and strengthening of energy independence.

V.S. Voronetska considers the process of ecologization of agricultural production in the context of the use of certain alternative economic systems, the introduction of which should be agro-ecological principles, according to which the agricultural enterprise is considered as an ecological-economic system based on environmentally sound and rational production methods, ensuring high product and raw materials quality, minimal environmental impact and production efficiency [4].

Technological reengineering can be one of the solutions to the problem of energy saving and the use of alternative sources of electricity at agrofood sphere enterprises.

Reengineering and technical re-equipment of Ukrainian agrofood sphere enterprises will allow to solve problematic issues related to an increase in production volumes, which are in demand due to a decrease in production time, an increase in production capacity, and an increase in the level of occupational safety in the enterprise; ensuring a high level of product quality, the emergence of new types of products [9].

L. Varava and H. Kravchenko note that production reengineering is aimed at realization technical and technological transformations, namely the improvement of production methods and technologies, as an option, the modernization or replacement of physically and morally worn out equipment.

Thus, the production reengineering causes an increase in the technical and technological level of production due to the introduction of resource-saving technologies into the production process, an increase in the utilization rate of a powerful production enterprise, and optimization of the level and structure of production costs [2].

Since technological reengineering is an integral part of comprehensive reengineering, it also has three stages: preparatory, project, and technological reengineering.

At the first stage, the real competitiveness of the technical and technological base of the enterprise is determined, that is, the internal capabilities of the enterprise, the performance parameters of the production program (energy intensity, cost of materials and raw materials, the duration of the processes, its structure, technical level of assets, condition and composition of equipment, use and reproduction of

assets, technical equipment of labor) are evaluated.

At the second stage (project), technological needs, assets parameters which are optimal for satisfaction future needs for the enterprise's products are determined, that is, technological processes are assessed, bottlenecks and measures to eliminate its are determined.

At the third stage, technological reengineering is carried out in three forms: the introduction of new technologies or individual technological processes (automation, fuel and energy saving, material intensity); improvement of the general condition of assets (repair, modernization, reconstruction, new construction, acquisition) elimination of surplus assets [7].

The process of technological reengineering of the agrofood sphere enterprises is intended to solve issues related to energy saving activities and energy efficiency. Such a need for energy saving and energy efficiency of a production enterprise was formed and specified in ISO 4472:2008 "Energy saving. Energy management systems of production enterprises". This standard notes that energy saving activities at enterprises are carried out within the energy saving policy. Conducting energy saving policies should be based on the results of the economic and energy survey of all production and management units. Now the major factor in the formation of energy efficiency of agricultural enterprises is the creation of an efficiently operating energy saving management system, which should contain technical, organizational and economic components. The technical component should be based on improving production efficiency and reducing the energy intensity of products through the introduction of energy saving measures, the use of alternative energy sources, the innovative production technologies, reduction of energy losses, and replacement of energy sources. The organizational and economic component should be based on the creation of an energy management service of an enterprise whose activity is aimed at ensuring the rational use of fuel and energy resources and is based on obtaining energy technology information by means of accounting, on conducting standard energy technology measurement, controlling and analyzing the efficiency of using energy resources and introducing energy saving measures [6].

Agreeing with M.A. Vozniuk, we propose to separate the following tasks of energy saving management: ensuring the growth of the level of production efficiency and expansion of the volume and range of products as a result of the introduction of energy efficiency equipment and machinery; definition, economic assessment, development and implementation of energy saving measures; creating a "map" of energy consumption, conducting energy analysis to identify potential savings and, as a result, reducing the cost of finished products; reducing the negative impact of production processes and the use of energy resources on the environment [3].

The above-mentioned tasks can be implemented by introducing technology reengineering in the agrofood sphere enterprise. Positive is the awareness of enterprises of the urgent need to improve the energy efficiency of production in combination with environmental safety, obtaining energy resources and using,

for this purpose, alternative sources of combustible waste detrimental to the environment which are subject to destruction, emissions as an additional source of energy [1].

Technological reengineering of the agrofood sphere enterprise will allow energy saving and the use of alternative energy sources (Fig. 1).

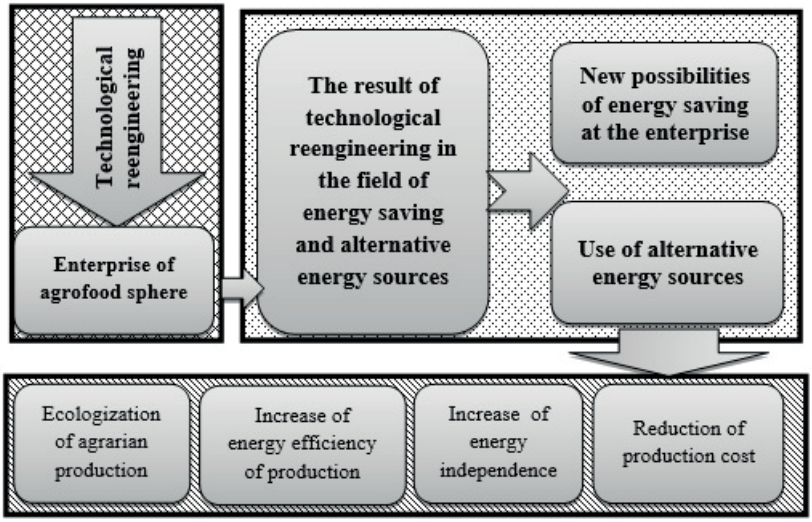

Fig. 1. Optimistic predictable result of technological reengineering in the field of energy saving and the use of alternative energy sources
Source: authoring

A. Kolevatova notes that the development of the agrarian sector and the use of alternative energy sources are associated with a decrease in dependence on energy resources which at the regional and state levels, interacting with energy security. The use of renewable energy sources is also associated with a decrease in the negative impact on the environment, which creates conditions for ensuring an appropriate level of environmental safety. In order to further develop the agrarian sector in the context of energy saving, investments are needed, both foreign and state, to provide a significant opportunity to introduce the innovative technologies, which are one of the ways to effectively solve energy problems. This may be the processing of specific agricultural raw materials (crushed vegetable biomass, manure, waste) into biogas and related products, such as liquid organic fertilizers [8].

In the Energy Strategy of Ukraine until 2030, it is noted that the components of the energy saving management system depend on inter-industry and intra-industry changes in the country's economy. According to the Energy Strategy of Ukraine until 2030, the estimated energy saving potential of the country will be 318.4

million tons of reference fuel in 2030, which is almost one and a half times higher than the current level of primary energy consumption.

The introduction of technological and structural energy supply measures will allow a 51.3% reduction in the level of energy consumption in 2030 – from 621 million tons of reference fuel at the current level of energy efficiency of 302.7 million tons of reference fuel with the predicted level [5].

O.O. Prutska and O.M. Tkachuk adhere to the opinion that the situation with the introduction of unconventional renewable energy sources in the agrofood sector of Ukraine is characterized by the following main features [13]:

- comprehensive application of modern methods, technologies and technical means for alternative energy supply requires additional legislative support and long-term consistency of state policy in the field of energy saving;
- energy supply based on the use of renewable energy sources requires the investment of significant financial and material resources, in modern conditions it is a significant problem.

Ukraine practically lacks mass production of many types of technological equipment for the use of unconventional energy sources.

The unconventional (alternative) energy resource S.V. Naraievskyi includes all types of renewable energy sources: biomass (excluding firewood), solar energy, geothermal energy, wind energy, tidal energy, waves, and watercourses (excluding hydro energy of large watercourses) [10].

Thus, the technological reengineering of the agrofood enterprise will be effectively implemented, which will open up new opportunities in the field of energy saving and the use of alternative energy sources, which today is extremely important in the context of an environmental crisis and a shortage of energy resources.

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ADAPTATION OF THE PROSPECTIVE SPECIALISTS IN AGRONOMY TO PROFESSIONAL ACTIVITIES AS A COMPLEX OF THEIR PROFESSIONALISM

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The structure of adaptation of prospective agronomists to professional activity in educational process in the form of a combination of motivational, cognitive, procedural and assessing components is clarified. The specificity and interrelation of students' socio-professional and socio-psychological adaptation are revealed. The study analyzes the specifics of the agricultural production sector, which determines the process of prospective agronomists' professional adaptation in the process of their professional training; the main adaptation resources of the prospective specialists of the agrarian sphere are determined. On the basis of theoretical analysis

of the problem, a conclusion is made about the place and role of university's phase of professional adaptation in the general adaptation process (pre-university, university, postgraduate professional adaptation).

Adaptability, that is, the dynamic balance in the system «man – professional environment», is manifested primarily in the efficiency of man's activities characterized by high productivity and product quality, optimal energy and optimal nervous and mental efficiency, as well as professional satisfaction.

The main provisions of the National Doctrine of the Development of Education of Ukraine, the Bologna Process, the Laws of Ukraine «On Education», «On Higher Education», the issues of humanization and humanitarian approach in education are the priority ideas, the implementation of which should ensure the transition of Ukrainian education in the XXI-st century to a new humanistic and innovative educational philosophy. In agrarian education, the professional training of the prospective specialists is oriented towards a market economy, since in today's agro-industrial complex a professional is needed, capable of effectively introducing the latest technologies into the agricultural branch, thus becoming a true master of his earth. At the same time, the question arises about the formation of a personality capable of reviving the best traditions of the Ukrainian village and agricultural labor; a specialist who realizes the importance and significance of his profession for society and the environment.

The formulation of article's objectives. In this regard, the educational process in agrarian universities requires the introduction of modern educational technologies that will ensure the use of best experience of domestic and foreign scientists in the area of adaptation of the prospective agronomists to their future professional activities within the changing conditions of contemporary Ukrainian agricultural sector.

So the objectives of the article are to analyze the problems of prospective agronomists' professional adaptation in the process of their professional training, as well as to determine the main adaptation resources of the prospective specialists of agrarian sphere.

Results. Professional adaptation is a complex phenomenon since it depends on a number of economic, political, socio-psychological, psycho-physiological and other factors that integrally determine this process. In the context of these problems, the pedagogical aspect of students' adaptation to their prospective agronomists' professional activity deserves special attention, covering the content, process and result of prospective specialists' professional training, as well as the changes taking place in Ukraine and the world.

The contemporary market dictates rather complex conditions for the quality and level of specialists' professional training regardless of the branch of economic activities. At the same time, agriculture is in a special position among other spheres of Ukrainian state, since market relations are being formed in agricultural sector rather slowly, and modern agricultural production technologies are being introduced in the countryside in much slower rates than in the city. Personnel policy

in agricultural production sector is not always well thought out, which, on the one hand, causes a tangible shortage of qualified specialists, and on the other, we have inappropriate and rather ineffective use of current human resource management for agriculture. According to A. Bartenyev's scientific researches [4], about 30% of agricultural graduates (budget form of education) settle in the rural territories, but among this small number only 15% leave their agricultural occupation and change their qualifications after the first year of professional activity. As a result, a shortage of professionally qualified specialists in agricultural branch is felt, and this applies not only to middle-level workers, but also to key agronomists, veterinarians, agricultural technicians and engineers, etc. It is clear that the main negative factors in this situation are economic; however, one cannot deny the significant role of social and psychological factors, including low level of professional adaptation, taking place long before the beginning of specialists' professional activity.

The process of prospective agronomists' professional adaptation, as well as other specialists in agrarian sector, is complicated by the specifics of agricultural production sector, which can be characterized by following features:

1. There is no sufficient number of vacancies for the graduates of agricultural universities to stay in the city. It is known that a significant number of agricultural students are reluctant to leave the city after graduating from the universities and having been adapted to the conditions of urban lifestyle. But it is very difficult for young agronomists to get a job in urban settings, so they often change the profession, just having left the walls of his university. Therefore, the state loses skilled, trained workers, and all the efforts of agricultural universities to provide a sufficient level of professional competence are nullified [24].

2. There is a seasonal nature of active professional activities of those engaged in agricultural sector, including those with higher education. As A. Kravchenko [12] notes, the extreme tension of agricultural labor without any fixed working day falls on the period of crops, harvesting and haymaking. Then the working day lasts 14-16 hours; whereas the winter months do not require such an intensive work, and there is an excess of labor. In addition, seasonality of agricultural labor is characterized by a high proportion of manual labor thus revealing dependence on region's climatic conditions (so-called risky agriculture). An additional consequence of these factors being a certain explanation of the complexity of professional adaptation of a specialist of agrarian sphere is his/herconstant work in the open air, regardless of weather conditions. Let's also add that a young specialist-agronomist should be versatility trained, since narrow-profile specialists cannot fully realize his/her professional activities in rural territories. So, a young agronomist after graduation should have sufficient knowledge of agro chemistry, soil science, seed science, technology of processing and preservation of agricultural products, etc. Such extensive knowledge can provide the specialist not only with a quick adaptation to professional activity, but also with a sufficient social status.

3. There are financial instability of agrarian production and low income of

rural population, including agricultural specialists. This instability is determined by external (political, economic, demographic) and internal (weather conditions, fuel prices, credit policy, etc.) influences on agriculture. In such a situation, young agronomists cannot plan their life trajectory, status growth, etc., which, of course, does not contribute to their successful professional adaptation [18].

4. There is also a limited career development in the rural society and the narrow spectrum of vacancies, which makes professional adaptation also limited concerning the status social roles that are available to young specialists [24].

5. There are also a high level of social control and the peculiarities of rural lifestyle, which prescribes certain requirements for the graduate of the agrarian sector concerning communication in social environment, as well as orientation in society, etc., since for rural areas, for example, collective labor style, collective solution of social problems, the prevalence of customary law and communal character of moral regulation of people behavior are more characteristic. Therefore, the young specialist immediately becomes the object of attention for the whole population (being in the focus of discussion of all his/her mistakes and behavior peculiarities), which, of course, does not contribute to a quick and successful professional adaptation.

6. At last, in rural areas there is a low level of development of social infrastructure, limited access to leisure centers, insufficient level of household services, etc.

In view of the mentioned problems and difficulties in professional adaptation of the graduates of agrarian universities, we can conclude that these adaptation problems are typical for prospective agronomists since the beginning of their professional training because:

1) the bulk of the entrants who have chosen a specialty in agronomy are rural residents, and therefore these adaptation problems are known to them since childhood;

2) a significant part of the prospective agronomists do not plan to return to professional activities in the agrarian sector, and uses the universities as a time and place for adaptation to urban environment;

3) during the period of studying in the university, the situation in agriculture is being changed, so the graduate may not be fully prepared for this situation.

On this basis, we can formulate the conclusion that professional adaptation should be an integral part of agrarian specialists' professional training as a system entity.

The specifics of the prospective agronomist's adaptation to their future job lies also in the activity of the adaptation vectors, which correspond to the system of relations man-nature», «man-society», «man-culture». It is clear that the prospective agronomist is much more concentrated in the process of professional adaptation to the «man-nature» system, because his/her professional activity is taking place with the significant participation of this structural component of the system of human relations with the world.

Hence it is important to adapt the prospective agronomist to professional activity

during his/her professional training that reveals such adaptive resources:

– physiological, psychological and cognitive qualities of the student's personality, which enable him/her to adapt to the conditions of studying in agrarian university, to accumulate a set of professional knowledge, to adapt to a professionally oriented environment of an agrarian university;

– personality features of the students that influence the implementation of the above mentioned psycho physiological and intellectual resources, thus providing the subjectivity of the objective circumstances of professional training;

– social characteristics of the prospective agronomist (status-role position in a student group, socio-economic status, personal social experience, etc).

The analysis of scientific works on the problem of adaptation (including professional adaptation) as a pedagogical scientific phenomenon made it possible to make a conclusion about its diversity, taking into account the criterion of classification, and interdependence of its components. Thus, V. Semichenko proposes to consider adaptation in the framework of system approach as a complex structural entity enabling to differentiate the following subsystems:

1) energy subsystem, which reflects the resource reserve of the organism to ensure its activities in adaptation, which implies increased energy consumption;

2) environmental subsystem, the essence of which lies in human relations and externally subject conditions;

3) activity subsystem that reflects person's ability to perform a certain set of actions in adaptation period (the assimilation of new ways of behavior which reject the existing skills, being superfluous in new adaptation conditions);

4) social subsystem, which embodies all the characteristics of the individual's entry into a new social space (the adoption of its norms and values by a person, on the one hand, and adoption a person by a human society, on the other);

5) a personality subsystem, being determined by personality level of adaptability (reduction of persons' anxiety, lack of desire to change their personality situation, domination of positive emotions, self-confidence, self-power, adequate self-esteem) [25].

Due to the analysis of labor adaptation structure V. Poltorak distinguishes the psycho-physiological (specialist's assimilation of special labor conditions at a new workplace), socio-psychological (the introduction of a specialist into the system of relationships within a separate team, adaptation to the rules and norms of cohabitation in it), the professional adaptation proper (specialist's acquisition of professional skills and capacities that have not being formed during the professional training, or the development of those skills and capacities that have been formed in the process of such a training) [22].

Valuable is the opinion of L. Yegorov, who in his researches concerning the stages of professional development presents the professional adaptation as a integral unity of several basic stages, in particular: the pre-university stage is characterized by person's definition of the sphere of prospective professional activity, as well as outlining the professional motivation and identification of prerequisites

for choosing the future profession, the formation of the basis of professional orientation; the university stage, providing the formation in the students the professional motivation, self-awareness, competence; the after-university stage, outlining students 'adaptation to real conditions of work, specifically, the final adjustment of professional orientation, adaptation to the conditions of professional activity, adaptation to professional status, realization of personality and professional potential, development of professional skills [22].

In the structure of the university's professional adaptation, one can singled out social-professional and socio-psychological adaptation.

Socio-professional adaptation is considered (P.R.Atutov, O.I.Zotova, I.K.Kryazheva, N.L.Kolominsky, Ye.M.Pavlyuttenkov, etc.) [1;10; 13; 11; 19] as a phenomenon, the formation of which is influenced by such factors as the social status of the prospective specialist, the level of his/her professional self-determination, the formation in a student a socially significant professional abilities; his/her social status and role in the group, as well as personality's specific characteristics that determine the conditions for revealing students' professional qualities during their professional training [9].

Consequently, adaptation is an inevitable, obligatory phenomenon of the transition of a personality from one type of activity to another.

The result of social and professional adaptation is the socio-professional status of a specialist working in agro-industrial complex. The socio-professional status is defined by the scientists as the place of the specialists in their professional structure, reflecting the level of their socio-economic status, qualifications, and professional self-awareness.

Socio-psychological adaptation (O. Zotova, I. Kryazheva, A. Nalchandzhian, T. Shibutani, etc.) [10; 13; 16; 26] expresses changes in students' social roles, their communicative environment. Due to socio-psychological adaptation, being an important component of the professional adaptation, a correction of prospective specialists' needs, the system of their values, the need for flexible regulation of their behavior, as well as the need for professional self-affirmation in the student group is realized. Socio-psychological adaptation promotes the students' assimilation of the norms and traditions of the university where they study, which correspond to the essence and nature of chosen profession. The psychological component of socio-psychological adaptation reflects the restructuring of students' thinking processes and such leading mental functions, as memory, imagination, representation, attention. In the process of students' professional training the emotional load on them increases due to their need for emotional and volitional entry into prospective profession.

Taking into account the fact that the approaches to structuring the professional adaptation can be different, we have come to the conclusion that the structure of students' professional adaptation during their professional training is understood on the basis of such conceptual thesis: professional adaptation of the individual is a holistic multicomponent system whose properties cannot be reduced to the

sum of separate components' properties [15]. At the same time, all components of professional adaptation have a relatively independent status. If one of the components (for example, cognitive or procedural) predominates, the result may be different. So, in our opinion, there can be no direct correlation between the level of academic success of the prospective agronomist and the level of his/her motivation for professional activity in agrarian sector.

The analysis of scientific literature, as well as ours observation of the process of professional training and professional adaptation of the prospective agro industrial complex specialists made it possible to conclude that the structure of their adaptation to professional activity in the process of their training can be represented as a unity of several components– motivational, cognitive, procedural, and assessing ones.

The motivation component of the professional adaptation is a particular element of this phenomenon, since the students' motivation to realize themselves as a prospective specialist depends not only on their adaptation to the conditions of study, but also on further adaptation as a prospective specialist. The lack of such a motivation results in the lack of students' active mastering the knowledge thus limiting their possibilities to professional self-realization. Unfortunately, there is a lot of such unmotivated students [20]. Therefore, the task of the university is to create a positive image of the prospective profession, which will provide sufficient professional motivation as a component of professional adaptation. According to N. Pylypenko, the motivational mechanisms determine the success of the process of specialists' professional adaptation [21]. The essence of these motivational mechanisms consists in appropriate change in the ratio of «the subject of activity –the professional environment»; but if we assume that the educational environment of the university is characterized with a certain level of professionalism, then the motivation for obtaining professional knowledge, the formation of professional skills and capacities are an integral part of students' professional adaptation during their training.

By and large, students' motivation for their prospective profession is an active process aimed at eliminating the student's inadequate professional orientations, thus fulfilling an important function in shaping the structure of personality adaptation factors when professional activity becomes a reality and the main form of human activity [14]. Given the fact that contemporary science considers two main factors of forming the professional adaptation (real one being measured by trainee's professional activity; and potential one being determined by specialist's attitude to his/her profession and the motives for his/her choice), then an important conclusion can be formulated: the motivation component of the professional adaptation of the prospective agronomist has a potential character and provides a positive image of the prospective professional activity, which should be consolidated by students' experience in solving practical professional tasks. Thus the motives of educational activity play an important role in the content of motivational component. And since students' educational activity is aimed at mastering professional knowledge, so their

professional training motivation play the role of an important factor of professional adaptation.

As the results of the research show, a large proportion of secondary school graduates select a prospective profession due to a coincidence of certain circumstances, and not by their calling. Therefore, at the end of study, the students often do not consider their choice to be successful, which undoubtedly reduces the motivation to their prospective work and influences professional adaptation during the study. In addition, the system of higher professional education is a rather conservative social institution, and the agrarian sphere requires highly skilled, technologically competent specialists capable of working in the context of rapid modernization changes. Therefore, students that are motivated enough for their prospective activity tend to adapt professionally, first of all, during their production practices in agrarian sector, because it is there that they can get real practical knowledge.

The process of forming a positive motivation in the students is characteristic of all mechanisms of motivation, known in psychology: the mechanism of motivation for success, the mechanism of avoidance, the mechanism of the conflict«achievement-avoidance». According to N. Pylypenko, in the process of students' professional adaptation during their training the mechanism for avoiding failures is not productive and important, because it involves students' refusal of full professional self-realization in the profession of agronomist; this refusal results in insufficient resources for successful professional adaptation within the conflict«achievement-avoidance» mechanism [21].

Thecognitive component of the prospective agronomists' adaptation to their professional activity presupposes, first of all, students' sufficient level of knowledge in their perspective specialty, covering a wide range of humanitarian disciplines necessary for successful entry into the professional field. K.M. Gurevich notes that «…any person is capable of mastering any profession. The matter lies in the problem, how much time and effort it will take»[6]. In general, the knowledge and skills of a university graduate are the basic capital that is formed throughout the training process and enables the prospective agronomists to declare their professional claims and to enhance the level of professional adaptation at the stage of obtaining a profession.

The acquisition of a complex of professional knowledge enables the prospective specialists to develop adaptive and orientation abilities that help to substitute objective flows of professional and not only professional information, that is, to develop their professional mentality. Moreover, the first and second training years, as already noted above, are the process of students 'adaptation to educational process of the agrarian university; and this is propaedeutics for students' professional adaptation being consolidated in senior years of study [15].

The knowledge, being acquired in the process of theoretical training, is realized by the students in the course of practical activity within theoretical training elements during practical classes and within more or less integral process of professional

activity in the course of production practices; in all, this activity forms the basis of the procedural component of students' adaptation to professional activity, which determines the effectiveness of the formation of pertinent capacities and professional skills. Thanks to students 'training activity, these skills operationalize students' knowledge and thus cause qualitative changes in perspective specialists' personality characteristics. The mentioned component also reflects students' adaptation to new psycho-physiological loads, a certain rhythm of life, methods and forms of training (and subsequently, the educational-professional), activity, as well as involvement in stressful studying work. If at the same time students' motivation to master the profession of agronomist is not sufficiently stable, so within the procedural component there can be a final correction of professional intentions that determine the content of students' professional adaptation.

Within the procedural component, certain subjective difficulties clearly manifest themselves, which adversely affect students' adaptation to professional activity in general, namely:

– insufficient level of knowledge in professional disciplines, which were mastered by the students superficially, thus does not allowing to form professional skills as the basis of prospective professional activity in agrarian sphere;

– low level of students' working and educational activity, which together with a small life experience and lack of professional experience cause insufficient social-professional maturity of prospective specialists;

– insufficient expressiveness of professional motivation, which does not contribute to students' desire to realize their knowledge in practical skills and abilities.

The development of the procedural component of students' adaptation to professional activity is clearly influenced by the effectiveness of all production practices being envisaged by the curriculum. So we can emphasize a special place and role of a production practice in the course of students' professional training and professional adaptation, since practice is an integral part of educational process and allows consistently combine students' theoretical training with their practical professional activities [16]. It should be noted that the problem of the influence of production practice on students' professional adaptation is insufficiently outlined in scientific literature. One can name a single scientific study [24], but even this work has a superficial analysis of production practice as a tool of professional adaptation.

The assessing component of the prospective agronomists' adaptation to their professional activity contains, in our opinion, the assessment and self-assessment of their adaptability to prospective profession, as well as students' self-esteem of the level of satisfaction with the chosen profession. Satisfaction, as being evidenced by scientific research [2; 3; 5], is characterized by the scientists mainly as a phenomenon, which in a certain way affects the specialists' personality status and their professional development. Thus, in S. Voitovich's opinion, satisfaction is a «complex social and psychological phenomenon, which, depending on individual's

degree of socialization as well as the type of satisfaction, has a varied influence on human activity» [5].

The results of the pilot survey of the students (3-4 years of study, National University of Life and Environmental Sciences of Ukraine, the number of respondents is 86, and the sample is a coincidental one) showed that most prospective agronomists are not satisfied with their future professional activity, The reasons for this are different:

– unsatisfactory state of agriculture in the country as a whole – 63.9%;

– low salary of an agronomist – 91.8%;

– rural area as a place of professional activity – 37.2%;

– the indifference of the local leadership and the leadership of the country to the problems in agrarian sector – 51.1%;

– underdeveloped infrastructure in rural areas – 72.1%;

– low level of career opportunities for an agronomist – 33.7%;

– they are not going to work in the chosen profession at all – 44.1%.

It should be noted that students could choose several answers; therefore, getting digital data is significant. We will also add that the students who indicated that after graduation they were not going to work as agronomists could also express the reasons for their dissatisfaction with the profession.

Results of the pilot survey are presented in Fig. 1.

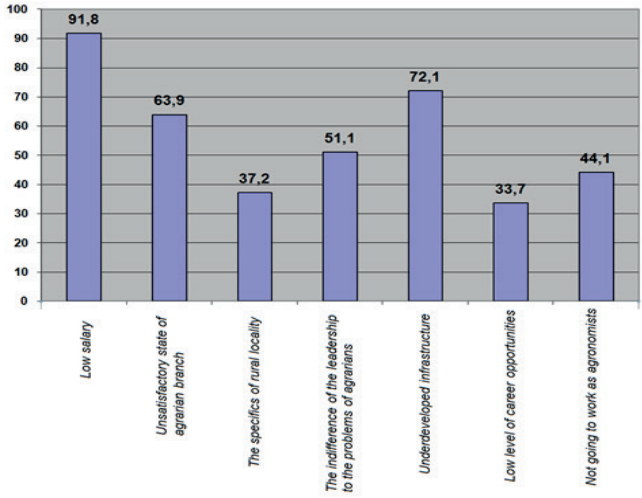

Fig.1. The main reasons for dissatisfaction of 3-4 year of study students with their prospectiveagronomist profession (in%)

The development of the assessing component of students' adaptation to their professional activity also affects the level of their professional self-determination,

and here is a direct correlation: the higher the level of students' professional self-identity, the more professionally adapted they can be considered at the stage of studying in the University of Agrarian Profile. And vice versa, the undervalued level of students' professional self-determination, their reluctance (inability) to see themselves among the representatives of chosen profession determine an inadequate level of students' professional adaptability in the process of professional training.

The idea of professional development, which is directly related to the problem of professional adaptation, is manifested at three levels in psychological literature [8; 23]:

– intentional, being realization of the aspirations of the subject of professional adaptation («I want»);

– potential, being self-assessment of students' cognitive and intellectual opportunities in professional development and professional adaptation («I can»);

– post-adaptation, at the level of consolidation of stable psycho physiological and personality characteristics of the subject of professional adaptation («I have»).

These levels [8], can be understood as the basis for differentiation of students' trajectories of professional development, and therefore, professional adaptation. Interpreting these considerations, we determined the student's resulting and assessing positions in the process of professional adaptation as a trajectory:

– desirable, expressing the desire to have a sufficient level of students' professional adaptation while studying in agrarian university, so that in a real professional situation they have a constant and consistent professional development without adaptation complications;

– possible, expressing realization of students' confidence that there is an opportunity to achieve a sufficient level of professional adaptation due to their abilities and interests;

–real, expressing objective assurance that students achieve a certain level of professional adaptation during the training period, and this will be quite enough to have no problems with professional adaptation in real situations of professional activity.

The content characteristics of students' adaptation to professional activity come from the criteria of adaptability, which can be both subjective and objective. The criteria can include the level of success (in general, and within professional disciplines, in particular), the successful passing of production practices, the level of formation of basic professional competencies, being outlined by educational and qualification characteristics of an agronomist.

To subjective criteria include:

– self-assessment of students' professional adaptation (satisfaction with chosen profession, correlation of values and professional orientations);

–professional motivation in chosen profession (social and professional motivation);

– the formation of personality qualities promoting professional development;

–personality's professional orientation (level of social-professional activity during training, aspiration for permanent professional self-education, etc.).

The process of professional adaptation can lead to different (as well as to mutually exclusive in their content, structure, and personality's individual characteristics) adaptation effects, which can be outlined as follows:

1. Students' professional adaptation contributes to their self-improvement, as well as to development of both the students himself and his educational environment, without violating the studying process and without introducing revolutionary changes in the content of professional training.

2. The process of professional adaptation ensures the integrity of the personality of the prospective specialist and / or the system of professional training in case of threat to its integrity.

3. The process of professional adaptation does not lead neither to any significant violations of the system of professional training, nor to any personality distortions.

4. The process of students' professional adaptation leads to destructive consequences: violation of professional motivation, destruction of the content and forms of professional training, lowering the level of professional readiness of the prospective specialist, etc.

Thus, the structure of adaptation of prospective agronomists to professional activity in educational process in the form of a combination of motivational, cognitive, procedural and assessing components is clarified. The specificity and interrelation of students' socio-professional and socio-psychological adaptation are revealed. The study analyzes the specifics of the agricultural production sector, which determines the process of prospective agronomists' professional adaptation in the process of their professional training; the main adaptation resources of the prospective specialists of the agrarian sphere are determined. On the basis of theoretical analysis of the problem, a conclusion is made about the place and role of university's phase of professional adaptation in the general adaptation process (pre-university, university, postgraduate professional adaptation).

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ORGANIZATION OF ACTIVITY AND ACCOUNTING FOR NOT-FOR-PROFIT ORGANIZATIONS: THE FOREIGN EXPERIENCE

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A nonprofit organization is an organization whose goal is something other than earning a profit for its owners Usually its goal is to provide services. This definition corresponds approximately to that found in most state statutes. The definition also emphasizes a basic distinction between the two types of organizations a distinction that is the cause of many management control problems in nonprofit organizations. In a for-profit company, decisions made by management are intended to increase (or at least maintain) profits. Success is measured, to a degree, by the amount of profit the organization earns. By contrast, in a nonprofit organization, decisions made by management ordinarily are intended to produce the best possible service with the available resources [2].

The nonprofit sector is the sum of private, voluntary, and nonprofit organizations and associations. It describes a set of organizations and activities next to the institutional complexes of government, state, or public sector on the one hand, and the forprofit or business sector on the other. Sometimes referred to as the "third sector" with government and its agencies of public administration being the first, and the world of business or commerce being the second, it is a sector that has gained more prominence in recent years - in the fields of welfare provision, education, community development, international relations, the environment, or arts and culture [5].

Success in a nonprofit organization is measured primarily by how much service the organization provides and by how well these services are rendered. More basically, the success of a nonprofit organiza- tion is measured by how much it contributes to the public well-being.

An important distinction exists between public (governmental) and private nonprofit organizations. Within the public category, the division among federal, state, and local government entities of USA provides a useful organizing scheme; any of these entities can have agencies, commissions, or authorities.

Within the private category, an important distinction is between charitable organizations, for which donor contributions are tax deductible, and commercial and membership organizations, for which donor contributions ordinarily are not

tax deductible. The former category includes health, educational, social service, religious, cultural, and scientific organizations; in the latter are social clubs, fraternal organizations, labor unions, and similar entities.

Non-for-profit organizations have similar financial transactions, accounting and bookkeeping needs as any for-profit organization.

The American Institute of CPAs (AICPA) is the world's largest member association representing the CPA profession with more than 418000 members in 143 countries and a history of serving the public interest since 1887. AICPA members represent many areas of practice, including business and industry, public practice, government, education and consulting [1].

The AICPA sets ethical standards for the profession and U.S. auditing standards for private companies, nonprofit organizations, federal, state and local governments. It develops and grades the Uniform CPA Examination, and offers specialized credentials for qualified professionals who focus on personal financial planning; forensic accounting; business valuation; and information management and technology assurance. With the Chartered Institute of Management Accountants (CIMA), it offers a Chartered Global Management Accountant (CGMA) designation, which sets the global benchmark for quality and recognition in management accounting.

The AICPA and CIMA also make up the Association of International Certified Professional Accountants (the Association), which represents public and managerial accounting globally, advocating for the public interest and advancing the CPAs, CGMAs and other accounting and finance qualities, competencies and employability professionals worldwide.

The AICPA Not-for-Profit Section supports not-for-profits (NFPs) and the professionals who serve NFPs. The Section produces and delivers information, tools and resources that facilitate timely compliance with standards and regulations, promote the excellence of our members as leaders in the NFP sector, and serve as a hub for peer-to-peer learning and information sharing. Topics cover NFP requirements in Accounting & Financial Reporting, Tax Compliance, Governance and Assurance.

Foreign experience shows that until recently, accounting for non-profit organizations was divided into four categories, and accounting principles were established mainly by the American Institute of Certified Public Accountants (AICPA) in separate audit manuals for each of them. The four categories were as follows:

– colleges and universities;

– hospitals and other health-care entities;

– voluntary health and welfare organizations;

– «other» nonprofit organizations.

Like any organization (or individual), a not-for-profit organization should have sufficient resources to carry out its objectives. However, there is no real need or

justification for “making a profit” - that is, havingan excess of income over expenses for a year or having an excess of assets over liabilities at the end of a year beyond what is needed to provide a reasonable cushion or reserve against a rainy day or provide for future growth plans of the organization. A surplus or profit is only incidental.

Not-for-profit organizations have a responsibility to account for funds that they have received. This responsibility includes accounting for certain specific funds that have been given for use in a particular project as well as a general obligation to employ the organization’s resources effectively. Emphasis, thus, is placed on accountability and stewardship. To the extent that the organization has received gifts restricted for a specific purpose, it may segregate those resources and report separately on their receipt and disposition [7].

The Not-for-Profit Guide applies only to nongovernmental not-for-profits and includes the following types of organizations:

– cemetery organizations
– civic and community organizations
– colleges and universities
– elementary and secondary schools
– federated fund-raising organizations
– fraternal organizations
– labor unions
– libraries
– museums
– other cultural organizations
– performing arts organizations
– political parties
– political action committees
– private and community foundations
– professional associations
– public broadcasting stations
– religious organizations
– research and scientific organizations
– social and country clubs
– trade associations
– voluntary health and welfare organizations
– zoological and botanical societies.

A voluntary health and welfare organization receives most of its support from voluntary contributions and is engaged in activities that promote the general health and well-being of the public. Typically, these organizations generate some revenues through user charges but receive most of their support from others who do not receive direct benefits.

FASB and GASB standards require different reporting. For example, FASB

reports equity as net assets that are permanently restricted, temporarily restricted, or unrestricted. FASB also requires that the changes in each of the three net asset classifications be shown. GASB standards generally classify equity as unre¬stricted or restricted fund balance. Many governmental health-care organizations will follow past practice terms of which restricted categories are presented as specific purpose, plant replacement and expansion, and endowment [3].

Other nonprofit organizations include the other organizations already listed (except colleges and universities) and cemetery associations, civic organizations, fraternal organizations, labor unions, libraries, museums, other cultural institutions, performing arts organizations, political parties, private schools, professional and trade associations, social and country clubs, research and scientific organizations, and religious organizations. Not-for-profit entities that operate essentially as commercial business for the direct economic benefit of members or stockholders (such as employee benefit and pension plans, mutual insurance companies, mutual banks, trusts, and farm cooperatives) are specifically excluded, as are governmental units.

The FASB has identified three classes of net assets: unrestricted, temporarily restricted, and permanently restricted. To be restricted, resources must be restricted by donors or grantors; internal designations are unrestricted.

Permanently restricted resources include endowments (resources that must be invested permanently) and certain assets such as land, artwork, and the like that must be maintained or used in a certain way. As the term indicates, these resources are expected to be restricted as long as the organization has custody.

Temporarily restricted resources include unexpended resources that are to be used for a particular purpose or at a time in the future and resources that are to be invested for a period of time (under a term endowment). Temporarily restricted resources might also be used for the acquisition or receipt of a gift of plant and would represent the undepreciated amount. As the plant is depreciated, the amount would be reclassified and depreciated in the unrestricted net asset class. Alternatively, the plant may be initially recorded as unrestricted.

Unrestricted resources include all other resources such as unrestricted contributions, revenues from providing services, and unrestricted income from investments. Resources are presumed to be unrestricted unless there is evidence of donor-imposed restrictions. As mentioned, undepreciated plant may be included as unrestricted. Donor-restricted contributions whose restrictions are met in the same accounting period may also be reported as unrestricted [3].

For each period for which a statement of activities is presented, a not-for-profit organization shall disclose:

– the composition of investment return including, at a minimum, investment income, netrealized gains or losses on investments reported at other than fair value, and net gains or losses on investments reported at fair value;

– a reconciliation of investment return to amounts reported in the statement of activities if investment return is separated into operating and nonoperating amounts,

together with a description of the policy used to determine the amount that is included in the measure of operations and a discussion of circumstances leading to a change, if any, in that policy [10].

Revenues, expenses, profits and losses should be accounted for on an accrual basis. Revenues and expenses should be reported in gross amount; Gains and losses can be indicated net. Realized and unrealized gains and losses on investments may be indicated net. All stock exchange income is recorded as an increase in net assets without restrictions.

Unconditional promises to give are recorded as revenues. Conditional prom¬ises to give are not recognized as revenues until the conditions are met. However, conditions are carefully distinguished from restrictions. Conditions require some action on the part of the donee before the gift is given. Restrictions are created when the donor indicates that contributions are to be expended for a particular purpose or in a certain time period. Specifically, contributions are restricted as to purpose or time or for plant acquisition.

Revenues, including contributions, are considered to be unrestricted unless donor-imposed restrictions apply, either for purpose, time, or plant acquisition. A presumption is made, in the absence of contrary information, that a given expense would first be made from restricted resources, if available, rather than from unrestricted resources, in which case a reclassification would be necessary, as shown next.

Expenses are to be reported by function. The FASB does not prescribe functional classifications but does describe functions as program and supporting. Major program classifications should be shown. Supporting activities include management and general, fund-raising, and membership development. Other classifications, such as operating income, may be included, but they are not required.

Contributed services, when recognized, are recognized as both revenue and expense. However, contributed services should be recognized only when the services:

– create or enhance nonfinancial assets;

– require specialized skills, are provided by individuals possessing those skills, and typically would be purchased if not provided by donation.

In 2016 the FASB issued Accounting Standards Update (ASU) № 2016-14 for Not-for-Profit Entities (Topic 958 in its codification). This update improved some financial statement presentations such as replacing the three classes of net assets into two: net assets without donor restrictions and net assets with donor restrictions. It also requires disclosures as to the organization's liquidity, its endowments, board-imposed restrictions and more. These updates are required in 2018 for calendar year entities and for fiscal years 2018-2019 entities [4].

Like any other organization, a nonprofit is evaluated by a wide assortment of entities like donors, investors, bankers, creditors, public watchdogs and government to get a picture of its financial position before donating, lending or accrediting the

organization.

Towards these ends, all nonprofit organizations in USA must prepare 5 essential documents at the end of each financial year. They are:

I) Statement of activities (aka income statement): Record of income earned and all expenses incurred by the not-for-profit organizations during the year that passed. Shows whether the nonprofit organization earned income or incurred suffered a loss resulting in decreases in equity or net assets.

II) Statement of financial position (aka balance sheet): Record of assets owned and liabilities owed by the not-for-profit organizations as on end of the year. Shows whether the organization owns fixed assets and whether it is solvent enough to pay its short term liabilities. At end it shows the 'net worth' of your organization, which is the difference between what the organization owns (assets) and what it owes (liabilities).

III) Cash flow statement: Record of all cash transactions of the NPO (inflows & outflows). Appraises all cash inflows and outflows in three transaction categories: cash flow in operating activities, cash flow in financing activities, ash flow in investing activities.

IV) Statement of functional expenses: A breakdown of the organization's expenses into 4 categories: Program expenses, Management expenses, General expenses, fundraising expenses.

V) Notes to the financial statements: The notes section tells the story behind the numbers. This statement includes a literal explanation of major income, expenses, accounting procedures and other material disclosures that cannot be noted in numbers and dollars. All accounting and book-keeping activities of nonprofit organizations are directed towards and culminate into preparation of these 5 documents at the year end [9].

In addition, large nonprofit organizations are required to undergo an external audit. They are required to furnish an Independent auditor's report towards that end.

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FUNDAMENTALS OF SOCIAL DESIGN OF MODERN ORGANIZATIONS

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Social design is concerned with the creation of conditions for effective activity in one or another field of social life. This designing is especially important for the development of a person's work activity. Social design provides services to all components of activity and social life of people. The specific feature of social design is to solve the problems that cover all social aspects as a whole, and it is a good reason to distinguish them by levels of organization of social life. Application of social design technologies in real life of social work of an enterprise can provide long-term social programs for its development. Moreover, the relevance of social design is determined by the fact that it consists of the development of social programs, social proposals and projects, processing methods, techniques and technologies of specific forms of social work, that is, a design approach is becoming

increasingly popular in management practices of modern organizations.

Moderate, well-coordinated social management on its own is a fundamental requirement for efficient, competitive operation of any modern organization. It provides the implementation of popular concept of corporate social responsibility. This is due to the fact that social management of an enterprise is a purposeful influence, based on the principle of feedback, on an enterprise to regulate and develop its social subsystem. Because of its systemic nature, social nature of labor, requirement to meet social needs of employees in the exchange of products of material and spiritual activity it focuses on achieving goals in the operation, improvement and development of an enterprise [1, p. 6-7].

We will give the structure of social management of a modern enterprise in fig. 1.

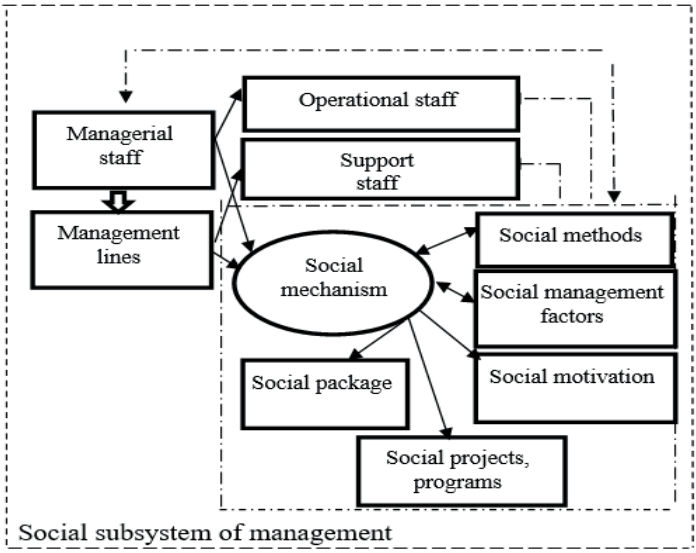

Fig. 1. Structure of social management of a modern enterprise.

It should be mentioned that social management of an enterprise will be more effective if social programs and projects are aimed at progressive development of its social sphere; improvement of conditions and quality of work of employees, meeting their needs and providing them with necessary social care and support using social and economic potential of an enterprise.

At the same time, the need to pay special attention to social management at an enterprise level is due to the importance of its results (they are criteria for assessing the efficiency of social management): high team cohesion of an enterprise; effective teamwork; a good level of employees' job satisfaction; stakeholder involvement in the enterprise operation and management; an optimal control level; social activity

of employees; a healthy employee turnover rate; steady increase of labor efficiency; a high level of employees' satisfaction with the work performed, employment at this enterprise.

In the context of social management of an enterprise we can define a project-based approach is a specific form of management that allows an enterprise to concentrate attention and resources on performance of a certain complex of tasks of social development and provision under the following restrictions: goal, objectives, work, time, resources, budget.

The following features show the advantages of a project-based approach in management (Fig. 2).

In order to implement social design efficiently and prepare successful social projects it should be guided by the following hard algorithm of the development of the latter:

Stage 1: Conducting a research.

Stage 2: Identifying problems / opportunities.

Stage 3: Setting a mission and goals of the project.

Stage 4: Formulating tasks.

Stage 5: Selection of task-solving methods, creation of a complex of basic works / activities.

Stage 6: Developing a logical sequence of work / implementation of activities.

Stage 7: Allocation, distribution and coordination of resources.

Stage 8: Setting a budget.

Stage 9: Assessment of project effectiveness.

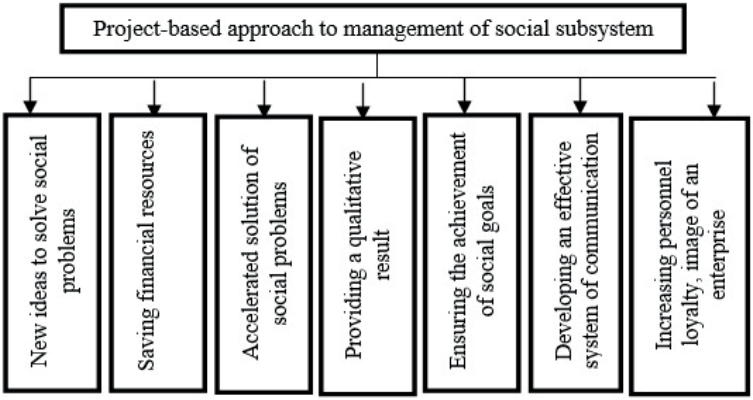

Fig. 2. Advantages of application of a project-based approach in management of social subsystem of an organization

Every stage is a logical step in social project designing. A problem must be substantiated by objective data detected in the research. A mission, a goal (final

result) must smoothly flow from the problem. Tasks should reflect step-by-step actions and have specific quantitative and qualitative benefits. Every method is a tool for problem solving, while work and actions are activities in the context of the latter. Every stage requires certain resources. In order to evaluate the result it is needed a rating scale.

We should study each stage mentioned above in details.

Stage 1: Conducting a research. Managerial activities are aimed at the monitoring and analysis of state, parameters and characteristics of a specific object in order to form an information base for its behavior and make well-grounded managerial decisions. They should be carried out on a systematic basis to form a representative assessment of the situation, which should be analyzed in dynamics.

Stage 2: Identifying problems / opportunities. It is the most important section of the project. A problem and its analysis should be presented in the project. When formulating a problem, it is necessary to pay attention to the fact that problems are the absence of something, something negative, which is harmful, something that requires changing. It is to show the causes of this negative phenomenon and its consequences. The same thing is with respect to opportunities, but vice versa.

Problem justification should include: 1) a brief analysis of its causes; 2) an analysis of previous attempts to solve this problem, their results; 3) an analysis of problem effect on the mission of an enterprise, the effectiveness of achieving the goals, and etc. At the same time target groups should be describe in this section. Project activity is aimed at target groups, whose life will improve in a certain way as a result of the project implementation. An organization should show knowledge of their problems and the availability of specialists who will work with this target audience.

Stage 3: setting a mission and goals of the project. A mission of a social project is a general description of proposed outcome and expectation, the highest point of achievements, which an organization intends to reach during the project implementation.

Stage 4: formulating tasks that should make the goals and mission more specific. In this regard, they must reflect the ways to solve the identified problems transparently and logically; be directly connected with the project activities and aimed right at the problem solving; be determined by qualitative and quantitative indicators; represent intermediate results.

Stage 5: Selection of task-solving methods, creation of a complex of basic works / activities. It is necessary to identify the ways to implement the tasks. In fact, it should be actually determined how the goals will be achieved, how the tasks will be performed, who will implement them, what resources will be used.

Stage 6: Developing a logical sequence of work / implementation of activities provides the formation of schedule and WBS project.

Stage 7: Allocation, distribution and coordination of resources. Coordination of resources for specific tasks and deadlines.

Stage 8: Setting a budget. Cost calculation of each stage of the project

implementation. Taking into account the options for resource allocation, the calendar of work and delivery, a detailed project budget is developed.

Stage 9: assessment of project effectiveness. The concept of social project effectiveness is different from the concept of business project effectiveness. Therefore, at this stage, we propose to use not an assessment, but a description of the expected social project effectiveness. These can be: positive changes in lives of stakeholders (employees), project participants: behavior change, health improvement, social and economic status, etc; positive benefits for society: changes of institutional conditions, public opinion, an attitude to a specific problem and its solutions; sustainability of operating results after the termination of a project, program, service. Thus, social project effectiveness is determined by the opportunity for integrated development of a social facility.

Since any project is time-limited, and long-term projects are noticeably less than medium-term and, especially, short-term ones, there is a frequent situation when those who gathered for collective work are not ready for it yet. There are people, but no teams. The problem will arise when, firstly, some common values are established (or confirmed) and, secondly, when mutual understanding turns into interaction technology (unspoken agreement).

Table 1

Characteristics of the main methods of strengthening a project team [based on 2]

Method	Characteristics
Brainstorming	a technique of team intellectual work with the aim to find new solutions to the problem under consideration is based on removing barriers of criticality and self-criticality of participants.
Synectics	includes work of permanent groups that professionally apply various techniques to enhance their creative potential.
Business game	imitation of managerial decision-making in various situations by playing (performance, role playing) according to the given rules or those ones that are created by the game participants themselves
Method of focal objects	technique of constructing a new object by applying to it the properties of other objects
The control questions technique	It is the work with a list of specially selected questions that help determine the nature of the task being performed accurately
The scenario building method	a view of a social project as a description of consistent development of events provided by it (can follow) with resource availability

There are a lot of methods that allow to enhance innovative potential capacity of a group and at the same time contributes to the formation of a project team. We

will briefly describe the characteristics of such methods as brainstorming, synectics technique, a business game, the method of focal objects, TRIZ (Theory of Inventive Problem Solving), the control questions technique, the scenario building method (table 1).

The formation of a project team is, of course, a much more complicated process than experimenting with the methods described. However, experience has shown that sometimes in order to significantly move things forward, it is necessary to create somewhat unusual working conditions. Also, in this case, the described methods help to perform this task. We believe that those who took part in brainstorming, business games, who worked together according to the method of focal objects, remember the smallest details of creative collaboration for a very long time. It is equally important that in such activities a project team are strengthened and provide tangible evidence of their success and have the opportunity to discover their potential.

Over time, organizations change the motivational orientations of their own activities. But the desire of people for stability, calm, security and justice remains constant. Social projects are dedicated to satisfaction of these basic needs, which, at the same time, help to meet the highest needs of the individual (in self-expression, development, respect, etc.). Social business is becoming more competitive and successful.

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PECULIARITIES OF COMMUNICATION MANAGEMENT IN MODERN ORGANIZATIONS

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Well-organized communication process is a key to efficient functioning of any modern organization. Communication management is based on the principle of equal access to all kinds of necessary information and active cooperation of employees with each other, which provides conditions for making decisions and successful work.

Communication management is an integral part of general management of an organization that makes it possible to react to internal and external factors of environment in a proper way.

Communication management refers to providing information support for all organization links. Nowadays the most important resource is information provided with the help of communication technologies. Thus, management process is impossible without communication.

Communication process involves understanding of the key objectives of organization's activity by every employee and working on corporation image, reputation and culture [1, p.195].

Therefore, in the context of world economy globalization and accelerated development of information community, the availability of positive information about organization's activity, which supports its reputation of a reliable partner on the market, can be considered as the peculiarity of communication management. Reputation management refers to the complex of actions to establish, support and protect reputation based on real achievements of organizations and focused on their prospective development [2].

From our point of view, if organization senior executives understand the significance of reputation management, they think of the perspective and are able to protect their organization from external pressure and internal risks at any necessary or crucial moment.

Taking into account the above-mentioned information, we should state that the research of reputation management impact on integrated processes in modern organizations and especially on communication management is becoming very urgent nowadays.

Business reputation cannot be copied or replaced, since it is a unique characteristic

of every organization and a special asset that cannot be bought or received without making efforts. Reputation is built up in the process of organization development and is its essential component [3, p. 42].

Reputation management researchers consider three trends which should be coordinated according to organization profiles. The first one is reputation establishment (changes in business activities, decision-making mechanisms etc.).

The second one is reputation support. It refers to generating such conditions when the organization image is created by means of the whole complex of positive information including brand, corporation culture, motivation level of employees, financial turnover volume, gaining market share, putting competitors on the back foot etc.

The last step is reputation protection, i.e. establishing new legal infrastructure and reducing costs for making business. In practice, all three steps are simultaneous [4, p. 38].

On the strategic level, the purpose of reputation management is establishing close links with stakeholders who have significant influence on the perspectives of organization functioning on the market.

In our opinion, it is necessary to state that one of the most important social components of business reputation that has dramatic impact on modern organization prestige is corporate social responsibility. It is organization's voluntary contribution to social, economic and ecological development of community. This contribution is closely connected with the main organization activity and goes beyond legally established minimum.

Every organization that seeks for authority and influence in community should know that recently most world leading companies have established their own policy of corporate social responsibility. Moreover, nowadays there is an association of companies aimed to the development and promotion of the conception of corporate social responsibility.

We think that adhering to the principle of corporate social responsibility by modern organizations is a significant part of their reputation as well as communication management. Furthermore, under current conditions socially responsible activity of any organization is considered to be a standard of behavior and a part of business ethics. Scientists suggest that it is due to the following factors [5, p. 22]:

- social activity of employees who want all organization decisions which they are interested in to be made in consultation with them;
- state regulation of big business activity for the sake of public interest;
- social environment influence on making managerial decisions in organizations.

Keeping in mind the significance of social respect, in order to improve their reputation modern organizations should focus on social value of their activity and prepare the program of corporate social responsibility that will accommodate stakeholders' interests and wants by means of communication management.

It should be mentioned that corporate social responsibility as a part of reputation

management has two main development vectors, i.e. internal and external forms. Both of them have their own development trends and peculiarities.

Taking into account all potential benefits, the peculiarity of corporate social responsibility practice refers to the fact that an organization can get the most out of it when its social activity is widely discussed. In order to carry out this task successfully it is important to make appropriate choice of the trend in socially responsible work as well as to create efficient communication campaign to promote this work.

Social activity of an organization involves various social programs of internal and external orientation. The special features of social activity programs are voluntary basis, system based approach and their link to development mission and strategy [6, p. 20].

Internal social activity includes, first of all, organization's attitude to its own staff, since every employee is a simplified model of the whole organization. Moreover, any socially responsible organization is characterized by voluntary response to social issues or problems of its employees concerning their development and social security. Such approach is considered not only as taking care of the staff, but also as a vital condition of organization's survival and development in the long run.

The main actions of internal corporate social responsibility include [7]:

- actions of social security of organization staff (total absence of discrimination, actions to provide staff security, life and health protection and assistance in case of emergency);
- human capital development by means of implementation of professional development programs, advanced training, using salary motivation schemes and support for efficient internal communication;
- analysis of employees' interests in the process of making important managerial decisions, which implies cooperation with employees who are considered as the main organization stakeholders;
- implementation of socially responsible innovative programs by means of preparation of social programs focused on facilitation of employee's adaptation to organization innovations (professional retraining, assistance in job hunting, redundancy compensation).

It is also necessary to mention that organization employees are powerful stakeholders and, moreover, they are an important source of organization reputation. Therefore, communication mangers should take into account their opinion in the process of preparation of certain projects and programs.

External corporate social responsibility (that is beyond an organization) includes: cooperation with local communities; relations with business partners, suppliers and customers (so called influence groups); respect to human rights in business activity and contribution to solve global ecological problems [8, p. 343].

At the same time it is important to comply with the following conditions which provide that corporate social responsibility will be of maximum benefit to

organization's reputation and communication management development:

- selection of such trend of socially responsible work which corresponds to organization's strategy and is not in conflict with its values and business style;
- organization's willingness to provide resources for socially responsible work, including time and human resources;
- organization's statement that it knows how to measure the efficiency of socially responsible initiative and how to communicate its achievements in this area.

On the base of world experience, we will try to differentiate criteria of socially responsible organizations.

These criteria include: production and sales of high quality goods; improvement of employees' professional level; conscientious tax payments; adherence to the norms of state and regional legislation; implementation of corporate programs for employees' health security and motivation; participation in generation of positive public opinion about business etc.

It should be stated that due to the implementation of the conception of social responsibility, organizations gain their social reputation and increased trust of the community to their activities, improved professional level of their employees, secure internal environment and new partner relations.

Thus, it is necessary to work out the mechanism of promotion of social responsibility development. It should consists of such elements as: promotion of public opinion about the significance of social responsibility for social and economic development of organizations and the state; shaping positive views of businessmen concerning their active social position; development of legal framework for clear understanding of social responsibility; improvement and application of the taxation mechanism to grant bonuses in the process of implementation of social programs [9].

The above-mentioned arguments concerning the improvement of social development of organizations are reasonable if social responsibility becomes top managers' duty and helps evaluate their own intentions and select behavior patterns in full compliance with social development. Otherwise, organizations should report to the community and be punished.

It is also necessary to say that social responsibility with the help of other factors provides sustainable development of organizations in the long run due to the amalgamation of interests of owners, the community, the state and other stakeholders.

The main drawbacks to take actions concerning social responsibility may be shortage of funds, tax pressure, imperfect legislation to promote these programs, lack of information and experience in this branch, absence of public and private organizations which could assist and give advice in conflict situations [10].

Our research has proved that efficient functioning and management of organizations is impossible without appropriate communication, since communication processes provide conditions for the development of employees' professional characteristics and creative potential.

In conclusion, we can say that the peculiarity of communication management in modern organizations is a wish to improve reputation and constant demonstration of a social component of business. Only in this case organizations will gain respect from all target groups without any exception, since the activity in the sphere of corporate social responsibility is positively accepted by the whole community.

Socially responsible companies have more possibilities to employ talented and active staff. Other commercial benefits include investors' trust and access to capital and long-term investment accordingly.

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MECHANISM OF ADAPTIVE DEVELOPMENT MANAGEMENT OF DOMESTIC ENTERPRISES IN THE CONDITIONS OF EUROINTEGRATION

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The need to develop and implement in the concept of realizing the economic potential of Ukrainian enterprises the mechanism of adaptive development management is intensified by the strengthening of the processes of European integration. This trend is gradually becoming a sign of system city and dynamism, antagonism and asymmetry, the effects of which are unevenly implemented in the national economy.

Problems adaptive development of enterprises in accordance with modern conditions of development of integration processes much attention was allotted in scientific works of both domestic and foreign scholars.

In the writings of R. Whipp [1], E. Lofquist [2], P. Jarzabkowski [3] previously documented substantive characteristics of the adaptation and specificity of its manifestations. P. Jarzabkowski [3] draws attention to the significance of adaptability as a particular property of the subject, taking into account the provision of its competitiveness; R. Whipp [1], E. Lofquist [2] is connected with adaptability to adapt to macro trends. The formation of an adaptation strategy previously documented in the writings of R. Miles and C. Snow [4]. Approaches to the structuring adaptive potential and methodical principles of its revealed definition in the writings of O. Gonchar [5], T. Oliynyk [6] and others.

However, despite the undeniability of the investigated issues, the vast majority of scientists in their scientific developments emphasized the individual problems of adaptation of domestic enterprises to external changes and emphasized the role of adaptive approach in Improving the efficiency of economic development of both a separate enterprise and the national economy as a whole. Therefore, today the field of scientific vision still has a sharp question about forming of adaptive strategy of economic development of enterprises in conditions of strengthening of integration calls.

By adaptation G. Kozachenko [7] understands the process of directed change of criteria, structural composition and signs of economic actors caused by the transformational processes of the business environment. E. Chizhenkova [8] notes that adaptation reveals the process of adapting business entities to the influence of the risks of the external environment of operation. Scientist V. Dubchak [9] notes that adaptation is the result of the process of adapting the company to the conditions of operation. According to S.A. Kravchenko [10], adaptation is a set of ways of

survival of economic actors in a competitive environment.

Despite the significant divergence of views, the unity of these ideas about the specifics of adaptation, in our opinion, lies in the fact that only the adaptation of Ukrainian enterprises to market transformations and European integration challenges provides the possibility of achieving the company's priority goals for economic development, and therefore serves as an objective basis for realizing its economic potential.

It should be noted that the development and implementation of the economic potential of Ukraine in the conditions of strengthening of integration calls are especially intensified and need increased attention in the scientific research to outline the strategic vectors Economic growth of the national economy in the context of sectors, as well as individual enterprises, which, in turn, will help to eliminate the negative dynamics of the international trade relations of Ukraine in general [7].

As the current practice confirms, [3] the main position in the world markets is usually owned by developed countries (USA, Japan, Great Britain, Germany, China, Singapore), which actually regulate the terms of commodity exchange in the international arena and are not Interested in the emergence of new competitors.

According to the results of the World Economic Forum Ukraine, the global adaptation index 2016-2017 has placed 79 places among 140 countries, having lost three positions in the year (in the previous rating, took the 76-in position) (Table 1).

Table 1

Dynamics of changes in Ukraine's position in the rating according to the global Adaptation process index [11]

2011-2012 (from 139 countries)	2012-2013 (from 142 countries)	2013-2014 (from 139 countries)	2014-2015 (from 139 countries)	2015-2016 (from 139 countries)	2016-2017 (from 139 countries)
89	82	73	84	76	79

According to expert assessment the range of problematic factors of realization of economic potential of domestic enterprises, in particular Agrofood sphere is defined, among which in descending order allocated: corruption, unavailability to financial resources, Inflation, political instability, high tax rates, inefficient state bureaucracy, complexity of tax legislation, regulation of the foreign exchange market, the frequent change of governments, restrictive labor market regulation, insufficient ability to Innovation, inappropriate quality of infrastructure, crime and theft, low quality of health, insufficient education and poor ethics of manpower [10].

As in world markets, the main positions reserved by the high-tech countries, Ukraine in international exchange can be a proposal for only relatively cheap agro-food resources. That is why to implement the strategy of «export breakthrough » Ukraine needs to evolve according to the principles of innovative euro oriented economic policy. Under these conditions, the issue of effective mobilization of

domestic capacities of the national economy, including agro-food enterprises, on the basis of implementation of adaptive mechanism in the concept of economic potential implementation is especially actualized. Which is to become the modern paradigm of economic development of agro-food enterprises in the conditions of globalization and European integration.

The main prerequisite for the unstable economic situation in the country can be considered political events in 2013, which resulted in the national economy a number of completely new in nature of obstacles, the elimination of which negatively acts as Economic growth of the national economy as a whole and economic development of each enterprise. This situation only activates the need to strengthen the adaptive capabilities of enterprises and to develop scientific and reasonable approaches to solving economic problems, the solution of which will be based on consolidation of calls to European integration processes and Priorities of business unit's development [6].

To ensure the interaction of theoretical developments with the modern paradigm of economic development and the realities of global market transformations in the mechanism of management of the adaptive development of Ukrainian enterprises, the dominant should be integrated Elements of the adaptive system, dialectical correlation of which will ensure the ability of the enterprise to more effectively and adequately react to the transformational processes of the institutional environment by using the system of organizational, economic and Social regulators to ensure long-term economic growth. It should be noted that in order to ensure a dynamic equilibrium of economic development in the coordinated coherent interaction between the enterprise with a natural, technological and socio-economic circle, the dialectical interrelation between the elements of the management mechanism Adaptive development should be subordinate to the laws of consolidation on the basis of qualitative changes in the ways of organizing Ukrainian production, technology used, adapting the organizational structure to the conditions of business space and forms of interaction with [9].

The role and essence of the elements of the mechanism of management of the adaptive development of Ukrainian enterprises and their ability adaptive response to European integration challenges outline the following scenarios of their economic development: scenario Conservative response policy; Active response policy scenario; Mixed response policy scenario.

Adaptive reaction for a conservative response policy is characterized by forced and local signs, in other words, in the economic development of the enterprise the changes only occur in the case of delivered of the choice.

The most adapted to market changes and challenges of European integration processes is the scenario of active response policy, based on the use of various models of adaptation in accordance with the influence of transformation processes and their level of gravity for economic Development of the enterprise.

A mixed response policy scenario takes into account only the general aspects of

the enterprise's behavior in transformational change, whereas its adaptive response is determined by the force of risk uncertainties: at low intensity of impact use of adaptive behavior is quite superficial, and with intensive-principles of adaptive behavior is largely used in the realization of the economic potential of the enterprise.

The processes of conservative adaptation of the enterprise are naturally connected with the Anticipation effect, and the processes of active adaptation – with the mechanism of adaptive development, as the possibilities of the enterprise to self-organization and self-regulation, activation which will Growth of economic potential in the short term, and in the long term – maximizing the market value of business. If the economic development strategy of the enterprise is adapted to transformational changes in the market space, it is constant, and the process of economic homeostasis is achievable [4].

Development of methodological aspects of management of the adaptive development of enterprises requires consideration of: complexity and diversity of production processes; Risk-uncertainties of internal and external business environment; The presence and interdependence of formalized and non-formalized priority purposes of implementing the economic potential of Ukrainian enterprises; Methods, methods and criteria of evaluation.

It should be noted that in the process of adaptation of the Ukrainian enterprises, the stages of development and implementation of adaptive mechanism must meet the priority goals of implementing the economic potential traceability Enterprises (Fig. 1).

One of the mechanisms of the conception of economic potential of Ukrainian enterprises is an adaptive mechanism, structural composition of which is represented by the aggregate of the interconnected economic, organizational, technical and technological components, and Also, social and organizational methods, integrated with the principles of social responsibility, coordinating the economic development of the enterprise in the conditions of the risk-uncertainties of market space [10].

Subject to a timely prediction of the effects of risk-uncertainties on the implementation of economic potential, the enterprise activates an adequate response management mechanism for the anticipated and inevitable changes in the business environment, whereas Resource flows and capacity-building capabilities are used for the purpose of implementing the adaptation mechanism, which outlines the capacities of the traceability enterprise to adapt to the transformational changes of the business environment.

However, activity of the enterprise is connected with decision-making on choice and substantiation of strategy of realization of economic potential of enterprise in conditions of incomplete information support, that is why one of decisive factors which should be considered in the adaptive mechanism, is a measure of failure and risk of a certain situation, which causes the value of failure and risk, localization and minimization of which depend on the efficiency of the mechanism of ensuring Protection of the economic interests of traceability enterprise [8].

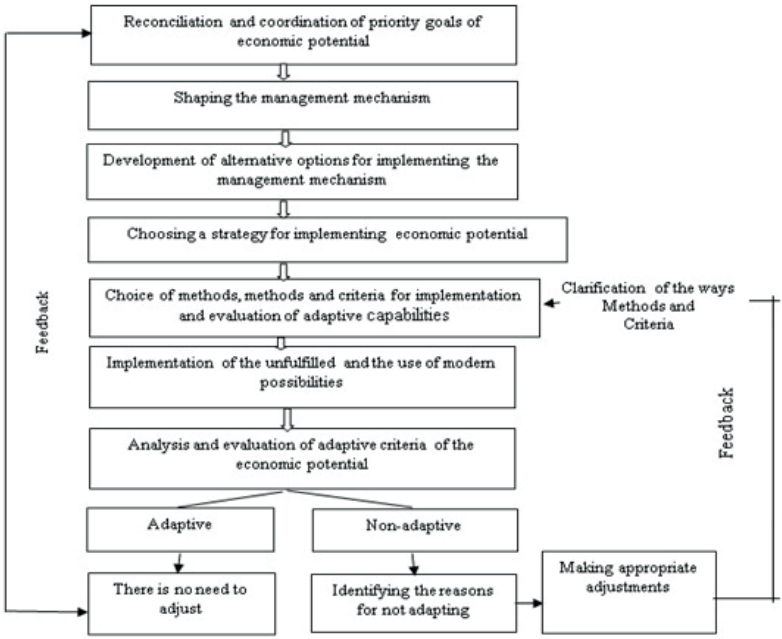

Fig. 1. Stages of development of the mechanism of management of adaptive development of enterprises

Developed by the authors

Under present conditions the transition to a fundamentally new model of economic development of the enterprise is carried out – adaptive, based on integration processes and integrating enterprises into strategic alliances based on the use of global Information systems.

Based on the principles of forming the mechanism of management of the Adaptive Development of the advisable requirements to be put forward in the process of developing a strategy for implementing the economic potential of the enterprise, taking into account the established country Specifics of economic and legal field development. At this , the concept of forming a mechanism of management of the Adaptive Development of the enterprise is based on three main dominant: the economic potential of the enterprise is an open complex system, which are inherent Stochastic signs; Interrelation and interdependence of risk-uncertainties of business-environment, components, subblocks and all over the whole system; The purpose of forming the adaptive mechanism of implementing the economic potential of Ukrainian enterprises is to ensure sustainability, security and ability to adapt to market transformations on European integration challenges.

Development of Methodological aspects of the mechanism of management of

the adaptive Development of Ukrainian Enterprises requires consideration:

- complexity and variety of production processes;
- acts risk-uncertainties internal and external business environment;
- presence and interdependence of formalized and non-formalized priority goals for the implementation of economic potential;
- ways and methods of their implementation, as well as evaluation criteria.

The implementation of the mechanism of management of adaptive development in the concept of realizing the economic potential of enterprises in terms of European integration challenges outlines the following tasks of economic development:

1) ensuring appropriate protection of the economic interests of traceability enterprises at the expense of localization of the risk-uncertainties and factors of European integration;

2) development of competitive advantages of the enterprise on the basis of its increasing capacity to adapt to possible changes of business environment and European integration challenges;

3) achieving priority goals of implementing the economic potential of the traceability enterprise on the basis of its ability to effectively use the resource flows of each structure-forming block of economic potential and Core competencies during the adaptation.

Structure composition of the developed mechanism of management of Adaptive Development in the concept of realization of economic potential of the enterprise is represented by the totality of interrelated organizational and economic forms, of methods and means to achieve achievement of the priority goals of its economic development by increasing the enterprise's ability to react to risk uncertainties and adapt to market changes.

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RESEARCH OF THE METHODICAL APPROACHES CONTENT TO ASSESSMENT OF DOMESTIC ENTERPRISES COMPETITIVENESS LEVEL

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Competitiveness in the conditions of globalization is the most important criterion of the enterprise effective functioning in the region and the country, a condition for effective economic activity, a basis for selection of approaches and methods of business activity and a key to successful competition. So, the issue of methodological approaches to assessing competitiveness of enterprises of the different industries is highly important at present stage of the Ukrainian economy development.

Analysis of the scientific sources showed that V. Kovalska [5], Z. Herasymchuk [1] study the problem of competitiveness of the regions and develop mechanisms for their improvement. The works of O. Vykhansky [2], R. Fatkhutdinov [10] and others are devoted to the classification of the competitiveness level indicators, assessment of competitiveness of products and an individual enterprise. But, scientists still have not had the common opinion on the definition of "competitiveness", methodical approaches to assessing competitiveness of enterprises, efficiency of using certain methods in the process of their implementation, a substantiated system of indicators for determination of economic entities competitiveness.

In our study, competitiveness is the property of the system elements that are characterized by the ability of enterprise's potential to adapt to regional entities and the peculiarities of their development, quickly responding to the environment

challenges, taking into account the promising trends of changes to restore the economic system. Thus, competitiveness is a complex enterprise characteristic that reflects the ability and potential of an enterprise to adapt to the non-deterministic market conditions and affects the effectiveness of its economic activity.

We emphasize that the competitiveness of any enterprise can be determined through a system of competitive advantages of the different levels.

Generalization of the scientists' points of view allowed to define the following structural elements of the system of the competitive advantages indicators: the sufficiency of the strategic potential for the implementation of expanded reproduction and increased socio-economic efficiency; availability of innovation potential for development and its quality; stability of the competitive position on the market; availability of resource potential of the company and the effectiveness of its usage; possession of intangible assets that create "barriers" of entrance to the industry; profitability of capital; quality level and products assortment; availability of resources (material, labor, financial, information); the level of environmental balance; availability of developed infrastructure; a level of institutional support, etc. [9. p.47];

The theoretical analysis of scientific sources showed that such methodical approaches of assessment of enterprise competitivenes as a structural (sectoral) approach; a functional approach; a procedural and target approach are the most up-to-date [2. p. 54; 1. p. 67; 10. p. 28].

Application of these approaches requires consideration of the following principles [7. p. 15]: complexity, systemicity, objectivity, authenticity, adequacy, openness and transparency.

Let's consider the approaches and their application efficiency in the modern conditions of domestic enterprises functioning in more details.

To our mind, the assessment of enterprise competitiveness is, first of all, a comparative analysis. Therefore, it is necessary to start it using the structural (sectoral) approach.

The structural (sectoral) approach implies division of all factors of the external environment, affecting the results of the enterprise activity, into two groups: the factors of the macroenvironment and the microenvironment and their by elementary assessment. Thus, the macroenvironment factors should be assessed according to the following elements: state of the economy (according to the general economic indicators); legal economic management; political processes; environment and resources; social and cultural factors; scientific and technological process and a level of innovation development; infrastructure (market, industrial, social); trade unions; international factors; government bodies; the tax system; policy of state regulation of the economy; national factors; regional factors; educational factors, etc. [6. p. 24].

The most substantial research on characteristics of the main groups of the microenvironment elements and the methodological basis for the analysis of the

industry structure was first offered by M. Porter. According to Porter's model, the microenvironment consists of a number of «competitive forces» having a double influence. It is necessary to say that the phenomenon of double influence is manifested in the fact that, these competitive forces make threats to enterprise functioning on the one hand, and create prior conditions for improving its effectiveness and competitiveness on the other hand. Assessment of the enterprise competitiveness using the structural approach involves three successive stages: the environment scanning; the environment monitoring; forecasting the future state of the environment.

Single-criteria and multi-criteria approaches can be applied for calculations at each stage. Single-criteria approach is based on the certain key success factor, for example, on the market (demand) growth or the type of the enterprise activity and its assessment.

The complex indicators of the competitive status of enterprise are calculated in order to assess the competitive position of enterprises on the market according to the multi-criteria approach.

Scientists offer two approaches to their calculation. The essence of the first approach is that the competitive status of the enterprise and the attractiveness of the economy sector in which it operates are assessed by the general system of the external factors (for example, market capacity, market growth prospects, industry profitability, technology, inflation rate, legislation, social, environmental, political, legal factors, etc.).

This indicator is assessed in points, by calculating the total weighted estimates of the influence of all external factors on the enterprise competitive position on the market.

The importance of the factor determines its relative rank, the significance for the attractiveness of the enterprise activity and the prospects for enterprise competitiveness increase; grade system of factors characterizes the intensity (force) of the factors influence on the competitiveness level.

The second approach is more complicated, but more accurate, because it is based on a more detailed and differentiated system of assessment of the factors influence on formation of the activity attractiveness for the enterprise in general and the prospects for competitiveness increase in particular. Thus, procedures for assessing the activity attractiveness and opportunities for increasing enterprise competitiveness are as follows: the groups of factors that have a significant impact on enterprise competitiveness are determined; the key indicators and their importance are defined for each group; the weighted value for each indicator group is calculated.

A complex indicator is calculated by the formula 1 [2. p. 68]:

$$K = a*G + b*P + c*O - d*T$$

where G, P, O, T are complex indicators for assessing the growth of demand, changes in profitability, opportunities and threats in the strategic economic centres, respectively; a, b, c, d is importance share of the coefficient of each factor relative contribution to formation of the competitiveness level and market attractiveness (a+b+ c+d=1).

It should be noted that the key factors in the formation of enterprise competitiveness and the grading scale (in points) for each enterprise and each specific sector of the economy should be determined by a group of experts individually. The importance of each individual coefficient depends primarily on the stage of enterprise life cycle and the field of its functioning.

Such methods of strategic analysis as PEST-analysis and SWOT-analysis [2. p.115] are often used for application of a structural approach to assess the enterprise competitiveness.

The peculiarity of using PEST-analysis is the assessment of the external environment influence on enterprise competitiveness according to the following groups of indicators: society (change of basic values, change of the living standard and life style, attitude to work and off-work time, demography, changes in income structure), technology (state innovation policy, technological changes in production, the speed of renewal of products and technologies assortment, etc.), economy (general state of the economy, inflation rate, dynamics of export-import, national currency stability, etc.) politics (legislation change, elections of the President, Verkhovna Rada elections, state sectoral regulation, etc.).

SWOT-analysis allows to generalize the situation at the enterprise and on the market, to see the prospects and threats for enterprise functioning, to identify the weak and strong points of the enterprise in comparison with the strongest competitor. The implementation of such an analysis can be described as a process consisting of the following stages: identification of strengths and weaknesses; identification of opportunities and risks; formulation of strategic alternatives to create the competitive advantages through the use of opportunities provided by the external environment, the strengths of the enterprise activity and the use of weak points in the competitor activity; formulation of the strategic alternatives to reduce the negative impact of risks on the enterprise activity; formulation of strategic alternatives to eliminate the weaknesses in enterprise activity.

The methodology of criteria assessment is used for calculation of indicators by methods of PEST-analysis and SWOT-analysis. This methodology has been described above.

A functional approach to the assessment of competitiveness involves structuring of the analysis objects in two directions: the type of activity and the functional affiliation of the subdivision. Matrix methods of strategic analysis: the Boston Consulting Group matrix, GE/McKinsey matrix, Shell/DPM matrix, etc are usually used to determine the competitiveness of certain types of activity of a multi-business enterprise. The matrix methods for assessing the enterprise competitiveness are

based on the matrix tables construction, in which the enterprise business position is determined by the certain indicators. The values of these indicators are reflected on the coordinate axes. For example, the BCG matrix involves the construction of a coordinate system based on the results of two indicators calculation: the market (demand) growth rate is on the vertical axis and producer's market share is on the horizontal axis. The main disadvantages of the BCG matrix are: consideration of only two criteria for assessing business competitiveness; market growth rates do not always objectively assess market attractiveness; relative market share does not always precisely characterize enterprise competitive status; interconnection between different activities of the firm, that is, synergetic effect is not taken into account.

It is necessary to say that the GE-McKinsey matrix has a wider application area and a more flexible approach to the determination of the enterprise competitiveness according to the types of its activity. Complex indicator of market attractiveness and complex indicator of enterprise competitiveness (competitive status of the enterprise) are used in the process of constructing the GE-McKinsey matrix. This allows to take into account more factors while assessing enterprise competitiveness. But this method is not perfect and has some disadvantages, namely: the possibility of active influence of the enterprise on the external environment is not taken into account; it is assumed that the future can be predicted rather accurate; unclear recommendations; a need for large amount of information in order to assess the parameters of the matrix factors [3. p.191].

The application of a functional approach to the assessment of competitiveness requires the structuring of the analysis objects according to the functional affiliation of subdivisions and further evaluation of each subdivision effectiveness. In our opinion, a method based on the theory of the effective competition is the most efficient [2. p.75].

Analysis of the scientific sources showed that the enterprises with well-organized work of all subdivisions and services are the most competitive ones according to this theory. Proceeding from the fact that such types of functional activity as production, financial, product (services) sales and promotion and quality management can be distinguished in any business area, it is possible to assess the level of enterprise competitiveness by calculating the integral indicator of competitiveness, which will take into account the results of each subdivision activity.

Integral coefficient of enterprise competitiveness is calculated by the formula 2 [2. p. 89]:

$$Ккп = 0{,}15 * Ев + 0{,}29 * Фп + 0{,}23 * Ез + 0{,}33 * Кт$$

where 0.15; 0.29; 0.23; 0.33 are coefficients of the strength of criteria; is a value of the criterion of enterprise production activity efficiency; is a value of the criterion of the enterprise financial position; is a value of the criterion of

effectiveness of products sales and promotion on the market; is a value of the product competitiveness criterion.

It is necesary to take into account certain indicators in order to calculate individual criteria for the effectiveness indicators.

We emphasize that the methods describing the level of enterprise financial and economic activity: financial and economic analysis; forecasting the financial enterprise position, etc should be used for the further assessment of enterprise competitiveness [8. p. 87].

The procedural and program-oriented approach to assessing enterprise competitiveness involves the study and asessment of the formulation of goals process, development and peculiarities of application of a strategic set of enterprises. The GAP-analysis method, LOTS-analysis method, benchmarking method, SPACE-analysis method are the best methods for implementation of this approach.

It should be noted that the GAP-analysis provides an opportunity to determine the methods of management and development of a strategy that can bring the company's business to the highest level of its senior management and owners objectives and ensure a high level of competitiveness.

Concentration of attention on the fact that each organization has to develop and adapt its competitive advantages and actions to buyers' demands is a peculiarity of LOTS analysis.

The LOTS methodology involves a deep, consistent discussion of such problems and areas of enterprise activity: current state of affairs, development strategies; strategic goals, short-term goals, methods and objects of the analysis, personnel potential; system of the development plans, organizations and a level of management and accountability.

The benchmarking method is considered to be the most modern approach to studying the peculiarities of business and the application of strategies and strategic behavior of a competitor, which is successfully used in the practical and research activity of entrepreneurs and scientists [4. p. 185]. Peculiarity of benchmarking is a system-wide character, with a clear focus on achieving a better level; applied orientation on the achievement of competitive advantages.

SPACE-analysis is a method of assessing the enterprise environment in order to determine the competitiveness of the enterprise strategy. This assessment is based on the identified strengths and weaknesses, threats and opportunities. With the help of SPACE-matrix, it is possible to determine the strategy that the organization is using without even guessing about it, that is very valuable in today competitive conditions of domestic enterprises functioning.

So, consideration of the most advanced approaches of assessment of enterprise competitiveness and the methods used to implement them relates to all the main organizational components, including personnel structure, employment, qualifications, technology, equipment, products, which are affected by the environmental factors. Therefore, the starting point for competitiveness increase is

the development of a strategy for such an increase. The process of competitiveness improvement requires consideration of the interconnection specificity both between the elements of the organization and with their environment as well. It is also a decision-making process (including goals, methods, plans) for competitiveness improvement, and this, in turn, requires application of different approaches to assess enterprises competitiveness depending on the purpose of such an assessment.

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SYSTEM APPROACH TO MANAGEMENT AGRICULTURAL ENTERPRISE

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Agrarian enterprises are a complex, which functions through an effective management mechanism. The current state of market relations in the economy, high level of competition and uncertainty predetermine significant changes in the management of the enterprise, and especially in the system of agrarian production.

System planning does not involve solving problems, but rather the permission to exist, with the constant redefinition of them through the learning process. Therefore, planning is understood not as a discrete activity, but as a continuously developing process. The system approach implies that the future is uncertain and can not be foreseen, based on the present or the past. The emphasis is on creating alternative scenarios for the future based on today's actions, rather than simply adapting to what the future brings [6].

The essence of the system approach to managing an agrarian enterprise is as follows:

- formulation of goals and establishment of their hierarchy before the beginning of management activity;
- To obtain maximum effect, that is, achievement of the set goals by comparative analysis of alternative ways and methods of achieving goals and choices;
- quantitative assessment of goals and means of achieving them, based on a comprehensive assessment of all possible and planned outcomes of activities [10].

The system approach implies observance of the basic laws of the system, namely [15]:

1. Compositions, that is, reconciliation of the common and private purpose.
2. Proportionality. Internal proportionality should be combined with external proportionality, that is, the corresponding level of development of elements of the environment.
3. Respect for the «bottleneck», where particular attention is paid to the weakest element of the system.
4. Ontogenesis, taking into account the sequence of stages of the life cycle of the enterprise (goods).
5. Integrations that direct the system to a high level of organization and allow for a synergistic effect.
6. Awareness that highlights information provision as a prerequisite for competitiveness.
7. Sustainability, which sets requirements for system construction (static state)

and its functioning (dynamic state).

The need for a systematic approach is due to:

1) the complication of the internal structure of management objects;
2) expansion and branching of connections;
3) rapid and continuous growth of the volume of information;
4) the instability of the environment;
5) intensification of competition.

The undoubted advantage of a systematic approach is to focus on poorly structured problems, to search for an optimal solution for their solution [14].

Such problems arise at the level of complex systems. The control system is based on the main four properties, the other properties are additional, to some extent, they are the characteristics of the main, and therefore there is a need to use the system approach (Table 1).

Table 1

System approach to management of agrarian enterprises

Name	Content
System defining properties	
Hierarchy	some elements of the management system belong simultaneously to several farm management systems.
Completeness	the system covers the required number of elements that are complementary and ensure the effectiveness of the process of managing cost of production.
Determinism	the system functions under the influence of factors in the presence of causal relationships.
Synergy	the control system has certain properties that are not specific to individual elements.
System characteristics	
Adaptability	preparedness of the management system for the influence of external changes.
Dynamism	time change.
Reliability	continuity of the work process in violation of elements.
Immersion	liability centers have some specific objectives, but they do not contradict and provide effective management.
Integrity	not elements create a cost management system, and the system is formed by relation to the elements.
Interdependence	interaction with other systems and control elements.
Purposefulness	effective management as a component of the productive activity of the agrarian enterprise in general.
Education	the ability to improve with respect to environmental change.

The basis of the systematic planning of the agrarian enterprise is information on both production activity and external changes, and the result is the rationality of the management system, which forms and ensures the efficiency of the functioning of the entire agrarian enterprise [4].

Strategic planning as one of the methods of forecasting the phenomena of social life and economic processes in the system of agrarian production is based on the strategic foresight of the external environment and adaptation to its changes, distribution of production resources and assessment of strategic potential, coordination of the internal economic structure on the basis of portfolio analysis methods.

Preservation of the characteristics and properties of the management system of the agrarian enterprise is mainly due to the internal component. Hence, the fact that the basis for the effective functioning of the control system is the formation of its main elements and the interconnections between them.

Since the agrarian enterprise management system is an open complex, it operates under the influence of external and internal factors, and the principle of adaptability allows it to react in a timely manner and to function effectively, with changes both in the middle of the enterprise and externally, preserving existing properties and characteristics.

Factors of the external and internal environment are not enough structured set, then in order to group them into a ranked row, in our opinion it is expedient to use the method of pair comparisons created on the basis of multidimensional scaling [9].

Table 2

Scale of relative importance

Incompatibility	Value	Content
1	equal importance	equal contribution of the agrarian enterprise
3	moderate advantage of one leverage over another	slight advantage one direction over another
5	significant advantage	quite a significant advantage over one another over the other direction
7	strong advantage	the advantage of one direction overlaps the practical significance of another
9	very significant advantage	impairment of one of the directions
2, 4, 6, 8	intermediate solutions between neighboring values	used in compromise cases
inverse quantities	when comparing one line of activity with another result will be given veleshin, while comparing the second direction with the first one will receive the reverse cell.	

The research will be carried out according to the steps below.

Stage No. 1. Definition of the goal. Clarification of the extent of the influence of a number of investigated factors on the level of efficiency of the management system of the agrarian enterprise.

Stage No. 2. Field of Restrictions. Finding the set of factors that directly affect the efficiency of the production management system.

Stage No. 3. Creation of a matrix of pair comparisons relative to the scale (Table 2).

Stage No. 4. Calculation of the product of the obtained points of pair comparisons for each row of the matrix.

Stage No. 5. From the received data, we calculate the root of the 20th degree (the number of selected factors).

Stage No.6. Summary of received calculations.

Stage No. 7. Next, determine the level of each factor of influence (%) by calculating the ratio of each component separately to the total.

Stage No. 8. Construction of a number of priority factors that have a strong influence on the management system of agrarian enterprises.

Stage No. 9. Analysis of the semantic value of the received priority series. The whole process is subject to verification and rethinking until it is certain that the process has captured all the important characteristics necessary for the presentation and resolution of the problem.

The details of the factors of internal and external influence on the efficiency of the management system of agrarian enterprises are presented in Table 3.

Analyzing the received priority number of factors of influence in Table 3, it should be noted that internal factors of influence are more significant than external ones. More important is not only the whole group of factors, but also the average value of each of them. This fact is substantiated by the fact that the process of managing an agrarian enterprise is more closely interconnected with the internal environment of farms, and therefore it is more determined by it.

The calculations confirmed the highest importance of internal factors such as the quality of information flows (13,5 %) and methodological provision of the management system (13,2 %), which emphasizes the need for high information provision, as well as tools and methods of processing for the formation of effective management, with this and the interconnected accounting policy of agrarian enterprises (12,0 %).

Factors organizational structure and technology of production have close estimates (6,2 % and 5,9 % respectively), since the organizational structure defines the implementation of the organizational management function, and the production technology forms the object of management. Among all internal factors of influence, technical support (1,4 %) was recognized as the least significant, but this degree of influence only indicates a low level relative to other internal factors, and not the insignificance of this indicator.

Table 3

Degrees of influence of factors on management of agrarian enterprises

№	Internal factors	Degree of influence, %	№	External factors	Degree of influence, %
1	quality of information flows	13,5	1	standardization level	10,0
2	methodical support	13,2	2	market conditions	5,0
3	accounting policy	12,0	3	government grants	4,2
4	the organizational structure	6,2	4	demand for products	2,1
5	production technology	5,9	5	international programs	1,4
6	qualification of employees	5,5	6	level of information support	1,3
7	assortment	4,9	7	tax policy	1,2
8	level of specialization	4,1	8	infrastructure of the region	1,1
9	size of the enterprise	3,8	9	inflation rate	0,5
10	legal form	2,7	Together		26,8
11	technical support	1,4			
Together		73,2			

Regarding the importance of external factors, the highest level of standardization of products (10.0%), since the requirements for products mainly form the composition and structure. Significant factors are market conditions (5.0%) and demand for products (2.1%). The most insignificant is the level of inflation (0.5%), which is taken into account only when planning costs, but it is impossible to reduce its impact on the management system of the agrarian enterprise.

The system approach to the rational formation of elements will not create a mechanism for effective management of the agrarian enterprise, since the main place in the functioning of the control system belongs to interconnections.

As the study of the factors influencing the management system of the agrarian enterprise showed, the most influential are the quality of information flows and the methodical provision of the management process. In essence, these factors are the informational interconnections of the management system [7].

From the point of view of system planning, agribusinesses are a complex system based on subsystems and a high-level subsystem of the industry. The system approach to the study of the agrarian production process allows to distinguish certain internal and external factors that have an impact on the organizational structure, functional distribution and, most importantly, on the financial result.

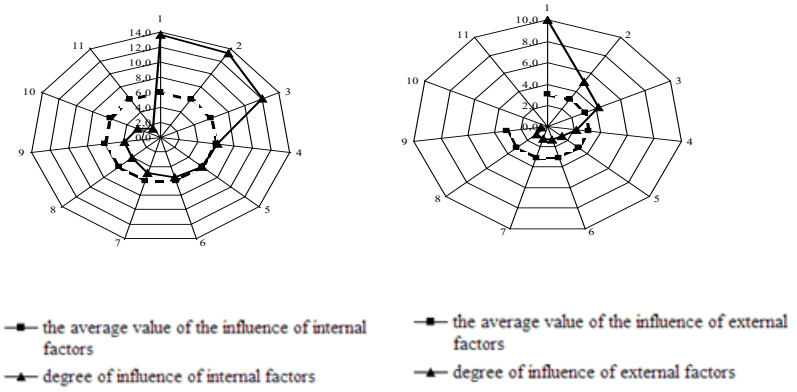

Fig. 1. Matrix of factors influencing the management system of agrarian enterprises

In the conditions of instability, the use of a systematic approach in the management of an agrarian enterprise allows the complex to assess the degree of implementation of management tasks, adjust them by terms, volumes, end results, correlate the goals of current and strategic management, establish the relationship between the execution of tasks and the opportunity to achieve a strategic goal of development, reducing the gap between the developed strategy and the actual processes occurring in the process of implementing the financial and economic activities of the enterprise [11].

Market transformations in Ukraine, the need to reorient the agrarian enterprises in order to produce competitive products, require significant investments. Efficient management of such enterprises requires a systematic approach. Often, beyond the scope of the research, questions remain about determining the parameters of the participation of the subsystems of the organization in agreeing development goals, directions of interaction, means of transformation, communication management and actions of individual subsystems in decision-making and their implementation in the process of management activities, which are associated with a holistic approach to solving complex tasks.

Consequently, the systematic approach in the management of an agrarian enterprise involves such management, which as a result solves systematically the system tasks that are integrated into the subsystem, taking into account the time management period, resource components, development prospects, risks. Application of this approach will prevent the development of crisis phenomena in the process of operation of the enterprise, since the management system is aimed at prediction, timely response and prevention of such phenomena.

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PART 4. THE LEGAL, SOCIOCULTURAL AND EDUCATIONAL ASPECTS OF SOCIETY MANAGEMENT

INFORMATION AND ANALYTICAL SUPPORT FOR SELECTION OF FORMS OF ORGANIZATIONAL LEARNING AT AN ENTERPRISE

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Effective functioning and further development of national enterprises are possible only with the use of an effective management mechanism, an important component of which is HR management. Qualified staff is one of the main factors in the formation and maintenance of enterprise competitiveness. In the conditions of rapid development and constant growth of the available information, the organizational learning of the personnel becomes more and more relevant, because it allows to avoid aging of knowledge and to improve the adaptability of the enterprise as a whole.

Many researchers considered the issues of organizational training, such as: T.Alftan, A. Aleksiuk, I.Bondar, D. Bohynia, O. Baranova, S.Batyshev, L.Herhanov, O.Hura, M.Drozach, V. Dzhyford, A.Yehorshyn, V.Yevdokymov, P.Zhuravlov, I.Zaiukov, A.Kapska, Dzh. Kilinh, I. Kovalenko, A. Kolot, O.Kuzmin, Y. Lipsits, B.Laport, D.Melnychuk, N.Nychkalo, B.Omelianenko, V.Pshennikov, F.Rodzhers, V.Savchenko, M.Semykina, V.Spivak, N.Skorobahatov, S.Stryzhov, Yu.Shvalb, Dzh. Shveitser, O.Yaroshenko ect.

Recently, more and more diverse organizational tools and techniques are emerging, which is largely due to the development of information technology. They have their advantages and disadvantages, and useful for the development of specific competencies of employees. In addition, it should be noted that the learning methods also vary greatly between different categories of staff. Therefore, the process of choosing forms of training for specific groups of employees is very important, in order to maximize the effect of training activities.

All learning methods can be divided into two large groups: - on-the-job learning; - off-the-job learning.

On-the-job learning is characterized by direct interaction with everyday work. It is cheaper and more efficient and facilitates entry into the educational process of workers who are not accustomed to studying in classrooms. Learning within the organization can include an external teacher's invitation to meet the specific training needs of the employee. On the other hand, the purpose and order of study,

in this case, can be lost under the current work and rigid period [9, p. 42]. This group includes the following learning methods: instruction, copying, mentoring, rotation, delegation, method of complicated tasks.

Off-the-job learning includes all types of training outside of the organization. Such methods allow separating workers for a certain period from the daily work activity. The learning process in this case is planned better [9, p. 46]. It includes the following methods: training of sensitivity, lectures, modelling, case studies, role games, business games, open learning, distance learning. Besides, a number of other classifications are existing (Table 1).

Table 1

Classification of methods of organizational learning

Classification	Learning methods
1. By activity of the listener	1. Passive 2. Active
2. By duration of learning	1. Short-term training - no more than 5 days 2. Medium-term study - no more than 6 months 3. Long-term - training more than 6 months
3. By the level of motivation	1. Methods of unmotivated learning - should be applied to an employee who does not understand the need of training, the dependence of his professional development on the results of training 2. Methods of motivated learning - should be used in relation to persons who want to study, and understand the necessity of professional development 3. Self-learning - is the highest level of motivation, when a person independently understands the importance of learning, there is a specific need that it seeks to satisfy through learning
4. By target group	1. Individual - it is conducted with only one employee according to an individual program 2. Group - is carried out for a certain group of workers with similar learning needs
5. By category of employees	1. Training of managers 2. Training of specialist 3. Training of workers
6. By way of realization	1. Own company forces 2. Invitation of consulting firm
7. By the combination of learning and work activities	1. With the leaving the production - during the training the employee is relieved of his duties 2. Without leaving the production - during the training the worker combines learning with the job
9. By the use of information technology	1. Traditional learning 2. Distance learning 3. Simulation learning

Source: developed by authors on the basis of [1, 8]

Table 2

Advantages and disadvantages of organizational learning methods

Learning method	Advantages	Disadvantages	Competencies
In basket technique	High level of motivation; development of abilities for analysis of employees	Employee involvement; requires significant funds	Communication skills, strategic thinking, organizational skills
Shadowing	Simplicity and economy; adaptation of the employee to a new type of activity	Employee involvement; significant duration; long-awaited results	Technical skills, customer orientation, striving for development
Secondment	Employees get personal development opportunity; acquires diverse experience in projects; gaining new skills and experience	Employee involvement; a long period of implementation; needs a lot of expenses	Stress resistance, strategic thinking, objectivity
Budding	Employees get the objective information about their work; creating interactive communication; improving interpersonal skills; equality	The difficulty of choosing a mentor; employee involvement	Ability to solve conflicts, communication skills, ability to work in a team
Coaching	Personal development of employees; Strengthening teamwork: improving interpersonal communication skills	Employee involvement; significant duration; long-awaited results	Initiative, leadership, creative thinking
Case study	Ability to compare different points of view; promotes the active use of knowledge and skills	It takes a lot of time to solve problems and tasks; employee involvement; requires significant funds	Ability to work in a team, strategic thinking, focus on results
Business game	Acquiring the ability to analyse and make decisions, simulate situations; reducing the likelihood of errors in real situations	The need for thorough preparation of the game scenario; high communicative skills of the person who conducts it is required	Creative thinking, communication skills, leadership
Distance learning	Ability to attract a large number of employees; the opportunity for employees to choose a convenient time to study; the possibility of fixing the learning process on electronic media	High level of technical equipment is required; lack of personal contact with the teacher	Focus on results, autonomy, technical skills

Source: developed by authors on the basis of [2, 6, 11].

It should be noted that in order to achieve the maximum effectiveness of organizational learning of the personnel company should not be limited in the use of its forms or methods, and apply their combination to achieve maximum effect. In addition, in the selection process, attention should be paid to what competencies should be developed within these activities (Table 2).

Considering the diversity of learning methods, it is very important to choose one of them or their combination that will be the most appropriate in a particular situation for a particular category of workers.

A significant role in this process is played by two factors: motivation of the employee for training and his professional maturity. They determine the extent to which the administrative impact on the training of this employee is needed, how much he is ready for self-learning, which methods should be used. The matrix, which reflects the relationship between the given factors, was built (Fig. 1).

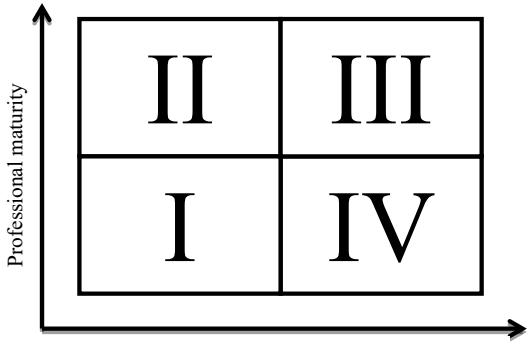

Fig. 1. The matrix of the relationship between the professional maturity and the motivation of the employee for training
Source: developed by authors

Each of the quadrants has its own peculiarities in terms of the category of workers who can get into it, and accordingly, to the choice of learning methods to be applied in one or another case. For the distribution of employees between quadrants, the evaluation is conducted, resulting in an integrated score of 1 to 10. The use of this tool requires a survey among the employees for whom the training plan is being developed. This tool allows dividing the employees in different categories and according to them to choose the learning method that will be most effective.

Quadrant I: employees who fall into this quadrant are likely to be newcomers to organization, but they do not have a strong motivation, so they are rather passive about their own adaptation at the enterprise. Therefore, it is important for such workers to organize training with external stimulation, such as mentoring.

Quadrant II: This quadrant may include workers close to burnout. They are professionally mature, but are not motivated for further development; do not understand

the need for education. Therefore, in this case, it is necessary to take measures that could return interest, for example, such method as Secondment can be used.

Quadrant III: the quadrant is made up of workers who are the most experienced and motivated, so they understand by themselves what knowledge is necessary, and they can independently make suggestions on learning activities, besides, for them the self-learning is given to the foreground and the task of the enterprise to provide them with the materials necessary for this purpose.

Quadrant IV: employees who fall in the quadrant are usually newcomers or workers who are not yet sufficiently qualified and experienced, but are very motivated to develop. Therefore, it is important for the enterprise to provide them with the ability to obtain the necessary skills and abilities, for example, such method as Shadowing can be used.

In modern conditions, it is critically important for enterprises to update the knowledge of their own personnel constantly, as this allows them to form new competitive advantages and use more innovative technologies in their activities. In order to achieve the maximum effect from organizational learning, it is very significant to choose its specific forms. This process can be improved by using matrix methods that allow you to take into account the individual characteristics of employees and form the most effective training plan for them.

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ASSESSMENT OF LEADERSHIP ABILITIES IN THE CONTEXT OF INTERNATIONAL ECONOMIC RELATIONS

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One of the most important tasks of modern education and business is the search for leaders and the development of their abilities. The main feature of the leader is his ability to create an image of the future in his imagination and lead other people on the way of transforming the imaginary image into reality. As leadership is directly aimed at the future, leading companies in the world today are teaching top managers of senior management leadership skills. This calls for the study and analysis of leadership qualities of both ordinary people and outstanding personalities of our time.

Despite the fact that it is impossible to teach any leader to be a leader, it is possible to identify and develop in each person the features of character and ability inherent to the leader, quite possibly, as some researchers believe Bass B. (Bass B.), Broadbeck F. (Brodbeck F.), Bublyk M., Viday A., Kalnitskaya K., Parigin B., Peterson M., Smith P., House R., Schwartz S. (Schwartz S.) and others. [1-25]. As it is customary to consider in work [3], it is leadership that is caused by the opposition to the official leadership, the system of established values, norms and social principles.

Kalnitsky K. [2] considers leadership as a way of improving the relationship between the leader and subordinates.

There is no universal understanding of leadership [21], because leadership features are characteristic of certain cultural values. The traditional feature of leaders born in the United States is the American values of individualism. Scientists also separately distinguish psychological characteristics of the leader's personality, as well as socio-psychological features of the situation in which the leader was.

Investigating the outstanding figure of G. Newell, among his main leader rice can be distinguished: 1) Risk; 2) perseverance; 3) responsibility; 4) the ability to

apply sanctions and reward; 4) the ability (personal) to decisive action.

Evidence of such features by G. Newell is his act - he left his studies at Harvard University for a career in Microsoft, which, in fact, proved to be successful - he has reached the level of the «Millionaire Microsoft.»

The success of leaders is characterized by the following features: high levels of energy, resistance to stress, emotional maturity, honesty, self-confidence. It is the confirmation of these features that are facts from the biography of G. Newell. In 2007, Newell openly criticized the development of games under the console, and especially the PlayStation 3, saying it was «a waste of time for everybody» [14] as well as a «catastrophe at all levels ... I would even say, though so late that they should simply cancel it and close it. Just say: «It was a terrible mistake, we apologize and stop selling it, and stop stopping people from creating something for that» [15]. In 2010, G. Newell appeared on stage during the Sony presentation; having apologized for the preliminary comments on the development of the console, discussed the open nature of the PlayStation 3 platform, and also announced the Portal 2 for it, noting that with Steamworks support this would be the best version of all consoles [16].

G. Newell also criticized the Xbox Live service, calling it «a train wreck» [17]. At the LinuxCon conference in September 2013, it announced that in the future, Linux would be the main operating system under which the games will be developed, also announcing SteamBox - a new console from Valve, which is closely related to Linux, as well as criticizing the latest version. The operating system from Microsoft Windows 8, calling it «disaster» and a threat to the open world of PC gaming [18].

G. Newell can skillfully transform the submissions of the subordinates, forcing them to realize the importance and value of the results of labor, activating their higher needs (self-esteem, self-actualization). Also, G. Newell forces his followers to be distracted from personal interests for the sake of the interests of the cause, which leads them to trust and respect, which motivates them to perform a greater amount of work than they were originally going to perform. Interesting is the fact that G. Newell played a lot in Resident Evil 2 and Super Mario 64 [13] to gain inspiration for the design of some parts of Half-Life.

G. Newell is also characterized by such features: authority, desire for freedom of action, instruction of subordinates, ability to motivate subordinates, maintain effective relations, responsibility for decision-making.

The leader must use some aspects of the special exchange. There is no need to treat all subordinates equally, but everyone must feel that they are valued and respected as a member of a team (organization) and that he is not a «citizen of a different kind». Namely these features are not inherent to G. Newell: tact, desire to emphasize the value of each employee, building friendly relations.

In general, often the emphasis is on leadership skills, as opposed to the possession of certain personal qualities. These skills include: knowledge of your business, technology and equipment, the ability to analyze complex events and grasp tendencies; Recognize changes and identify problems; the ability to maintain a cooperative

relationship, as well as the ability to persuade. However, the relative significance of most of the specific skills significantly depends on the situation in which the leader was. Here, the ability to rational persuasion, inspiration, counseling, ability to cause commitment to oneself, ability to appeal to a person, communication, ability to form a coalition, to exercise pressure, to justify actions, etc., are already important.

Table 1

Assessment of leadership abilities by G. Newell

№	The name of leadership abilities	Score scale
1.	Individualism	3
2.	Personal ability to take decisive action	4
3.	The desire for freedom of action	5
4.	Persistence	2
5.	Responsibility for making decisions	3
6.	Risk	5
7.	Tact	1
8.	Authority	5
9.	Diplomacy	1
10.	Social sensitivity	2
11.	Ability to persuade	4
12.	Ability to listen	4
13.	Ability to transform the submissions of subordinates	3
14.	Ability to activate in subordinates self-esteem, self-actualization	4
15.	Ability to motivate subordinates to work for the cause	5
16.	Ability to apply sanctions and reward	4
17.	Ability to instruct subordinates	3
18.	Ability to maintain effective relationships	4
19.	Ability to emphasize the value of each employee	1
20.	Ability to build friendly relations with subordinates	3
21.	Knowledge of your business, technology and equipment	4
22.	Ability to analyze complex events and grasp tendencies	5
23.	Ability to recognize changes and identify problems	5
24.	Ability to maintain cooperation relationships	3

Note: evaluated by authors, where 0 is the absence of features, 5 is the most striking feature of the feature

It should also highlight the following qualities inherent in G. Newell's tact, diplomacy, listening skills, social sensitivity, which the programmer used to develop

favorable relationships with subordinates, equal or higher rank.

The list of the main leader traits of G. Newell and their evaluation on a scale scale from 0 to 5 is shown in Table 1.

G. Newell most clearly manifested features: riskiness, desire for freedom of action, authority, ability to motivate subordinates to work for the cause, ability to analyze complex events and grasp tendencies, the ability to recognize changes and identify problems (all received an assessment – 5). Almost absent (weakly inherent) in the figure of G. Newell there are features: tact, diplomacy and ability to emphasize the value of each employee (all received an estimate – 1).

Of the 24 leader traits of personal qualities, G. Newell describes 12 rice, 8 rice relate to subordinates, and only 4 features describe his professional knowledge and skills.

The results of the evaluation of leadership features showed that the fig. 1.

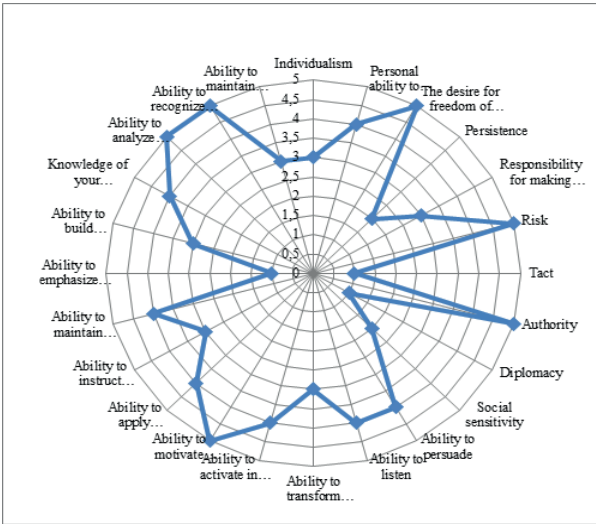

Fig. 1. Results of the evaluation of leadership features of G. Newell

Note: proposed by authors

Thus, among the special leadership features characteristic of G. Newell, there is a traditional feature of the leaders born in the USA, namely: the American value of individualism.

Consequently, the researches made it possible to state that leadership should be understood as the relations of dominance and subordination, influence and follow-up in the system of interpersonal relations in the group. Leadership as a process and a means of organizing group activities, aimed at achieving goals in optimal terms and with the optimal effect. The main feature of the leader is his ability to create an image of the future in his imagination and lead other people on the way of transforming the imaginary image into reality.

Among the special leadership features characteristic of G. Newell, there is the traditional feature of the leaders born in the USA, namely: the American value of individualism. In the process of research and evaluation of leader traits, the figure of G. Newell revealed that his character most clearly shows the following features: riskiness, desire for freedom of action, authority, ability to motivate subordinates to work for the cause, ability to analyze difficult events and grasp tendencies, ability to recognize changes and identify problems. Characteristic weaknesses in the figure of G. Newell are features: tact, diplomacy and ability to emphasize the value of each employee. Of the 24 leader traits of personal qualities, G. Newell describes 12 rice, 8 rice relate to subordinates, and only 4 features describe his professional knowledge and skills.

Leaders do not make important decisions in place until a critical situation has developed. When dealing with routine problems, effective leaders are guided by long-term goals and strategies. Leaders with a wide range of specialist knowledge and advanced cognitive skills are more likely to make successful decisions. Self-confidence, resistance to uncertainty and stress also help the leader to cope with responsibility for making important decisions in the absence of complete information. Every person has his own prototype of the leader (that is, an idea of what the leader should be), which helps her to evaluate real leaders. Thus, the «effectiveness» of leadership is not determined objectively, but through the justification of expectations.

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PROVIDING TRAINING FOR PERSONS FOR PUBLIC ADMINISTRATION

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Technical progress, the informatization of society, social transformations and the change of values are reflected in the system of public administration, but, unfortunately, they do not give it perfection. The question of the professional characteristics of a civil servant, his personal qualities and training are not only relevant but also debatable. Can a person's civil service be without a professional education? What is more important in management: strict adherence to laws (rules) or the availability of certain freedom to make decisions? Is it possible to allow foreigners to be governed by the state and create an exclusion system for obtaining citizenship?

What should be a priority in making decisions: the rights and freedoms of an individual or the interests of the state? These and many other, more practical issues still do not have a clear answer in the theory of public administration, so each country, building a civil service system, is guided by both the theoretical positions and the traditions and historical experience of managing state affairs, which was influenced by many factors. It is clear only (and this is noted by the researchers) that there is a rethinking of the role of public administration, which acquires the signs of totalitarianism. Y. N. Harari writes that «... 7 billions of sapiens are less dependent on the whims of nature, but are increasingly subject to the diktat of industry and management systems» (here and thereafter translation from the Russian language – T. M. Lozynska [1, p. 425].

Harari observes that in the conditions of capitalism, the management of public

relations is carried out on the basis of the interaction of market and state functions and their constant review. At the same time, «quite often the market exploits a person, and the state uses the army, police and bureaucracy not to protect man, but to oppress» [1, p. 436]. The high morale of the officials and the ethics of their behavior are still an unattainable ideal and attract much attention from academics in the process of reforming the civil service [2; 3; 4], especially in view of the choice of values of European democracy as benchmarks for the construction of modern Ukrainian statehood. There is a public demand for state bureaucracy officials to be more in line with the liberal style of governance and to show respect for human rights, but in this case, citizens should also demonstrate models of high social consciousness. Otherwise, in line with the democratic way of forming power, we will not be able to provide for the selection of state officials of persons with certain professional and personal qualities.

T. Vasilevska notes: «In a situation where demands that do not find a response in society, nevertheless, will be realized in the sphere of executive power, there is a real danger of separation of the axiological system of civil service from the dominant values of society, from the mental installations of the people» [4]. Thus, the construction of the civil service system in Ukraine and the provision of its highly skilled personnel during the period of transformation of social values is a challenge for the young state. And it is unlikely that, with the implementation of a number of tasks of the staffing of the civil service, a possible return to the instructions of N. Machiavelli regarding the fact that the ruler has «<... induce fear and love for the people ...>, <... should not keep his promises ...>», it is not necessary «It is imperative to follow the peace, if he speaks of it, etc. [5]. At the same time, one cannot but cause sympathy with other views of the Florentine philosopher: that the ruler must think and realize great intentions; to encourage citizens to calmly give in to trade, craft or agriculture, to organize their possessions, without fearing that they will be taken by someone; to be an example of liberality and generosity; behave with counselors so that they are not afraid to express themselves [5].

The success of reforms in other spheres of socio-economic life of the country will depend to a large extent on the way in which and for what purpose they will make decisions in the system of state power, that is, the reform of the civil service is extremely important for the further development of the state. It should also be borne in mind that in the process of decentralization of management, requirements for officials of local self-government bodies are transferred to which a significant part of life-saving powers are transferred at the local level, hence the creation of a system of training for the entire sphere of public administration. This peculiarity of the present is taken into account by the main institution that performs functional management of the civil service, the National Agency of Ukraine for Civil Service, which carries out professional training of civil servants and officials of local self-government. In recent years, there has been a decrease in the number of civil servants and officials of local self-government in Ukraine, which is connected with the streamlining of

the structure of the civil service and the reduction of administrative-territorial units as a result of the association of territorial communities (Fig.1). At the same time, the quality of the staffing of the civil service becomes much more important in view of the complexity of the tasks of bringing Ukraine to a sustainable development trajectory. The Action Plan on the Implementation of the Association Agreement with the European Union, approved by the Resolution of the Cabinet of Ministers of Ukraine dated October 25, 2017 No. 1106 [6], provides for the introduction of new principles of the civil service, which largely relate to personnel policy and training as a component of it. The main directions of the reform of the civil service are also evidenced by its focus on improving staffing:

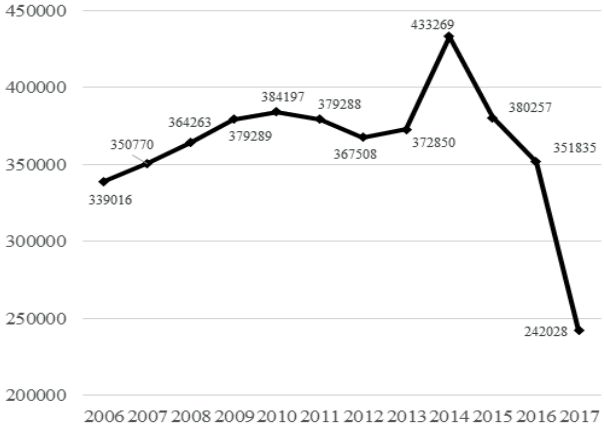

Fig. 1. Dynamics of the number of civil servants and officials of local self-government in Ukraine, 2006-2017, persons
Source: built according to the National Agency for Civil Service of Ukraine.

- construction of professional, uncorrupted, prestigious, oriented to the needs of citizens of the civil service;
- separation of policy from administration;
- introduction of a competent human resources management model;
- harmonization of civil service and service in local self-government bodies;
- introduction of a transparent model of remuneration and career motivation of civil servants;
- staffing of the decentralization process [7].

Higher requirements for the professionalism of civil servants determine the need for continuous training, retraining and advanced training, which, in turn, requires a high enough motivation for officials to study and provide appropriate incentives in the process of their career development. The basic requirements for the training of civil servants and local self-government officials are regulated at the legislative level

[8]. Since 2015, the monopoly of the National Academy of Public Administration under the President of Ukraine for the training of civil servants collapses in Ukraine, and from 2019 - a monopoly of budget institutions for retraining and raising the skills of civil servants. At present, the training of specialists in the field of public administration under the various educational and professional programs of higher education «bachelor», «magister» and «doctor of philosophy» carry out institutions of higher education of Ukraine of state and private ownership, which received a license for this. According to the Resolution of the Cabinet of Ministers of Ukraine dated February 6, 2019 No. 106, the subjects of the provision of advanced training services are recognized not only organizations of state and communal ownership, as it was before, but also «natural or legal persons (educational institution, enterprise, institution, organization any form of ownership) who conduct educational activities; international and foreign institutions, organizations implementing relevant programs, projects of international technical assistance «[9]. The response to such innovations, as always, is ambiguous, but open-access reviews require some comments. In particular, the conclusion is reached regarding the low quality of educational and professional programs, which are carried out training of specialists in public administration in the system of institutes of the National Academy of Public Administration under the President of Ukraine [10], which has not been substantiated.

To date, the Academy has focused on the best specialists, some of them, after 2015, went to work in other institutions of higher education, but if they are criticized for forming poor quality (by what criteria?) educational programs, then where to find specialists, who will do it better? There is no reason to argue that the dispersal of specialists and resources from other, in particular private, institutions will automatically bring educational programs in line with the urgent needs of the civil service. Similar statements only reflect the expectation of positive changes in personnel training for the public administration, but are not the result of a thorough analysis of the status of the existing system, reflecting the voluntarist nature of the decision. Perhaps the correct solution is correct, but its correctness is not proven, which always causes doubts and resistance. The statements of certain public figures and politicians regarding the growth of the number of civil servants are not sufficiently correct, which, firstly, is not affirmed by statistical data (Fig. 1), and, secondly, the conclusion is made without regard to any criterion. In this regard, it is advisable to refer to the results of the study of Professor A. Khaletska, who gives the given data number of officials around the world (table 1).

For example, J. Grekov notes that as a result of the reform of the civil service of Great Britain, the integrity of the system was destroyed and the prestige of the civil service was undermined [11], and the reason is seen by the author in the run-up to the reform of the civil service compared to the real state of social relations.

Table 1

It is given (on 1 official) the number of citizens in individual countries of the world, persons

Country	Population, million people	Number of civil servants, thousand people	Number of citizens per one official, persons
Belarus	9,5	53,7	176
Estonia	1,3	26,0	50
China	1340,0	70000,0	19
Latvia	2,3	88,3	26
Lithuania	3,3	20,0	165
Germany	83,2	507,5	163
Russia	141,9	996,6	140
USA	309,0	2101,2	147
Ukraine	42,0	242,0	173
France	61,0	320,0	190

Source: systematized and refined according to the data: [10].

In this regard, it is fair to conclude that the public service should not outstrip the real state of social relations and the level of development of the society from which it takes personnel and which is called to govern [12]. In the case of only formal borrowing of civil service models and training for it, there is not only a preservation, but also accumulation of personnel policy shortcomings under the guise of reforms.

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ANALYSIS ON THE CURRENT SITUATION AND COUNTERMEASURES OF THE DEVELOPMENT OF THE ELDERLY HUMAN RESOURCES IN CHINA

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According to the statistical bulletin of China's national economic and social development in 2018, at the end of 2018, the total population of the mainland China was 1,139.38 million, and the population over 60 was 249.49million, accounting for 17.9%of the total population, of which the population aged 65 and above was 16,658, accounting for the total population11.9% [1]. Based on the current age of population aging, experts predict that by 2020, the number of elderly people over the age of 80 will increase rapidly, and is expected to exceed 30 million. By 2025, the total number of elderly people in China will reach 300 million, thus entering the super-aged country [2]. Since 2014, the working-age population has begun to decrease, and the demographic dividend has gradually disappeared, which means that the peak of China's population aging and the reduction of the labor force in the young and strong years (see chart 1). Therefore, the shortage of labor force will become an important factor that restricts the development of China's economy and society. This is also a huge challenge that China will face now and in the future.

The 60-69-year-old younger people are large in scale and have a high health rate. They are the main targets for the development of the elder human resources. In 2018, the number of elderly people aged 60-69 in China is 140 million, and in 2030, it will exceed 200 million [3]. Based on the latest World Health organization (WHO) 2018 edition of World Health Statistics, the life expectancy of Chinese people is 76.4 years [4]. The human resources of the young and old after 60 years old, which are huge in scale, are potential huge treasure house of human resources.

However, from the perspective of depth and breadth, the development of China's old labor resources is very low. Very few people continue to engage in social work after retirement, which inflects in the relatively low employment rate of the elderly. As they grow older, physical conditions become the first obstacle to restrict the

elderly to continue to participate in work. Therefore it is more important to develop intellectual resources of the elderly.

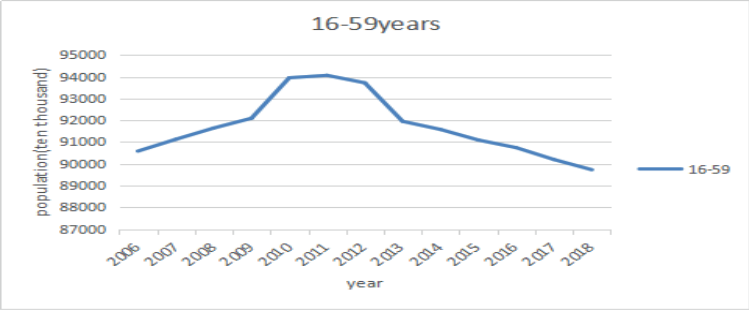

Fig. 1. Changes in China's working-age population from 2006 to 2018
Source: Statistical bulletin of the People's Republic of China on national economic and social development 2006-2018

At present, in China, the living status of the elderly over 60 years old is reflected in the following aspects: First, they look after the grandchildren or grandchildren at home. Looking after grandchildren or grandchildren is a very common phenomenon in our society, which distinguishes from foreign countries. Second, they are in a state of «complete retirement». Among them, there are many high-tech and high-skilled talents who have not been fully utilized. Therefore, a large amount of old-age labors have been wasted which lead directly to the shortage of labor in China while the large number of elderly people in China have not been exploited and utilized.

The development of the elderly resources plays the very important role in society. However, there are still a lot of difficulties in the development of the elderly resources. First, the scientific and cultural knowledge of the elderly needs to be updated and improved. The college entrance examination system was reinstated in 1977, but the number of students admitted was only 270,000 [5]. Among the elderly over 60 years old in China, most of the college students who have retired have a relatively backward knowledge structure. Except them, the same as the middle-aged and high school-aged seniors, which objectively restricts their re-employment.

Second, the supply of education resources for the elderly is seriously inadequate, which is unfavorable for updating the knowledge of the elderly. According to relevant data, in 2016, China's total human capital was 1675 trillion RMB [6] in terms of the value of that year, but there is still a big gap in terms of the proportion of international human capital density not less than 7%. The problem of lack of senior human capital is more serious, and the number of it is decreasing. Most of the intellectuals at higher levels are over 45 years old, which reflects the shortage of human capital in China. Lack of human capital and human resources have impeded the process of rejuvenating the country through science and education. Therefore,

development of the elderly labor resources can meet the needs of economic development and compensate for the human capital gap.

However, the urban-rural distribution is extremely uncoordinated, and there are few old-age universities in the countryside. In 2018, the number of elderly people in the country was 249.49 million, of which only 8 million were studied in relevant educational institutions, accounting for only 3% of the elderly population. According to data released by the China Association of Senior Citizens, there are more than 70,000 educational institutions for the elderly, including universities [7]. But for the whole country, older universities are still overwhelmingly in short supply. The old universities are solving the problem of insufficient supply through remote lectures. At present, there are 5 million elderly people who participate in distance education, but it still cannot meet the educational needs of the elderly. Moreover, good universities for the elderly are scarce. A large number of elderly people unable to enter the universities because of barriers to entry. Therefore, it is difficult to some extent to update the knowledge for the elderly.

Third, the government is short of specific national plans. In recent years, scholars have made endless suggestions for the development of the elderly resources. In addition to delaying the retirement policy, the state has not responded positively. The current Law on the Protection of the Rights and Interests of the Elderly in China is only for the protection of the basic life of the elderly. It does not involve the issue of re-employment of the elderly, nor provides specific laws for the re-employment of the elderly. The right of the elderly to re-employment has not been confirmed by law, so that their re-employment has not received the support and recognition of the society, which also makes it natural for society to exclude the elderly from the social labor resources. Especially for the government, it has no corresponding guidance and specific plan on how to make full use of and develop the resources of the elderly. The development of the elderly resources in China is still in a loose and spontaneous disorder. Therefore, the state should introduce relevant policies and plans as soon as possible in order to promote the rational resources of the elderly.

Fourth, there is no policy support for employers. Some employers can provide suitable jobs for the elderly. However, due to the relatively weak physical strength of the elderly, it is difficult to completely avoid the incidence during their work. Once the elderly are sick in the workplace, the employer necessarily needs certain civil liability which will become a heavy burden especially for some small and medium-size enterprises. Therefore, this makes the employer so discouraged that it is rare to hire older people in practice without systematic policy support for employers. Considering the intellectual and physical advantages of young adult labor force, many companies and enterprises prefer to exclude older people. In the specific operation, the labor relationship between the elderly and the employer needs to be supported by the policy. Otherwise, that the health factor of the elderly not only increases the employment risk of the unit, but also lacks the actual protection for the elderly who are re-employed which makes hiring the elderly become a piece

of paper.

Based on previous difficulties, several measures should be taken in order to promote the elderly labor resources development (see Fig 2). First, strengthening the construction of laws and regulations and improving the system. The legislature must strengthen the formulation of laws to ensure that the elderly are not discriminated against in the course of their work and that their labor rights are not deprived. In order to allow the elderly to have a retirement buffer period, while implementing the existing labor access system, an appropriate labor withdrawal system should also be established, which can help enterprises and individuals recover unnecessary losses.

Second, strengthening the market more market-oriented and expanding the channels for reemployment of the elderly. Bai Yansong, a member of the national committee of the Chinese people's political consultative conference (CPPCC), analyzed China's current population situation during the two sessions in 2018. He proposed to launch a pilot program to the employment market for the elderly [8]. The state council has issued a notice on the 13th five-year national plan for the development of undertakings for the aged and the construction of an old-age care system.

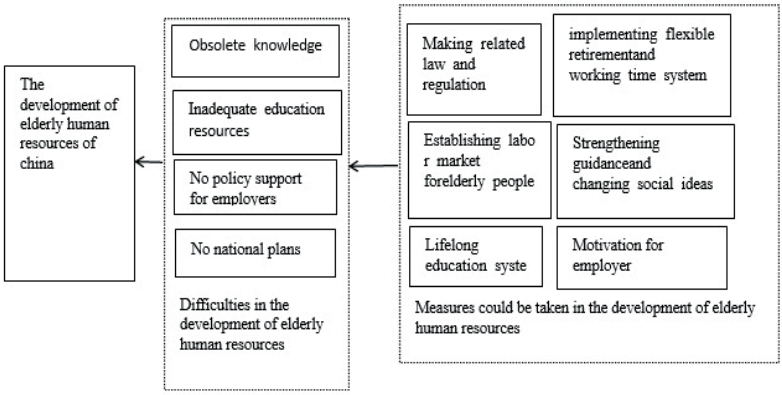

Fig. 2. System of development of elderly human resources of China
Source: adopted by author according with [8, 9, 10, 11, 12]

We will incorporate the development and utilization of elderly talents into the overall plans for building talent teams at all levels, and encourage local governments to formulate special plans for the development and utilization of elderly talents according to the notice [9].

On the other hand, the elderly should unite actively and establish a group organization which can guarantee the interests of the elderly. Therefore, the elderly can form organizations such as senior citizens associations, actively participate in social activities, improve themselves for re-employment.

Third, developing old-age education and building a lifelong education system.

In the 13th Five-Year Plan (2016-2020), the Chinese government mentioned the promotion of the development of old-age learning. At least one old-age university is opened in cities above the county level, and 50% of towns will have old-age schools. The 30% of administrative villages will establish old-age learning points, and the proportion of the elderly who regularly participate in educational activities in various forms accounts for more than 20% of the total number of elderly people. If this plan can be achieved, by 2020, at least 50 million elderly people will study in a senior university or educational institution, which will greatly improve the education level and quality of the elderly [10]. In February 2018, the national office on aging and other 14 departments decided to jointly carry out national education on population aging in the whole society to promote the development of education for the elderly. Approved by the Chinese society of gerontology and geriatrics, Mr. Gao Shuping, vice chairman of the geriatric education branch and chairman of Peking University medical university times education committee, released the «national education plan for the elderly», which include thousands of talents training plan and putting the theory of education for the elderly into practice [11]. The implementation of these plans will greatly promote the development of China's elderly education in future.

Fourth, implementing flexible retirement and working time system. The characteristics of the resources of the elderly determine that we must adopt a flexible retirement age system and a flexible working time system. On the one hand, China's current law stipulates that the retirement age is 60 for men and 50 for women. In fact, the higher the degree, the shorter the working life, especially for women, which is a great waste of the development and utilization of human resources. On the other hand, the level of social productivity is constantly improving. Many experienced seniors will leave their jobs and bring losses to enterprises and society. Therefore, the adjustment of the retirement age is very necessary, especially for the female labor force, which can be appropriately adjusted according to the industry, region and type of work and appropriately extend the retirement age of the elderly. Considering the actual needs of enterprises, they can learn from the German practice, fulfill the flexible retirement system, and replace the mandatory working hours with flexible working hours [12].

Fifth, the government should play a guiding role in promoting the reemployment of the elderly. At present, people still have some misunderstanding that is «uselessness», «package theory», and «theory of robbing bowl of the youth». A large number of cases show that the elderly can have a positive attitude towards life without being completely out of social labor, and can truly feel the joy of life. Therefore, it is necessary to carry out various media propaganda, increase the propaganda of the significance of the development of the elderly labor resources, mobilize the organizations and people in the society to support and promote this work, and create a good social atmosphere for the development of the elderly labor resources in China. For those with special skills, they have the ability and opportunity to continue working without special train. Therefore, increasing the development and utilization of this part of the elderly will

be significant for alleviation of labor supply and demand inadequacy and economic development. Secondly, there is no contradiction with young people to seize the post. Most of the occupations of older workers require a great deal of experience and expertise, which most young people lack. The combination of the elderly and the young labor force can effectively fill job vacancies and further develop the elderly human resources while meeting social needs.

Sixth, tax incentives for enterprises that employ older people. To encourage businesses to hire more old people, it is suggested that government should set up preferential tax system by law for employing the elderly in our country in which different levels of tax incentives are given to businesses depending on the number of older people employed. It can not only greatly improve enterprise hiring older people's enthusiasm, thus pushing more young adult labors move to more suitable positions more suited to their physical conditions, but also help reduce the increasing pressure to corporate tax in recent years [12].

In a word, the development of elderly human resources is of great significance to alleviate the labor shortage caused by the aging of China, promote the physical and mental health of the elderly, alleviate the burden of social pensions and the financial pressure of the country, help young people adapt to the job as soon as possible, compensate for China's human capital gap and alleviate the talent crisis. Therefore, the government should make a good plan, formulate relevant laws and regulations, and enterprises should take feasible management measures to develop the elder resources positively.

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FEATURES OF DEVELOPMENT OF CORPORATE SOCIAL RESPONSIBILITY OF BUSINESS IN UKRAINE

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Strategic objective of numerous social and economic reforms and transformations in Ukraine is creation of the state of general welfare in which all social needs of citizens are satisfied and also conditions for realization of their potential are created. In recent years the concept of the state of general welfare is more and more connected with more global concepts of human development and the human capital which implementation is one of priority activities of the international community. Provisions of these concepts have to take root in all spheres of a social and economic system. Important means of their implementation is business structures. Acts as one of conditions of implementation of the Concept of human development and the human capital introduction and observance of bases of social responsibility of business (SRB), both large, and small and middle.

Let's notice that to various aspects of such phenomenon as the corporate social responsibility (CSR) in Ukraine and in the former Soviet Union devoted a significant amount of scientific publications. In particular, the continuum of views about essence of CSR is analysed in articles of R. Abramov [1], L.S. Belyavskaya [2],

E.Yu. Berezina [3]. Numerous interpretations of content of social responsibility of business are closely connected with the aspiration to realize and classify by CSR determined by models international experience of realization (A. Yu. Berezina [4], E. Yukholin [5], etc.).

Separately it is necessary to mark out scientists who focused on studying of features of the Ukrainian model of realization of corporate social responsibility: V. Vorobey [6] - determination of prospects of development of CSR and the offer on acceptance of National strategy of CSR; O.A. Grishnova [7] - a role of social responsibility in overcoming an economic crisis; M.I. Carlin [8] – relation CSR with the general social policy of the state; L. Petrashko [9] – participation of the Ukrainian companies in the Global Compact of the UNO.

As we see, the phenomenon of CSR is not on the periphery of scientific studios. However studying of CSR in Ukraine mainly concentrates around problems of sustainable economic development and effective management. At the same time there are not enough researches on social responsibility of business. Nearly the only exception is A.V. Mazurik's publications on problems of social audit which allows to measure degree of CSR [10]. Results of sociological polls concerning understanding and the attitude towards social responsibility of business are presented in A.N. Balakireva's articles [11], A.A. Oliynyka [12]. So, the insignificant level of scientific readiness excited problems in sociology and its great public value caused relevance of research CSR of the enterprises of small and medium business in Ukraine.

The achievement of the put aim envisages the decision of such tasks: to find out the features of development of CSR in Ukraine; to define the level of legislative settlement of questions, regional features of introduction of CSR, business tendency to support of development of CSR, barriers that interfere with becoming of corporate social responsibility.

Unlike an occident with a withstand market economy, culture of enterprise and protracted traditions of social partnership Ukraine belongs to those states, where the processes of social-economic modernization have going after character, and transformation processes delayed on a few decades. Ukrainian realities have certain features. However Ukraine only at the beginning of way of construction of the system of social responsibility of business.

The main distinguishing feature of the Ukrainian model of CSR is that on regional and state levels social payment, mainly, is taken to a force participating of business in realization of the various social and cultural programs that partly are the sources of corruption. Although there are many social initiatives of businessmen, but often enough they have not strategic, but especially tactical aims. In particular, social initiatives are initiated by business on the eve of elections to the government of different levels bodies with the purpose of to bring over liking of citizens to the candidate.

The most Ukrainian scientists meet in opinion, that on the sources of adjusting, practice of forming and development a home variant of social responsibility is

by symbiosis of ingredients of the British (voluntarily initiation by business) and Continentally-European models (desire of enterprises to get clear behavior scopes from the state).

Definitely to it understanding of concept testifies corporate social responsibility by organization «Forum of socially responsible business of Ukraine», that considers that CSR, is «responsible attitude of any company toward the product or service, consumers, workers, partners; active social position of company, that consists in a harmonious coexistence, co-operation and permanent dialogue with a company, to participating in the decision of per acute social problems» [13].

In our view, the specific line of the Ukrainian model of SRB is connection of new social directions in activity of business with maintenance of soviet or even and pre-revolution traditions. In Ukraine the typical enough is remained by the role of personality, and in many new business structures that pass the stage of primitive accumulation of capital, is almost fortress dependence of workers on will of leaders and proprietors that by such method aim to strengthen dependence of personnel on a management, and top-managers from proprietors.

Among other features of the Ukrainian model of CSR it is possible to distinguish such: absence in Ukraine of ideology of socially responsible enterprise and high level of civil consciousness; a force character of social responsibility of business is in Ukraine.

As already marked higher, in Ukraine the state is played a key role in forming and stimulation of social responsibility of businessmen. Strategy of assistance to development of SRB develops in three directions:1) reform of taxation; 2) improvements of the pension system; 3) developments of innovative and scientific projects are by means of story chart of techno parks, that assumes favorable tax treatment.

Next to the programs of stimulation of practices of social responsibility of business their normatively-legal providing is developed. The row of the laws called to regulate activity in part of socially responsible behavior of companies operates in Ukraine [14-16]. However the real normative certificates outline the promises of enterprises only, not touching directly their voluntarily initiatives. Moreover, interpretation of CSR the Ukrainian legislation does not give.

And those stimuli that according to laws had to get companies, for example, on introduction of alternative energy sources, does not act in practice.

Let's notice what one of problems of slow development of CSR in Ukraine is not accounting of its advantages by the companies. Though such advantages are obvious what the matrix made by the Company "Sustainability" on the basis of the analysis of activity of the companies of Central and Eastern Europe testifies to [11].

In addition, it costs to mark that a situation with the input of social responsibility of business is different in the separate regions of Ukraine. Variables, that influence on forming of those or other forms of co-operation of business and power in regions and predetermine their differentiation, are, : resource base of region; dominant or dependent position of power is in a region (city); power or weakness of economic

participants; initiative or passive character of building co-operation of power is with business; readiness of power and business is to the mutual compromises.

In the conditions of the poor region interaction of the power and business is based on model of incidental cooperation. For it the lack of a strategic component in these relations, replacement with its incidental initiatives is defining from the power or business of rather joint participation in the solution of social problems - charitable point, separate actions for guardianship of boarding schools and children's shelters, participation in actions of assistance to orphan children, disabled people and citizens of advanced age and so forth. The weakness (including financial) of power in such regions results in a volume, that she mostly leans against informal contractual relationships with business and, as a rule, does not use a compulsion.

The weakness of resource base and power on places often comes forward as reason of low level of trust between parties of public mutual relations. The low level of trust forms the special requirements of business to power in case if power counts on realization of the social programs from the side of businessmen. These requirements are erected, as a rule, to two important positions: equality of investments and transparency of social charges that come true by power due to money of business.

In the rich regions of model of co-operation of power and business can acquire a different kind: their configuration in large part depends on readiness of power and business to the general actions, initiating of partners in the process of co-operation, from the willingness of power to bring over business to the decision of social problems of region.

Thus, it is possible to establish, that forms of realization of directions of social politics in rich and poor regions can be identical, and however strong power and powerful business assist appearance of more developed forms of social responsibility of business, than those that arise up in poor regions.

In a rich region at powerful companies that have necessary resources, a dominant value is acquired by three basic strategies: establishment of loyal relationships with power, forming of relations of trust of population, advancement of positive image of company, in the first turn on territory of the activity.

Thus establishment of relations of trust with local-authority and company afterwards acquires more system character, from separate eleemosynary shares, passing to support of the having a special purpose social programs, from realization of separate initiatives from the side of power - to participating in initiatives from below. Lately this support begins to come true within the framework of competitions of social projects [17].

In poor regions strategy of support of local communities is on the first stage of the development and erected, mainly, to the thesis to «help of scanty means». The basic form of realization is traditional charity.

Imaginary strategy of support of company that lately will be realized by business also has a tendency to further development. However already there are attempts through

introduction of this strategy to provide the high level of capitalization of business.

Will mark once again, that to exaggerate successes and achievements of development of CSR with Ukraine it does not cost. To the modest enough results of input of practices of socially responsible behavior of business the slow attaching of the Ukrainian companies testifies to the Global Compact of the UNO (GC of the UNO, or United Nations Global Compact). So in 2006-2008 in the conditions of the economy growing the amount of participants of GC of the UNO grew sufficiently smartly – from 30 to 71, or almost in 2, 5 times.

2009-2010 it was shown crisis, that initiative in assuming organizations obligations from steady development and responsibility before a company calmed down. After joining in 2011 to the Global contract 60 organizations the amount of new participants in next years grew very slowly.

The analysis of list of participants of the Global Compact of the UNO as the organization and a field of activity also allows defining features of social responsibility of business. It turns out that as of February, 2017 among those who joined the Global Compact of the UNO nearly a half (42.3%) are made by non-governmental organizations – the international and local, 9.5% – the organizations of the public sector. At the same time among participants of the contract only every seventh (14.3%) is the big company. Exactly as much and sub «objects of small and medium business. Besides, part in the Global Compact of the UNO is taken by 16 business associations (8.5% of the public) and 21 other organizations (11.1% of the public) – scientific educational institutions, funds, labor unions. So, as we see, among those organizations which show devotion to the international principles of social responsibility, the large, medium-sized and small companies make minority – 28.6% of the public. However, formal captures by the company on duties of the UNO's Global Compact in practice not always defines its intentions to work respectively and responsibly. In Ukraine according to the GRI standards (The Global Reporting Initiative is the reporting in the field of sustainable development) reports gave only five companies among which there are the "Donbas's fuel and energy company" (DTEK), "Met invest", "System Capital Management" (SCM), "Obolon" and "Nadra bank". Separate social reports give out or include some companies in the consolidated reporting, for the others the principles of the contract is especially declarative. More large-scale distribution the practicing of SRB in Ukraine faces a number of the barriers inherent as to the countries from close to the Ukrainian phase of development of SRB, and especially domestic: in Ukraine mechanisms of practical promotion of social responsibility of business, in particular financial are limited; The Distorted role of means mass information; Low organizational ability of groups of influence in Ukraine; the culture of cooperation is limited; need of adaptation international the practicing of SRB to the Ukrainian conditions; Lack of enough the acquainted, interested and competent managers of SRB. SRB in Ukraine runs into the row of barriers inherent to both the countries with near to Ukrainian the phase of development of SRB, and especially home:

in Ukraine limit mechanisms of practical encouragement of social responsibility of business, in particular financial; distorted role of facilities mass of information; subzero organizational possibility of groups of influence is in Ukraine; limit culture of collaboration; a necessity of adaptation of international practices of SRB is to the Ukrainian terms; absence of sufficient amount of acquainted, interested and competent in SRB of managers.

Thus, unlike an occident with a withstand market economy, culture of enterprise and protracted traditions of social partnership Ukraine belongs to those states, where the processes of social-economic modernization have going after character. Taking into account this forming of practices of social responsibility of business began far later, and practices, taking into account Ukrainian realities, have certain features.

In this connection successful introduction of ideas of social responsibility of business needs modernization a tax system (expansion of tax deductions), strengthening of fight against a corruption, alteration of informative politics with the aim of strengthening of inactivity and objectivity, adaptation of international practices, training of personals on questions organization of social responsibility of business.

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DEVELOPMENT OF SCHOOL AUTHORITIES' MANAGERIAL COMPETENCE IN CONTINUING EDUCATION

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Formulation of the problem. In the period of radical modernization of the Ukrainian education system, the problem of school authorities' managerial competence development and the formation of the leadership's corps of a new creative, innovative type, who are ready and capable to initiative and non-standard

managerial decisions becomes especially relevant. Therefore, the study of school authorities' professional competence is determined by the needs of the society in that it outpaces the educational and professional personal development of the base-level managers of school education as active subjects of culture, social and historical process. These requirements are due to a set of reasons:

- the structure of the needs of a rapidly changing society in general and its social institutions;
- technical progress, which determines the complex knowledge, skills and abilities requirements in professional and social activities;
- the information load increasing, on the background of which knowledge tends to quickly become outdated;
- the necessity of being able to «work in teams», to show readiness for cooperation and to orient themselves independently in related areas;
- the necessity of such qualities as the ability to take responsibility, the ability to independently think and act [1].

The analysis of the main research and publications. International Commission on Education in the XXI century came to the conclusion that the future progress of humankind was not so much related to economic growth, but more to the personal development level. UNESCO proposes to change from the classical concept of «human resources» to the concept of «human competence». This concept implies the maximum, mainstreaming the human interests: the acquisition of professional competence, knowledge, skills and abilities, which are necessary for the health protection and improvement, the culture development, environmental protection, competitiveness in the labor market.

The theoretical foundations of the manager's activity and raising his / her managerial competence have been reflected in the studies of V. Bondar, L. Danilenko, G. Yelnikova, V. Oliinyk, V. Piquelnya, T. Sorochan and others. So too has the analysis of the theories of managerial qualities (R. Krichevsky, L. Kudryashova, V. Lebedev, etc.), general principles of the theory of management in educational activities (L. Karamushka, L. Orban-Lemberk, J. Schwalb, etc.). However, despite the scientists' considerable attention to the problem of the education managers' professional competence formation, the issues of development of school authorities' managerial competence are still not sufficiently researched.

Aim of the Research. We aimed to make the case for development of school authorities' managerial competence at the postgraduate level, to consider approaches to the definition of the concept of «managerial competence» in the scientific and pedagogical literature and to identify the core elements of school authorities' managerial competence.

Main research results. Contemporary challenges, facing the education system in general as well as a particular educational institution in particular, put school administration specialists in a situation of the need to find new management tools and methods. Capacity development of national school staff is currently a state

educational policy priority.

Today, the demanded manager, who has a high level of managerial competence, provides a number of new functions, together with traditional functions, including: forecasting educational institution development, quality and change management, identifying and supporting innovation, their time and subordinates' time management, fundraising and marketing, brand management, etc.

The lack of the required level of managerial competence in the majority of managers seriously complicates their adaptation to the new activity conditions, carrying out the tasks of the education modernization and the successful transformation of organizations led by them into a new status [2].

In education there has been a lot of talk about the competent concept of the teaching and managerial personnel formation and development lately, therefore, we will examine the concepts of «competence» and «competency».

An analysis of the current scientific knowledge allows us to distinguish between these concepts: competence is a description of the personality potential state, and competency is a personality characteristic that manifests itself in real activity. On this basis, one can see that competency is a complex integral characteristic consisting of a complex of competences whose content is determined by the goals, tasks and activity nature [3].

Competence is a given social and professional requirement for the training of a specialist, which is necessary for effective professional activity. The manifestation of the competences availability is recorded only in the context of a real specific situation.

Competences formation and development is represented as the knowledge, skills and abilities formation in the formal and non-formal learning process, developing aptitudes and building the values in the training process and gaining experience in the process of professional activity, internships, informal education. Thus, the complex of competence formation can be imagined as the development of abilities, personal qualities and psychological resources of the individual and the acquisition of the cognitive component and experience in the educational process. At the same time, knowledge, skills and abilities become not goals, but are constantly improved by means of solving those or other professional tasks. In the Ukrainian pedagogical science, often the specialist's competency is considered from the point of view of the professional competences formation.

However, there are other approaches to leading assessing the manager's professionalism. For example, the American model of a competent employee focuses on the part of the spectrum of individual-psychological qualities, which includes autonomy, discipline and communication. The key point is also the need for self-development, the ability to set goals and work towards them.

In this case, the most important component of the employee's qualifications is the ability quickly and without conflict to adjust to specific working conditions and the dynamism of their change [4].

Competence has an activity character of the generalized skills in combination with the subject skills and knowledge in specific areas.

Competency is apparent in the ability to make a choice, based on an adequate self-assessment in a particular situation. If professional training will be understood as a professional development process, capturing the experience of future professional activities, then we can say that the competent specialist is future-oriented, envisaged changes, oriented to self-reliance education.

An important feature of the individual's professional competency is that the competency is realized in the present time, but it is oriented towards the future. During the study scientists and educators have clarified the understanding of the specialist's professional competency as a set of key, basic and special competencies [2], [3].

Key competencies are required for any professional activity; they are related to the individual's success in a changing world. That is why the key competencies are of particular importance today. They are apparent, first of all, in the ability to solve professional problems on the basis of the use of information, communication (including in foreign languages), socio-legal bases of personality behavior in civil society, moral values. To a great extent, key competencies include individual psychological personality traits.

Basic competencies reflect the specifics of a particular professional activity (pedagogical, medical, engineering, etc.). For the professional activity in the education field (pedagogical or managerial), the competencies necessary for «building up» professional activity in the context of the requirements to the system of education at a certain stage of society development will be basic. Here we must recall that administrators of educational institutions, who come into the field of education from business structures and from other economy branches must be specially trained for basic pedagogical competencies.

Special competencies reflect the specificity of a specific subject or super-subject area of professional activity. Special competencies can be considered as the realization of key and basic competences in the field of specific professional activities, including the formed additional competencies necessary to carry out certain tasks. In the case of headteacher's activity – it is a managerial competency [5].

All three types of competencies are interconnected and evolved simultaneously. It forms the individual style of activity (in this case managerial), creates an administrator's holistic image and ultimately ensures the formation of his / her professional competence as certain integrity, integral personal characteristics of the school leader.

Since the goal of our research is the development of the school authorities' managerial competence in continuing education we will consider the concept of «specialist of school administration».

Administration is the monitoring of the organization's activities, individual entities and personnel units. This process is carried out by administrators, specialists, executives of the management apparatus; usually they are at the upper level in the

organization. In general secondary education institutions, school administration specialists are the director, deputy director for education, deputy director for training [6].

Under the school administrators' managerial competency, we understand the ability and willingness to analyze holistically and deeply, clearly formulate the educational institution problems and find the most appropriate and effective approach in relation to the particular situation of the school from a wider range of alternative approaches to their solution.

The social and professional development dynamism, systemic changes in the field of education suggest that the professional activity of school administration specialists is not defined for the entire period of their professional career. In the prevailing socio-economic conditions, continuous education is required, which ensures a continuous increase in the level of managerial competence of school administration specialist. According to the manifestation peculiarities of the considered competency in the practical professional activities of school administrators in the process of solving traditional and non-standard managerial and pedagogical tasks, three levels of its formation can be distinguished: development, competency, craftsmanship. At the same time, in the structure of managerial competence, four main functional elements can be designated:

- cognitive component (knowledgeable);
- practical component that has an applied character (skills and abilities), motivation for professional activity;
- personal (socially significant) qualities;
- the potential (person's psychological resources), which determines the professional development prospects and the trajectory and self-improvement [7].

At the same time, topical managerial competency includes such characteristics as readiness for manifestation of managerial competency (motivational aspect); ownership of knowledge of the competency content (cognitive aspect); experience of competency displaying in a variety of standard and non-standard managerial and pedagogical situations (operational aspect).

Consequently, the managerial competency of the school administration specialist can be regarded as an essential component of professional competency. Managerial competency is a systemic characteristic of the person-centered process of training of managers at the postgraduate level (PGL).

That is why the problem of formation and development of school administration specialists' managerial competence in the professional development process should be addressed to the greatest extent in the process of realizing personal and project-centered education.

Professional development is, by its very nature, the reformatting of ways of professional activities, professional communication skills and abilities, personality traits, adjusting already existing ideas, updating the motivation of school administration specialists. In the process of training there is an opportunity to master

new methods of professional thinking and ways of solving professional problems, which is directly related to the properties and qualities development of the school administrators' personality as subjects of study.

The professional development of the school administration specialists at PGL will be effective if conditions are created which ensure the learning process orientation to the personal development, taking into account the peculiarities of professional activity in the field of education management and the existing subjective practical experience of management; if development of the elements of management competency is carried out in the interactive actions of educational actors in accordance with the planned, expected result of the managerial competence formation and development [8].

In order to study the peculiarities of managerial competency and the possibilities of its formation at PGL in the period from 2015 to 2018, on the basis of the Donetsk Regional In-Service Teacher Training Institute (ITTI) (Kramatorsk), an experimental research was conducted in which about 180 school managers participated.

The first stage of research and experimental work was devoted to the educational system modeling, which contributes to the effective formation and improving of school administration specialists' managerial competence in the professional development process at PGL and the developing theoretical model to ensure a sufficient level of its formation. Key, basic and special competencies, interacting with each other, are manifested in the process of solving important professional tasks of different levels of sophistication and in different contexts, using a certain educational space.

To identify the level of school administration specialists' managerial competency, it is desirable to carry out in the form of a number of verification acts: verification of the formation of «information» competence – the task of finding specific information (at the choice of specialist – training leader) with the help of a PC (for a duration of not more than 10 minutes); personality-value competencies and leadership skills testing (1-2 tests of the training leader) (20-40 min.); analysis and ways of solving a specific managerial situation with the allocation of risks of the problem «proposed» solution. The best option is «case study», which includes economic and legal nature issues and the need for management experience (30 minutes); an interview on completing the proposed task and an answer to 2-3 questions on the identification of the «special» competency formation (20 minutes).

Total time to determine the state of school administration specialists' managerial competency formation – 2.5-3 hours.

As a result, an individual card of the school administration specialist's development is being compiled. It is possible that the certain competences formation is desirable to conduct in the internship form – everything is solved individually [9].

In designing training it is important to take into account the professional level of school administration specialists, their self-education ability. ITTI creates «small groups» whose participants have similar problems in professional growth.

Moreover, as a rule, it is a question of developing competencies of the existing school administration specialists.

Analyzing the strategic tasks of the educational institutions development in the Donetsk region, a number of tasks have been identified that reflect the necessity to develop special management competences of school administration specialists: new organizational forms of educational institutions building up, transition to autonomy; new economic aspects of the educational institution activity: a new sectoral employee remuneration system; application of management laws and regularities in the general secondary education institution's administrative activity (GSEI); formation of the GSEI information environment; introduction of aspects of GSEI state and public administration; establishment of interaction with other education actors, school partners (social partnership); the educational process building up focused on achieving the goals of a particular education degree and taking into account new educational standards; educational space designing for school teachers' and administrators' professional development and self-education.

It is advisable to build the learning process with the maximum use of tutor's virtual interaction (teacher, conducting individual or group sessions in a distance learning) with members of the group on a special, closed to unauthorized networks users, forum.

The material for self-study, tasks, actual information the teacher places on the platform. In the forum communication (on-line) occurs on a daily basis, at a convenient time for everyone. School administrators can ask any questions that concern them as managers at present. The reaction comes not only from the teacher, but from colleagues. Teacher-tutor can offer themes to be discussed (research topics) that their tasks are not a purely theoretical convention, but require a combination of knowledge, experience, managerial skills in solving specific problems. The actual communication of such group is minimized, but, of course, it is planned. Thus, the process smoothly transforms into continuing professional education with the simultaneous creation of the informal and network community of like-minded people.

At the second stage the theoretical and methodological bases of application of competence, activity orientated and person-centered approaches in the process of school administration specialists' managerial competence formation were developed.

At the core of this stage it is an analysis of the school administrators' personal qualities, which inadequate formation does not allow to manage the organization, the team, to achieve the goals effectively. At this stage, the leader's individual qualities, his / her personal characteristics, ability to manage, influencing the «key» and «special» competency, are analyzed.

Key competencies:

- the ability to manage oneself;
- reasonable personal values;

- clear personal goals;
- the need for personal growth.

Basically, the factors mentioned above are in the logic of the «cultural and value» competence and «self-improvement» formation.

Special competencies (management):
- skill to solve problems;
- the ability to influence others;
- knowledge of modern managerial approaches;
- creativity and ability to innovate;
- ability to manage;
- ability to teach and develop subordinates;
- the ability to form and develop effective working groups [5].

These factors affect their own managerial («special») competency. Absence of any skills or abilities creates limitations for full management activity. An analysis of a wide range of possible approaches to study these issues in national and foreign pedagogy has allowed to highlight the tests proposed by Mike Woodcock and Dave Francis: personal constraints assessment; the inability to control oneself; nebulous personal values; vague personal goals; leadership skills, etc. [10].

On the basis of the acme logical modeling of school administration specialists' managerial competence, a model of managing the formation of GSEI manager's managerial competence and socially significant qualities at PGL, the content of which is due to the peculiarities of the simulated object, and the study purpose, is developed [11].

The model structural components are: a methodological cluster (goals, tasks and principles of realization), a technological cluster (leading technologies, content, means, training methods and forms), a criterion cluster (results achievement levels and indicators and psychological and pedagogical conditions for the GSEI managers' training at PGL). The basis of the research and experimental work training phase was a development programme aimed at developing managerial competency in management in the conditions of the state standards introduction, the formation of readiness for the effective implementation of managerial functions (planning, organization, stimulation and motivation, control and regulation) within the framework implementation of modern state educational policy.

The procedure of the individual educational trajectories implementation was carried out in several stages: propaedeutic, installation, procedural, diagnostic and reflexive.

Conclusions. The findings of our study indicate that the GSEI managers' in-service course training, organized at PGL on the competent approach basis, allows developing their managerial competency and professionally important personality traits.

The effectiveness of GSEI managers' managerial competence forming at PGL is provided by a set of specially created conditions: organizational, related with the organization of the school administrators' training, which allow to manage the

students' competencies formation effectively, to introduce innovative educational technologies in the educational process, and content, related to optimize the training content.

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FORMATION OF FAKE NEWS RESISTANCE IN STUDENTS OF HIGHER EDUCATIONAL INSTITUTIONS AS A COMPONENT OF NATIONAL SECURITY

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In the concepts of national security of many leading countries of the world it is determined that the main feature of the new century will be the shifting of emphasis in the field of information confrontation. The achievement of information superiority becomes a prerequisite for the victory over any opponent.

Back in 2006, experts at the Kyiv National University of Internal Affairs substantiated that the most dangerous at this stage in the development of Ukrainian society is the holding of information wars - the extreme form of information confrontation [1]. They highlighted two interpretations of the notion of information warfare: humanitarian and technical, where the humanitarian information warfare is an attempt to influence the processes of thinking of the population of the enemy state.

Psychological struggle consists in the organization and conduct of various psychological operations.

1. Operations againsts the national will.
2. Cultural conflict.
3. Operations againsts opposing commanders.
4. Operations against troops.

Information struggle is not only in the course of a military conflict, but also long before its beginning and after its completion, that is, it can often be said that it is conducted permanently.

At the stage of preparation for armed struggle, measures of information struggle are carried out primarily at the state level in order to create the desired military-political and economic conditions for the beginning of aggression. Purpose: isolation of a likely opponent on the international scene, undermining the morally-psychological state of the servicemen and the enemy's population, strengthening anti-war and anti-government sentiment in the enemy's country, consolidating the population and the personnel of its own armed forces and allies.

In the course of combat operations, information-psychological operations pursue the following main objectives: the undermining of the moral and psychological state of the personnel of the enemy's armed forces, the weakening of the offensive impulse or the ability to the enemy's hard-core defenses, the demoralization of the departing enemy units, the motivation etc.

After the achievement of the military-political goal, the information campaign is aimed at stabilizing the socio-political situation in the enemy's country, neutralizing the foci of resistance, and loyal attitude to the transformations in the country of the world community.

Information psychological weapons affects the moral and psychological state of man, social and other groups of the population, society as a whole. According to [1], one of the main goals of the information war is the suppression of a person's moral creative abilities. We relate this to the fact that the lack of spontaneous creativity blocks the ability of the group of individuals to create authentic cultural patterns that usually help one community / nation separate and morally protect themselves from the various influences of other human groups.

Today, social wars are increasingly shifting from television and paper to Facebook, blogs and special websites. Social media are very convenient for such a method as trolling. It is known that some countries have «troll armies». Comments without links are often posted straight to forums, and each troll has to produce hundreds of comments during a 12-hour shift. Disinformation is designed to manipulate the receiver's feelings. Younger and more visually oriented people are lured in with memes, caricatures and videos. Social media attacks can be seemingly small, for example a 140-character tweet. But according to [2] this can be enough: some internet users had stopped commenting online because aggressive trolls had called them names and used threatening language. The inluence of a small message can grow when it is repeated, and some trolls have called tweeters the same nasty names hundreds of times.

Disinformation is also created for people who prefer in-depth "analyses". The needs of this target audience are met with lengthy blog articles with seemingly accurate lists of sources simulating the credibility of the text. The references, however, mostly lead to other disinformation sites. Subtle and intelligent content is the most problematic to resist: not everyone recognizes it as the product of an aggressive foreign manipulator. Thus many people let it affect them cognitively or psychologically.

According to [2] vulnerability of the population to information attacks correlates with the level of education of the population. In our opinion, education in general does little to protect a person from misinformation. It is known that if desired, different civilizations create books that meet the reader's intelligence, but may contain various forms of misinformation and propaganda. Often, people overestimate their own intellect, which prevents them from seeing complicated manipulations with facts created by the author, whom they vice versa underestimate.

Cyberbullying Research Center conducted a series of surveys on cyberbullying identification, prevention, and response. In particular, it discusses the differences between bullying and cyberbulling. While interpersonal relationships have many differences with interstate, some analogies can be identified. Based on the results of the research, in Table 1 we show common features between the characteristics of

cyberbullying in a teenage environment [3] (left column) and the use of fake news for political purposes according to our vision (right column).

Table 1

Common features between the characteristics of bullying in a teenage environment and the use of fake news for political purposes

Cyberbullying	Fake News
Victims may not know who is targeting them, or why. The aggressor can cloak his identity using anonymous email addresses or pseudonymous screen names.	Typically, the chain of links in an article with political disinformation ends with a fake source, a lot of such information is placed by bots in the comments to various videos, articles, etc. If it were easy to identify the author of fake news, it would be possible to erase his reputation or to start libel proceedings. But if everyone can transfer responsibility to another little-known source, it blocks the attempts to combat dishonesty in the media
Second, the hurtful actions of those who cyberbully can go viral; a large number of people can participate in the victimization. It seems, then, that the pool of potential targets, aggressors, and witnesses/bystanders is limitless.	An important aspect of fake news – it seems people love to distribute them. If you do not like a politician, nation or country, it's enjoyable to tell a tale about them
Third, it is often easier to be cruel using technology because cyberbullying can be done from a physically distant location, and the aggressor doesn't have to see the immediate response by the target. In fact, some teens simply might not realize the serious harm they are causing because they are sheltered from the victim's response.	Again, many people who click on «share with friends» in social networks under fake news are not fully aware at this moment, how unethical it is. At the click of this button, his own action seems completely innocent to the user of the Internet

The Table 1 shows that the danger of fake news lies deeply in the psychology of group interaction, and it is necessary to deal with it with complex methods, because prohibitions and punishments do not change many patterns of human behavior.

It is now accepted to develop universal (preferably international) indicators to combat dishonesty in the media. The Trust Project [4], for example, is undertaking such work to develop indicators to determine the reliability of sources and platforms, which can provide useful benchmarks for further search for relevant metrics. Reliable media should unite their efforts. These indicators should help users evaluate the quality of the content and allow them to check the source, its owner, and compliance with ethical and journalistic standards. Such indicators should be displayed along with the journalistic material on the media site. Search engines must integrate these metrics into their ranking search algorithms.

At the level of news consumer, the rules for determining fake news should be as simple as possible. For example, it should be clear for social media users if a certain message is really popular, or whether such popularity is artificially created. Sometimes the rules for media professionals contain many nuances, and specific methodologies are needed to teach media literacy different social and professional groups.

In 2018, the European Commission released Report of the independent High level Group on fake news and online disinformation, in which much attention is paid to education [5], in particular.

The European Commission should:

• Sharpen actions in support of media and information literacy for all citizens, including exchange of best practices and training for teachers (e.g. through Erasmus+, Training and Education 2020 and similar schemes), and the promotion of media literacy in EU curricula reforms and OECD PISA competency rankings. Special attention should be paid to the specifc needs of certain sub-regions (e.g. Baltic or Eastern Europe);

• Following the example of collaborations already in place and currently focusing on young people (e.g. the Safer Internet Centres, Better Internet Centres and Schoolnet.eu), consider increasing its support to build a Europe-wide community of practice engaged in leading media and information initiatives on diferent age and demographic groups;

• As the European Commission can provide training of journalists.

Civil society organisations should:

• Work with academia, educational psychology professionals and the media industry to formulate skill and age-specifc media and information literacy approaches and monitor their efectiveness;

• Design and promote literacy programmes to enhance the quality of information around elections.

Platforms should:

• Develop tools to share standard information sheets to users developed by independent (educational) institutions within media and information literacy programs, raising awareness of digital disinformation and emerging fndings about digital risks.

News media organisations should:

• Cooperate with CSOs and academia to formulate and implement skill and age-specifc media and information literacy approaches, and for all ages, while pursuing their media literacy projects in cooperation with schools and other educational institutions that target younger generations.

Today in Ukraine, universities have begun to engage in fight with fake news, aware of the role of education in shaping the consciousness of future generations. Thus, teachers, graduates and students of the Mohyla School of Journalism became co-founders of the site to verify the facts Stopfake.org [6], which was launched on

March 2, 2014. According to the experts of this site Ukraine should include media literacy as a separate subject in the general school curriculum, prepare teachers for teaching this discipline and develop special methodological recommendations for its teaching. It would be wise to use the approach mentioned in the report of the European Commission Expert Group - such training programs should be developed by educational authorities in conjunction with experts on fact-checking organizations. In addition, it is important to implement individual information literacy training for citizens of different age groups. It is especially important to conduct such training on the eve of election campaigns.

At the Petro Mohyla Black Sea National University, media literacy training for students and teachers could be conducted on the basis of the Center for Socio-Psychological Support, Professional Development and Employment Promotion, which already exists on the basis of the Postgraduate Institute [7]. The activity of department covers the following areas as advanced training, retraining (second higher education) and part-time education. The Center provides the participants of the educational process with modern socio-psychological knowledge, increases their psychological competence, carries out psychodiagnostic, developmental work, conducts psychological consultations and trainings. In addition to scheduled trainings for students, additional training is provided on request.

While trainings are the best way to provide students and teachers with the latest information on media literacy, it is obvious that university education can not be limited to training, and all socially important information should be incorporated into the educational process. We have analyzed the curricula of specialties that are accredited at Petro Mohyla Black Sea National University, Mykolayiv, on the possibility to teach students media-literacy, without changing the existing educational process. The results are shown in Table 2.

As you can see, the curricula of most specialties contain disciplines that are appropriate to study various aspects of fake news. However, some of these disciplines are selective (first of all it applies to political science), so in reality, students risk not getting the necessary knowledge. For such specialties it is especially important to consider the issue of fake news within the boundaries of security science disciplines (life safety, labor protection, civil protection).

In the modern world we have to bear in mind that classical education is not the main source of knowledge and meanings for young people. Back in 1988 Guillermo Orozco Gómez in Harvard tested the hypothesis that people learn much more from regular television than from any other institution around. He proved that most of the students were learning different things from television and other media such as film, and this is true to this day [8, 9]. Now the Internet is a serious competitor to television, but many people continue to watch TV shows and video materials, they just rarely use a classic TV-set for this.

Table 2

The list of actual disciplines (2018-2019), the plans of which are appropriate to include questions on various aspects of fake news

Specialty	Subject
053 Psychology	The curriculum contains many relevant disciplines
029 International relations	The curriculum contains many relevant disciplines
073 Management	The curriculum contains many relevant disciplines
231 Social work	**Bachelor degree** Regulation of social conflicts Analytical-synthetic verification of information Information security of a person Advertising and information technologies **Master degree** Social risks
281 Public administration	**Bachelor degree** National and public security Anti-crisis management in municipal management Modern information and communication technologies in management **Master degree** European integration, international public administration and security Anti-crisis management Conflictology
061 Journalism	**Bachelor degree** Psychology Sociology of mass communication The theory of mass communication and communication technologies Critical Thinking and Media Literacy Fact checking and verification of information Media text analysis
052 Politology	**Bachelor degree** Global and regional security systems Modern problems of war and peace **Master degree** The political image of the countries of the world in the mass media
054 Sociology	**Bachelor degree** Sectoral Sociology: The Sociology of the Conflict Political and PR campaigns Pre-election campaigns and work with voters in cities Modern digital communication Management of media processes and PR

072 Finance, Banking and Insurance	**Bachelor degree** Risk Management of Financial Institutions Professional ethics of financial organizations **Master degree** Business Security Management
076 Entrepreneurship, trade and stock market activities	**Master degree** Business Security Management Exchange risk management
071 Accounting and taxation	**Master degree** Business Security Management
032 History and archeology	**Bachelor degree** Conflictology
193 Geodesy and land management	**Bachelor degree** Political science
035 Philology	**Bachelor degree** Critical Thinking and Media Literacy
081 Law	**Bachelor degree** Political science
122 Computer Science	**Bachelor degree** Political science
123 Computer Engineering	**Bachelor degree** Political science
151 Automation and computer-integrated technologies	**Bachelor degree** Political science
121 Software Engineering	**Bachelor degree** Political science
101 Ecology	**Bachelor degree** Political science
227 Physical therapy, ergo therapy	**Bachelor degree** Political science
222 Medicine	–
017 Physical Culture and Sports	

One of the problems with media education is that in many, first of all, physical, mathematical and technical areas teachers and university professors are more willing to introduce courses on media education, but courses at the technical level – not for addressing the critical thinking in using the digital tools. But the realty is that latest technologies have made retouching and the complete re-creation of photos so fast and efficient that photo technicians have now joined video and recording engineers

in the fraternity of modern manipulators, each of them capable of reassembling bits of reality for any effect at all (Marshall Blonsky, citated from [10]).

Many teachers and university professors see television, blogs, and social networks as something that students do outside the classroom, and they don't want to deal with it. It is more expedient to use the elements of modern media for constructive purposes, and it is not only about commenting in an educational institution and criticizing individual articles, but also about creating and incorporating your own content into the television-digital world.

Particular sections of disciplines «Information security» and «Media Literacy» can be partly integrated in other disciplines of different specialties according to their profile.

1. During the study of the subjects «Life Safety», «Occupational Safety» and «Civil Protection» it is important to consider the issue of fake news. While studying "Occupational Safety", consider the influence of fake news on making decisions by workers and management on employment, extension of contracts, and the choice of a candidate for elected positions, sale and purchase of shares of their enterprises.

2. The harm of politically oriented fake news can be explained to students through analogies with their personal daily lives: bullying, gossip, etc.

3. To train critical thinking fake news can be placed periodically in university newspapers, and a contest «Find the fake news» conducted among readers.

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LEGAL REGULATION OF THE STATE POLICY MECHANISMS OF SMALL BUSINESS SUPPORT IN UKRAINE

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Entrepreneurship has significant opportunities for expanding productive employment not only through the creation of new jobs, but also through direct involvement of the unemployed in entrepreneurship.

According to Article 42 of the Constitution of Ukraine, everyone has the right to entrepreneurial activity, which is not prohibited by law [1].

In defining the role of the state in the legal regulation of entrepreneurial activity, it is worth mentioning:

- the state provides protection of competition in entrepreneurial activity. Abuse of a monopoly on the market, unjustified restriction of competition and unfair competition are not allowed. Types and boundaries of a monopoly are determined by law;
- the state protects the rights of consumers, controls the quality and safety of products and all types of services and works, promotes the activities of public organizations of consumers;
- the State Employment Service has the experience of financial support for the entrepreneurial initiative of the unemployed through a one-time payment of all unemployment benefits, which is entitled to a citizen registered in the center of employment as an unemployed person.

Financial support for the unemployed who have expressed a desire to be engaged in entrepreneurial activity is carried out by providing a one-time payment of unemployment benefits, which a person will receive in most cases within 360 days. A widespread view is that funds received as a one-time payment of benefits should be aimed at the purchase of production equipment, raw materials, materials for rent, and premises lease. However, as a rule, in most cases this amount is not enough to cover the costs.

Therefore, entrepreneurs direct it to provision of own existence in the first (organizational) period of entrepreneurial activity, when business is still not profitable, and other sources of income are lost. That is, although this assistance is intended to start an entrepreneurial activity, it does not achieve and cannot achieve such a goal in

real life. However, a certain part of the unemployed from those who have been paid a one-time unemployment benefit payment to start a business, in the future, for various reasons, is not engaged in entrepreneurship, but enters into employment. Although not on a large scale, but some of the unemployed seem to be trying to start their own business, but instead, after registering at the employment center, to develop a plan for self-employment, to take part in job-finding workshops, to follow the advice and recommendations of the center's specialists employment, regularly report on their job search activities, receive one-time payment easily (in case of fulfillment of the business plan development requirements), and then independently carry out a job search or implied unregistered employment. Similar facts are often referred by law enforcement agencies to abuses, violations of the law[7].

The above negative facts cannot lead to a rejection of the idea of expanding the support of the unemployed who have solved the problem of employment at the expense of their own initiative. Moreover, the proportion of citizens who receive a one-time unemployment benefit for doing business that they do not plan to do is not too high.

Among the reasons hindering the implementation of entrepreneurial activity, respondents who did not register as private entrepreneurs identified the following:

– employment;

– lack of entrepreneurial inclinations and abilities;

– a mistake in choosing a business idea;

– lack of necessary professional knowledge for the conduct of their own business [8].

Problems of improving the procedure for a one-time unemployment benefit payment for the organization of unemployed entrepreneurship are dealt with both by the State Employment Service and by government officials, along with legislators.

In the vast majority of cases, the reason for the ineffectiveness of one-time unemployment benefit payment is the selection of unemployed candidates, which is actually carried out during the recruitment process, the implementation of professional counseling and career counseling measures, and at the stage of considering the assessment of the business plan.

In order to improve the a one-time unemployment benefit payment for the organization of unemployed entrepreneurship and for the purpose and purposeful and efficient use of the Fund of the compulsory state social insurance of Ukraine in case of unemployment, referring to national requirements and requirements of the current legislation of Ukraine, it is considered appropriate, among other things, to ensure implementation the mechanisms of public administration regarding:

a one-time unemployment benefit payment for the organization of entrepreneurial activity solely for the purpose of ensuring the employment of the unemployed, in the first place, those for whom there are no prospects of employment for the period of unemployment benefit due to the exhaustion of all employment opportunities;

compulsory occupational diagnostic examination of the unemployed according to the appointment of the employment service who apply for unemployment benefits

on a one-time basis and the training of the basics of small business by programs lasting at least two weeks;

reviewing and peer review of unemployed business plans submitted to the relevant structures of regional associations of employers and local self-government bodies regarding the expediency and development of the chosen direction of entrepreneurial activity [11].

According to the Resolution of the Cabinet of Ministers of Ukraine dated 20 November 2000 (with amendments) No. 307 "The procedure for granting unemployment benefits, including one-time payments for the organization of entrepreneurship", a one-time payment of benefits is made only by those unemployed who cannot be employed with the assistance of employment services within a month [4]. It is also provided that the money assistance is not paid to people who have been registered as entrepreneurs during the last 24 months prior to the start of unemployment [3, 6].

Consequently, the centers of employment are faced with the task of significantly increasing the efficiency at all stages of attracting unemployed to entrepreneurship and self-employment, which are a significant factor in employment.

Article 27 of the Law of Ukraine "On Employment of the Population" of 5 July 2012 regulates the issue of stimulating self-employment of the population and creating new jobs by small business entities [5, 7].

Considering that promotion of entrepreneurship and independent employment of the unemployed is a priority direction of implementation of the state employment policy in the labor market, it is important not only to understand the essence of entrepreneurship, the peculiarities of forming the motivational mechanism of its development, the need to substantiate specific areas of organization of its own business, but also to process at all levels of management of the whole systems of appropriate measures that would ensure achievement of the goal.

The purpose of the task is to make the unemployed more informed about what it means to be self-employed, to indicate what steps and actions they should take to start their own business, to help them in his organization. It is also important to decide whether unemployed people are ready to start their own business. Therefore, the activity of employment centers to attract the unemployed to self-employment should be carried out in stages: information → orientation → preparation → start of own business.

The analysis of the practical activities of the employment centers in relation to the attraction of the unemployed to self-employment and entrepreneurship, as well as the regulatory documents regulating it, provide for the successive passage of five stages (Fig. 1).

Who and under what conditions can be provided with this social service?

The first condition is registration at the center of employment for at least 1 month, while the person must reach the age of 18, and there is no suitable job for a person on the labor market.

The one-time payment of unemployment benefits is not paid to the unemployed, who, as a result of unemployment benefits, was reduced by dismissal from the last place of employment on the grounds provided for in s 3, 4, 7, 8 of Article 40, Articles 41 and 45 of the Labor Code of Ukraine, as well as servicemen dismissed from services on the grounds provided for in paragraph 7 of Article 36, paragraph "c" of part 3, paragraphs "g", "h", "i", "k" of part 6, paragraphs "g", "h", "i" of part 7 Article 26 of the Law of Ukraine "On Military Duty and Military Service" and paragraph 5.4 or terminated in connection with the submission of the documents containing false information and persons in the last 24 months before the start of unemployment were registered as business entities [2].

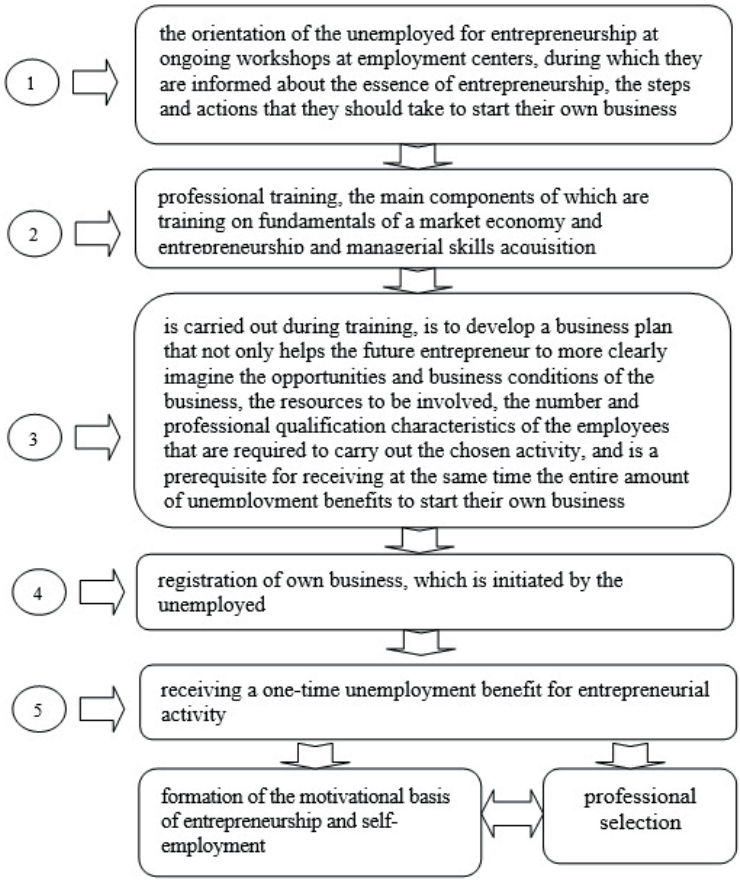

Fig. 1. Stages of the analysis of practical activity of employment centers in relation to the attraction of unemployed to self-employment and entrepreneurship [formed on the basis 3, 4, 5, 10, 11]

There are also restrictions for the unemployed, who, while registered, had violations for failure to comply with the written recommendations of the employment service.

The State Employment Center involves unemployed people who have expressed their desire to receive unemployment benefits once for business organization, with their consent and taking into account professional diagnostics for seminars, or organizes training in the basics of business.

The one-time payment of unemployment benefits is paid in the amount of the annual amount of unemployment benefit specified for the particular unemployed.

If the unemployed person has already received part of the targeted unemployment benefit, the remainder is paid.

The one-time payment of unemployment benefits to people of retirement age is made on a general basis in the amount of the annual amount of unemployment benefit.

The one-time unemployment benefit for unemployed people for the organization of entrepreneurship is carried out by employment centers within the limits of the funds provided for this purpose by the Fund of the compulsory state social insurance of Ukraine in case of unemployment under the below defined mechanism of public administration.

To consider unemployment benefits, the following documents are submitted to the employment center: a statement of assistance and a business plan.

The decision on a one-time payment of unemployment benefits (or refusal to pay it) is taken by the head of the employment center on the basis of the conclusion of the commission on issues of one-time payment of unemployment benefits for the organization of entrepreneurship, regarding the ability of the unemployed to entrepreneurial activity. The conclusion of the commission is based on the results of the professional diagnosis of the unemployed, his acquired knowledge on the organization of entrepreneurship and analysis of his business plan.

A decision on a one-time payment of unemployment benefits (or refusal to pay it) is issued by an order with which the unemployed person must be acquainted with a personal signature.

The decision on a one-time payment of unemployment benefits is made within 10 working days from the date of submission of all necessary documents for its appointment.

The one-time unemployment benefit is paid upon submission of the unemployed to the employment center within 10 working days after the decision on the one-time payment of unemployment benefits certified in accordance with established procedure copies of an extract from the certificate of state registration of an individual entrepreneur, and in case of the creation of a legal entity, copies of the statement from the certificate on the state registration of a legal entity and a copy of the constituent documents.

The amount calculation of the unemployment benefit for the one-time payment to the unemployed is made from the date of state registration of it as an individual entrepreneur or from the date of state registration of a legal entity whose founder is

this unemployed person and transferred to the personal account of the unemployed within 30 calendar days after receipt from the Pension Fund bodies of Ukraine information on the registration actions by the state registrar regarding the creation of a legal entity, the acquisition of the status of an entrepreneur by an individual.

It should also be borne in mind that people who have been paid a one-time unemployment benefit payment, if they are re-registered at the State Employment Service as unemployed in the two-year period within which she was to be paid, unemployment benefits are not allocated.

In the case of recognition in the established procedure, unemployed people of pre-retirement age who have been paid unemployment benefits once for the organization of entrepreneurship, unemployment benefits are granted after the end of the period for which a one-time payment was made.

The amount of unemployment benefit for these individuals depends on their participation in unemployment insurance (on a voluntary basis) during the business activity [9].

In attracting unemployed citizens to entrepreneurship it is extremely important to strengthen their orientation towards this activity. First of all, it is necessary to improve the advertising of this service, its essence, advantages for the most innovative part of employment centers' clients. It is about advertising in the media, and directly in employment centers. One of the most important elements of support for start-up entrepreneurs is the state assistance to them in identifying promising and profitable types of business.

Consequently, small businesses do not have the ability to hold specialist departments, even individual specialists, or spend significant amounts of money on marketing. Without state support of this direction, they are forced to move in business by trial and error, which in many cases leads to failures, bankruptcies and disappointments. Therefore, it is advisable that in regions with business centers or agencies for the development of entrepreneurship, special units have been created that would engage in marketing research for start-up entrepreneurs.

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APPLICATION OF STATISTICAL ANALYSIS METHODS IN THE COMPETITIVENESS MANAGEMENT OF REGIONAL SYSTEMSOF HIGHER EDUCATION

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Governments, public organizations and businesses call higher education the main driver of development. Such attention to the higher education can be explained by several factors, among which three most important ones can be distinguished. First of all, it is increasing the role of education and knowledge in ensuring of economic competitiveness. Generation of new knowledge and its commercialization in the form of innovations depends on the intellectual potential of higher education institutions (HEIs). Secondly, according to the results of special

surveys of labour force in the member countries of the Organization for Economic Cooperation and Development [19], the average incomes of the population with the master and doctor degrees are almost twice (by 91 percent) higher than incomes of persons with general secondary education. The third factor that causes the global attention of scientists, politicians and the general public to the problems of higher education functioning is somewhat 'belated', as McCowan [16, 505-523] notes, an awareness of its importance in ensuring sustainable social development. The Incheon Declaration [37] adopted at the World Education Forum and the UNESCO Preliminary Report [38] on the preparation of a global convention on the recognition of higher education qualifications stated that 'Higher education is expected to play a pivotal role in sustainable development, economic growth, decent work, gender equality and responsible global citizenship in all regions'.

The presented arguments point to the fact that the competitiveness of higher education system becomes one of the determining factors not only of sustainable development, but also of national security. That is why the development of approaches to the analysis of higher education system competitiveness, which takes into account the whole complex of its functions and interests of various groups of stakeholders, is an actual problem of theoretical and applied nature.

In recent years, there has been significant increase in the number of studies concerning the functioning of higher education system. In a global study of directions, publications and the institutional structure of higher education research, Altbach [1] concludes that despite the growth in the number of research centres, 'higher education is a field without a clear intellectual, methodological, or disciplinary centre. A diversity of approaches reflects the diverse interests and backgrounds of those involved in the field'. Characterizing possible trends in the development of higher education research, Altbach noted that they will be defined by the challenges faced by HEIs and education systems, in particular regarding the equity and access to higher education, its funding, development of new technologies, and effective management.

McCowan [16, 505-523] has proposed an original analytical model for studying the evolution of higher education which is comprised of three main components: (1) value; (2) functions; (3) the level of interaction with the external environment. Based on this model, the author identified five institutional models in the global evolution of universities (Medieval, Humboldtian, Developmental, Multiversity, Enterprise), and outlined trends in the development of higher education for each of the components of the model. The assessments of the value of knowledge in terms of its functional and practical importance, as well as the growth of social interaction of universities with the other institutions of society, were among the main trends in the evolution of universities. This model allows to explain the increase of contribution of the economic efficiency and social interaction of the HEIs in the analysis of its competitiveness.

Analyzing the modern HEIs management in terms of balancing the interests of various stakeholders, Teichler [29] focused on the criterion of quality, relevance

and efficiency. It is reasonable to consider the author's conclusion about the need to balance the different groups of criteria for higher education assessment, taking into account the mission, strategy, type and functions of HEIs. However, in our opinion, a more appropriate term for designating a compliance feature is the HEIs social responsibility. This criterion involves the development of strategies based on the identification and balancing the interests of various higher education stakeholders. Based on the integrated analysis of functions of the higher education system [39], as well as its internal and external goals in the global strategic development, Panchyshyn and Hrynkevych [20] have concluded that quality, social responsibility and economic efficiency are the main criteria for the analysis of competitiveness of higher education systems at all levels its functioning.

Databases with indicators of HEIs performance play the key role in development of methodology for competitiveness analysis of the higher education system. The International ranking expert group [13] has adopted the Berlin Principles on Ranking of Higher Education Institutions to increase stakeholder confidence in the results of the comparative analysis of competitiveness in higher education. These principles included a clear methodology for building a ranking; usage of a set of quantitative and qualitative indicators; the preference of indicators that characterize the achieved results, and not resources of HEI; utilization of confirmed data that are based on the use of scientific methods and approaches.

The methods of integrated assessment of competitiveness in higher education can be divided into two groups by the level of application: (1) a local one, which corresponds to numerous rankings of HEIs competitiveness; (2) a national one that performs the assessments of the national system of higher education in different countries of the world. The authoritative ranking company in higher education, Quacquarelli Symonds [24], annually develops and publishes a ranking of national systems of higher education effectiveness titled 'QS Higher Education System Strength Rankings'. The evaluation methodology includes four components of assessment: (1) System strength; (2) Access; (3) Flagship Institution; (4) Economic context.

Despite the obvious simplicity and transparency of the approach for ranking of the national higher education systems, the methodology proposed by QS has a number of significant, in our opinion, shortcomings. First of all, this ranking is based only on the positions of the country's HEIs, which fall into the world ranking of universities 'QS World University Rankings', that is formed by the same company. Secondly, the ranking does not take into account the overall economic potential of the country's system of higher education and its funding by different types of stakeholders. Thirdly, the ranking does not reflect the level of implementation in the country the whole complex of functions of higher education that includes not only educational and scientific activities, but also public services and promoting the goals of sustainable development. Based on this analysis we found that there is no ranking that is equally informative and useful for various stakeholders and we agree

with the conclusions of Goglio [8] that 'an active role of researchers in the field of university rankings is desirable, for monitoring improvements on methodological issues and for making better-informed ranking consumers'.

The present study aims to lay out an interdisciplinary approach and conceptual model for the analysis of the higher education system competitiveness that is based on the criteria of quality, economic efficiency and social responsibility. For each of the criteria a framework for constructing the appropriate set of indicators has been developed. The proposed conceptual model as well as cluster analysis were applied for assessment of the higher education system competitiveness in the Ukraine's regions. The groups of regions that differ significantly in terms of the higher education system competitiveness and require a differentiated governmental policy as well as financial support were identified.

Research design and methods. The complexity of goals and interrelations that determine the functioning and development of the higher education system as well as factors of its competitiveness requires the usage of scientific theories and multidisciplinary approach for their application. Regardless of the institutional boundaries of decision-making, the development of the higher education system and its competitiveness depends on the influence of the following main groups of factors:

• socio-cultural and demographic factors related to the institutions of family, culture and religion, the hierarchy of values, the demographic structure of the population and its social mobility;

• political factors whose influence is related to the distribution of powers in the higher education management, funding policy, the level of development of the educational law and civil society institutions;

• economic factors that not only determine the prices for educational products of HEIs, but also cause the migration of intellectual resources as a result of the asymmetry of economic development of countries and regions;

• technological factors that create new opportunities related to the expansion of access to higher education through the online resources, as well as produce new threats associated with the reducing of demand for formal higher education.

The high level of interconnection and dependence of HEIs on various factors justify the application of institutional theory as the theoretical foundation for the analysis of higher education competitiveness. The application of the institutional theory expands the facilities of traditional types of analysis of complex objects, in particular the system-structural and strategic analysis, by the study of the interests of various stakeholders, as well as by recognition that the competitiveness of HEIs and its products are major factors of the competitiveness of regional and national higher education system (Fig. 1).

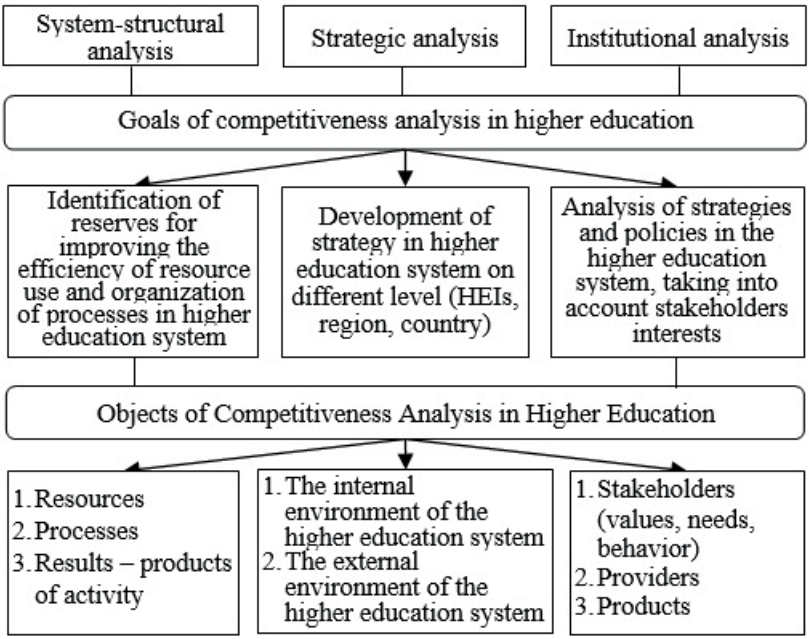

Fig. 1. Types of Competitiveness Analysis of Higher Education System
Source: developed by the authors

Using the interdisciplinary approach based on the institutional theory [18], the theory of human capital [2; 26], the theory of social capital [3], the theory of intellectual capital [6; 28], the theory of stakeholders [7], the theory of competitive advantage [22] we propose the definition of the higher education system as a system of informal (values, norms of behaviour, traditions etc.) and formal (laws, standards, educational, stakeholders, etc.) institutions that provide an understanding of the critical role of knowledge in self-improvement, accumulation, transmission as well as generation of new knowledge for the purposes of individual and common development.

The main components of the institutional structure of the national system of higher education can be defined as following: higher education providers, higher education products, internal and external stakeholders. Based on the introduced main components it is proposed to define the competitiveness of the higher education system as the ability of education providers to create products that generate benefits in human, social and intellectual capital development, and, accordingly, in realizing of the individual, national and global goals of development.

The frameworks for constructing of indicators of the higher education system competitiveness by the criteria of quality, social responsibility and economic

efficiency were developed using the methods of system analysis. Cluster analysis was applied in order to classify Ukraine's regions based by the set of competitiveness indicators. The cluster analysis, unlike most mathematical and statistical methods, does not impose any restrictions on the type of objects under consideration, and allows to explore a set of initial data of arbitrary nature.

The goal of the cluster analysis is to divide a set of objects G into m (m-integer) clusters Q1, Q2, ..., Qm based on the data contained in the set X, so that each object Gj belongs to one and only one subset of G. In this case, the objects belonging to the same cluster should be similar, and objects belonging to different clusters are unrelated. There are several cluster analysis algorithms that can be divided into hierarchical (tree-like) and non-hierarchical ones. The purpose of the tree-clustering algorithm is to combine objects into rather large clusters, using some degree of similarity or distance between objects. A typical result of such clustering is a hierarchical tree.

In the present study a tree-like method proposed by Ward (1963) was used for clustering of Ukraine's regions according to the level of the higher education system competitiveness. This method uses the variance analysis to estimate the distances between clusters. The method minimizes the sum of squares for any two (hypothetical) clusters that can be formed at each step. That is, the method is aimed at connecting clusters that are close to each other's. In general, the method is very effective, but it seeks to create small-sized clusters, which is not always convenient for a large number of observations.

Non-hierarchical k-means method is significantly different from the tree-like clustering [14]. Suppose we already have a hypothesis regarding the number of clusters. For example, we create just three clusters so that they are as different as possible. In the general case, the method of k-means generates exactly a k-number of different clusters located at the largest distances as possible from each other. From a computational point of view, this method can be considered as a 'variance analysis on the contrary'. The algorithm starts with k randomly selected clusters, and then changes the affiliation of objects in such a way that: (1) minimize the variability (variance) within the clusters, and (2) maximize variability (variance) between the clusters. This method is analogous to the ANOVA-method on the contrary, in the sense that the criterion of significance in the variance analysis compares the intergroup variance with the intragroup in examining the hypothesis that the mean in the groups differ from each other. During the k-means clustering, the program moves objects from one group (cluster) to another in order to obtain the most significant result when performing a variance analysis.

The study also used ANOVA-method to assess the quality of the results of clustering of Ukraine's regions. Based on the statistical parameters – intergroup variance, the average of group variances, Fisher's F-test and p-value, the significance of differences between the formed clusters in each of the indicators of competitiveness was evaluated. The method of calculating these statistical parameters is described in detail in [27]. The statistical parameters shown in the

Table 3 are calculated using the software package STATISTICA. If the actual value of the Fisher's F-test is higher than critical for the indicator of competitiveness, then the influence of this indicator on the results of the clustering is significant. The statistical parameter p-value, characterizes the probability of obtaining the Fisher's F-test higher than critical, when the significant effect of the competitiveness indicator on the difference between the clusters is actually out. The smaller the actual p-value from the accepted critical 0.05, the more likely the non-random influence of the competitiveness indicator on the clustering result of Ukraine's regions.

The method of taxonomic analysis is used for integrated assessment and comparison of the higher education systems' competitiveness in the regions of Ukraine. The method of taxonomic analysis is described in detail in [9; 21] and includes the following main steps:

1) the formation of input data matrix on the partial indicators of the system for each objects of comparison (in this study, higher education systems in the regions of Ukraine are such objects of comparison);

2) standardization of the partial indicators of the system, taking into account their division into incentives and disincentives;

3) calculation of the standard values vector of system;

4) calculation the distance between the actual and standard values of the system indicators for each object of comparison;

5) calculation the integral indicator of the system development for each object of comparison (in this study – the taxonomic coefficients of the higher education system competitiveness in the regions of Ukraine).

The databases of the following institutions served as information base for the performed competitiveness analysis:

• The State Statistics Service of Ukraine [32-35] – data about the activity of HEIs, the scientific and innovative activity in the regions of Ukraine, the gross regional product and regional human development;

• The Ukrainian Centre for Educational Quality Assessment [36] – data on the education quality of HEIs entrants, that was assessed by the results of external independent testing;

• Educational portals www.euroosvita.net [30] and www.osvita.ua [31] – about the national academic rankings of Ukrainian universities, as well as rankings by individual criteria;

• Portal of the project Profrights [23] on the observance of the principles of academic integrity by the HEIs of Ukraine.

One problem in the assessment of the competitiveness of the HEIs in Ukraine and its regions is related to the quality of information about the employment of university graduates. In Ukraine, unlike many European and other countries in the world, including Australia, the United States, Poland, Russia, there is no monitoring of graduate employment. There are also missing data on financial income and expenditures of universities by type of activity, systematized by region, that impairs

the quality of information on the economic efficiency of the higher education system of Ukraine's regions.

Results. The conceptual model of competitiveness analysis of the higher education system.

This section may be divided by subheadings. It should provide a concise and precise description of the experimental results, their interpretation as well as the experimental conclusions that can be drawn.

The interdisciplinary approach to the competitiveness analysis of the higher education systems involves determination reserves for its increase, taking into account the interests of stakeholders, the potential and performance of higher education providers, as well as the levels of functioning of the higher education system: HEI, region, country. Fig. 2 provides a conceptual model for analysis of the higher education system competitiveness.

Fig. 2. Conceptual model for analysis of the higher education system competitiveness
Source: developed by the authors

The components of the higher education system – providers, products and stakeholders, as well as criteria for their evaluation – quality, social responsibility and economic efficiency – form the basis for the competitiveness analysis. The next level of the conceptual model of analysis takes into account the practicability and achievability of its implementation at various levels of the higher education system functioning: local/ institutional, regional, national.

Framework for construction of indicators of analysis of higher education system competitiveness according to criteria of quality, social responsibility and economic efficiency.

Fig. 3 presents an outline for construction of indicators of quality in higher

education competitiveness analysis. The framework takes into account the international principles of quality management [11], the peculiarities of the higher education system structure as well as the need to balance the interests of various stakeholders.

Criteria / objects of analysis	The levels of quality analysis			
	product	provider	region	country
Consumer's satisfaction (students, graduates, employers, etc.)				
Quality of the institutional environment				
Quality of results				
Quality of suppliers (entrants, teachers, institutions of secondary education, etc.)				

Fig. 3. Framework for construction of indicators of quality in competitiveness analysis of higher education system
Source: developed by the authors

Generalization of theoretical and applied approaches to understanding the essence of social responsibility [5; 22; 41], uniqueness of its manifestation from the point of functions of higher education, that was declared by UNESCO [40], as well as the definition of social responsibility proposed by the International Organization for Standardization [12], provided basis for distinguishing three types of classifications in the further analysis:

• the first type: the main areas of responsibility – social, economic and ecological;

• the second type: internal and external stakeholders of higher education, including staff, consumers, partners, community;

• the third type: the main functions of higher education system. For HEIs, these are educational activities, research, public services (serving public interests).

The combination of different approaches to understanding the essence and components of social responsibility allowed to describe this criterion of competitiveness of higher education system by a set of qualitative and quantitative estimates according to the scheme as shown in the Fig. 4.

Stakeholders	Areas of social responsibility		
	Social	Economic	Ecological
Educators, researchers, managers			
Entrants, students			
Partners (schools, employers, etc.)			
The community of the region, country			

Fig. 4. Framework for construction of indicators of social responsibility in competitiveness analysis of higher education system
Source: developed by the authors

Summarizing the theoretical approaches to understanding the economic efficiency of higher education [4; 15; 17], as well as applied issues of analysis of economic efficiency, we proposed to distinguish two main levels of relevant analysis: (1) the level of educational provider and its products; (2) the level of the higher education system of country and region. At each of these levels it is convenient to use three types of indicators of economic efficiency:

• indicators, which reflect the scale and the results of various activities of the HEIs in absolute measure;

• indicators that allow comparison of the absolute performance indicators in the higher education system per unit of assets, per staff, per student;

• indicators of income diversification, that reflect the sources of income from different activities in higher education system.

It is also important to take into account the interests of various stakeholders in defining the list of indicators of economic efficiency in the higher education system. The outline for construction of indicators of economic efficiency in higher education competitiveness analysis is presented in the Fig. 5.

Criteria / objects of analysis	The levels of economic efficiency analysis		
	HEIs and its products	region	country
	Stakeholders (internal and external)		
	students, educators, researchers, managers	entrants, graduates, employers, state and local governments	
Results (Capacity)			
Performance			
Income diversification			

Fig. 5. Framework for construction of indicators of economic efficiency in competitiveness analysis of higher education system

Source: developed by the authors

Proposed in Figures 1-5 conceptual and applied approaches to the competitiveness analysis of the higher education systems can serve as a basis for the development of analytical databases for decision-making at different levels of competitiveness management. In other words, it refers to the methodology for the formation of large data sets (Big-data) in the management of higher education system both at the institutional (HEI) and the regional and national levels. Figure 6 presents the framework for analysis of competitiveness of region/country higher education system.

Cluster analysis of competitiveness of higher education systems of the Ukraine's regions.

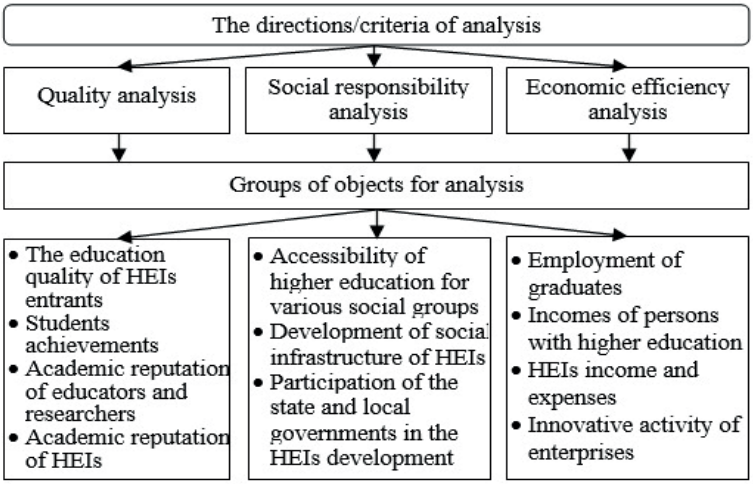

Fig. 6. Framework for analysis of competitiveness of region/country higher education system
Source: developed by the authors

In order to identify the features of the regional development of higher education system in Ukraine, we applied the proposed in Fig. 6 framework for comparative analysis and the database of The State Statistics Service of Ukraine [32-35], The Ukrainian Centre for Educational Quality Assessment [36], The Educational portals about the national academic rankings of Ukrainian universities [30-31], as well as portal of the project Profrights [23]. The set of indicators used is presented in the Table 1.

The list of indicators, as defined in Table 1, largely reflects the peculiarities of the higher education development in the regions of Ukraine. For example, one of the problems of universities in the L'viv region is the availability and quality of dorms for students from other regions of Ukraine. There are cases when HEIs with a high academic rating lose potential students, due to living conditions in dorms. Due to this, the percentage of students who are provided by dorms' is included in the list of indicators of the competitiveness analysis of higher education system of the Ukraine's regions.

Table 1

Indicators of quality, social responsibility and economic efficiency in the competitiveness analysis of higher education system of the Ukraine's regions

Indicators of quality	Indicators of social responsibility	Indicators of economic efficiency
• The share of entrants with an average score 180 and above according to external independent evaluation, % • The ratio of HEIs entrants in the region and the number of entrants who have participated the external independent evaluation in this region • The number of publications according to the SciVerse Scopus database, per the 100 HEIs staff, units • H-Index per one HEI according to the SciVerse Scopus database • The highest ranking of the HEI of the region in the University Ranking 'TOP-200 Ukraine' • The share of HEIs – participants of international associations, % • The share of foreign students in the HEIs, %	• The share of the disability students in the HEIs of the region, % • The share of students in the HEIs of the region among orphans and children deprived of parental care, % • The percentage of students who are provided by dorms', % • The number of students per 10 thousand population in the region, persons • The share of students in the HEIs of the region who study at the expense of local budgets, % • The number of recorded cases of violations of the rights with regard to students and staff per one HEIs in the region	• The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of the state order, % • The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of a regional order, % • Number of patents per 100 researchers who performed research in HEIs of the region • GRP (Gross Regional Product) per capita, UAH • Share of innovatively active enterprises in the region, % • Share of innovative products in total sales in the region, %

Source: developed by the authors

Indicator values for empirical analysis of higher education system competitiveness of the Ukraine's regions are presented in Tables 2-4.

Significant differences are observed in the quality of regional systems of higher education in terms of the quality criteria of entrants' education and academic reputation of educators and researchers. The statistics also show that Volyn, Donetsk, Zhytomyr Transcarpathian, Kropyvnytsky, Kherson and Chernihiv regions faced the problem of losses of significant portion of the potential entrants due to inter-regional and international educational migration.

Indicators of social responsibility of higher education systems of the Ukraine's regions are presented in Table 3.

Table 2

Indicators of quality in the competitiveness analysis of higher education system of the Ukraine's regions

Region	The share of entrants with an average score 180 and above according to External Independent Evaluation, %	The ratio of HEIs entrants in the region and the number of entrants who have participated the External Independent Evaluation in this region	The number of publications according to the SciVerse Scopus database, per the 100 HEIs staff, units	H-Index per one HEI according to the SciVerse Scopus database	The highest ranking of the HEI of the region in the University Ranking 'TOP-200 Ukraine'	The share of HEIs – participants of international associations, %	The share of foreign students in the HEIs, %
1	2	3	4	5	6	7	8
Vinnytsya region	7.84	0.651	26	5.00	33.0	33.3	35.1
Volyn region	8.86	0.562	64	13.50	23.1	50.0	42.6
Dnipropetrovsk region	6.72	1.074	118	11.91	44.4	29.2	39.5
Donetsk region	6.13	0.545	289	12.30	32.1	88.9	40.7
Zhytomyr region	6.09	0.521	22	7.50	19.4	20.0	33.7
Transcarpathian region	5.99	0.526	125	15.00	29.2	80.0	29.8
Zaporizhia region	6.19	1.005	41	8.50	26.4	9.1	28.0
Ivano-Frankivsk region	8.77	0.882	28	14.67	29.8	60.0	26.8
Kyiv region	6.79	0.371	2	3.00	20.0	16.7	43.0
Kropyvnytsky region	5.40	0.339	4	4.00	25.2	0.0	41.2
Luhansk region	4.95	0.821	64	9.33	27.7	50.0	39.1
Lviv region	14.28	1.418	137	17.25	44.7	19.0	34.9
Mykolaiv region	5.15	0.740	13	6.00	27.3	60.0	36.7
Odessa region	5.73	1.295	77	10.92	35.2	71.4	31.2
Poltava region	6.49	0.959	25	4.60	25.6	66.7	27.0
Rivne region	8.00	0.623	6	6.00	23.7	20.0	36.2
Sumy region	7.05	0.966	85	17.00	42.0	40.0	37.4
Ternopil region	9.37	1.276	44	8.75	29.5	50.0	34.3
Kharkiv region	8.07	1.834	126	12.47	49.5	31.6	35.7
Kherson region	5.25	0.509	10	5.00	22.3	0.0	31.4
Khmelnytsky region	7.09	0.664	15	13.00	27.2	11.1	34.9
Cherkasy region	7.73	0.794	35	9.50	20.6	40.0	34.1
Chernivtsi region	6.99	0.844	184	27.00	33.0	66.7	31.0
Chernihiv region	7.75	0.412	19	10.00	19.3	25.0	39.2
Kyiv	16.03	3.388	120	11.76	86.2	20.9	30.9

Source: calculated by the authors using [30-31; 35; 36].

Table 3

Indicators of social responsibility in the competitiveness analysis of higher education system of the Ukraine's regions

Region	The share of the disability students in the HEIs of the region, %	The share of students in the HEIs of the region among orphans and children deprived of parental care, %	The percentage of students who are provided by dorms, %	The number of students per 10 thousand population in the region, persons	The share of students in the HEIs of the region who study at the expense of local budgets, %	The number of recorded cases of violations of the rights with regard to students and staff per one HEIs in the region
1	2	3	4	5	6	7
Vinnytsya region	1.16	0.52	85.4	283	9.0	18
Volyn region	1.35	0.59	92.2	257	14.6	11
Dnipropetrovsk region	0.86	0.83	93.5	370	4.8	3
Donetsk region	0.76	0.92	85.9	73	2.4	42
Zhytomyr region	1.18	0.74	88.7	249	9.2	23
Transcarpathian region	1.41	0.35	64.0	180	3.0	35
Zaporizhia region	0.88	0.40	71.9	400	4.3	29
Ivano-Frankivsk region	1.32	0.35	61.9	276	5.3	13
Kyiv region	0.90	0.78	90.2	170	7.2	24
Kropyvnytsky region	1.52	0.95	88.0	160	10.0	32
Luhansk region	0.69	0.62	100.0	83	4.1	44
Lviv region	0.76	0.31	74.8	492	3.0	26
Mykolaiv region	1.06	0.88	73.0	282	8.1	31
Odessa region	0.47	0.50	97.1	475	3.0	41
Poltava region	1.08	0.49	80.9	340	4.5	12
Rivne region	1.30	0.47	97.7	311	5.8	47
Sumy region	1.18	0.58	91.4	330	7.8	19
Ternopil region	1.18	0.35	99.1	398	10.0	31
Kharkiv region	0.83	0.33	97.2	657	3.0	29
Kherson region	0.79	0.75	66.2	256	6.5	48
Khmelnytsky region	1.45	0.52	90.8	251	10.0	34
Cherkasy region	1.11	0.59	87.5	312	8.0	28
Chernivtsi region	1.19	0.46	100.0	345	6.5	13
Chernihiv region	1.29	0.58	89.7	203	10.3	19
Kyiv	0.84	0.29	87.8	1290	1.9	28

Source: calculated by the authors using [23; 32-35].

Table 4

Indicators of economic efficiency in the competitiveness analysis of higher education system of the Ukraine's regions

Region	The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of the state order, %	The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of a regional order, %	The number of patents per 100 researchers who performed research in HEIs of the region	GRP (Gross Regional Product) per capita in the region, UAH	The share of innovatively active enterprises in the region, %	The share of innovative products in total sales in the region, %
1	2	3	4	5	6	7
Vinnytsya region	22.4	69.0	191.6	37270	15.4	0.15
Volyn region	21.8	63.0	27.5	30387	10.2	0.06
Dnipropetrovsk region	30.4	67.6	7.5	65897	14.7	0.07
Donetsk region	13.5	47.6	133.6	26864	13.8	0.28
Zhytomyr region	31.4	54.1	16.0	30698	20.6	0.34
Transcarpathian region	20.0	29.1	15.5	22989	11.2	0.00
Zaporizhia region	26.9	61.4	8.6	50609	22.1	0.50
Ivano-Frankivsk region	22.9	41.4	28.1	33170	21.1	0.12
Kyiv region	23.4	52.1	10.7	60109	16.6	0.32
Kropyvnytsky region	14.6	52.0	16.5	39356	17.9	0.30
Luhansk region	11.6	89.8	47.4	10778	13.2	1.51
Lviv region	14.3	26.7	8.9	37338	20.6	0.71
Mykolaiv region	23.9	68.7	5.3	41501	23.1	0.03
Odessa region	25.3	64.5	13.2	41682	20.9	0.37
Poltava region	28.8	81.9	17.1	66390	14.0	0.00
Rivne region	11.2	53.6	38.8	30350	17.0	0.07
Sumy region	31.0	73.7	4.6	37170	17.8	3.38
Ternopil region	12.6	29.5	76.8	24963	26.1	0.55
Kharkiv region	27.1	41.5	7.9	45816	30.5	1.89
Kherson region	15.3	75.4	17.6	30246	19.8	0.06
Khmelnytsky region	22.4	46.6	31.5	31660	12.8	0.01
Cherkasy region	10.9	51.8	16.0	40759	16.1	0.08
Chernivtsi region	27.1	74.2	22.5	20338	20.4	0.00
Chernihiv region	10.1	50.8	4.0	35196	15.2	0.14
Kyiv	16.5	32.8	6.7	155904	23.1	0.20

Source: calculated by the authors using [32-35; 30-31].

Analysis of the competitiveness of higher education systems in Ukraine's

regions by the criteria of social responsibility gives reason to argue that the problem of low access to higher education for children with disabilities and other socially vulnerable groups is relevant for most regions. The share of such categories among students of Ukraine does not exceed 1.5 %, then, for example, in Poland this indicator is almost twice as high.

There is a significant uneven distribution of Ukraine's regions by the level of participation of regional authorities in the financial support of higher education. The proportion of students who participate in universities at the expense of local budgets differs among regions of Ukraine by almost eight times.

Indicators of economic efficiency of higher education systems of the Ukraine's regions are presented in Table 4.

The regional distribution of higher education systems according to the criterion of economic efficiency is the most uneven in terms of the indicator «The number of patents per 100 researchers who performed research in HEIs of the region».

The lack of statistics on incomes and expenditures in higher education in Ukraine at the regional level makes it difficult to analyse the economic efficiency of the higher education system in the region. Despite critical remarks on the reliability of the statistical indicator of graduates employment who were studying through state or local funding, this indicator remains one of the few for comparative analysis not only of the efficiency of state funding of higher education, but also its quality.

Cluster analysis was applied in order to classify regions of Ukraine by the set of competitiveness indicators. Fig. 7 shows a tree of the clustering results of the 25 regions of Ukraine using the Ward's method and a list of indicators presented in the Tables 2-4.

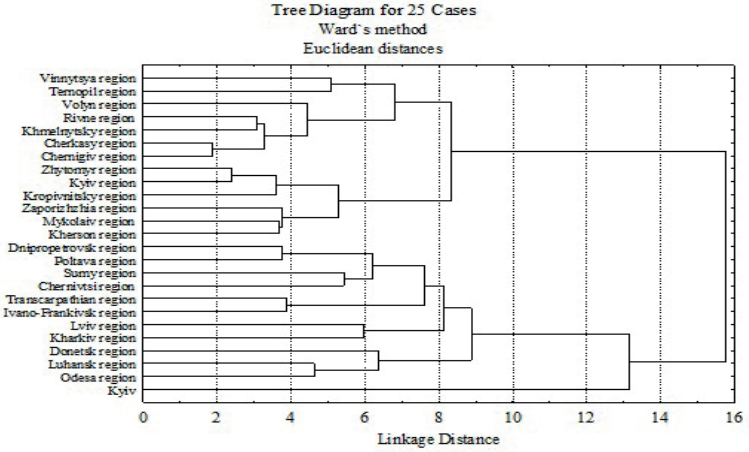

Fig. 7. Cluster analysis of the Ukraine's regions according to the level of the higher education system competitiveness: the tree-like method

Source: calculated by the authors using data tables 2-4.

As Ward's clustering results show, four major types of regions in Ukraine can be identified in terms of the competitiveness of the higher education system. The first cluster includes the capital of Ukraine – Kyiv with universities that provide the highest level of quality according to such criteria as 'the education quality of HEIs entrants', 'the academic reputation of universities in the national ranking', 'the attractiveness of the region HEIs among domestic and foreign students' and 'prospects for employment of graduates' The second cluster combines eleven regions of Ukraine (Odesa, Luhansk, Donetsk, Kharkiv, Lviv, Ivano-Frankivsk, Transcarpathian, Chernivtsi, Sumy, Poltava, Dnipropetrovsk), with generally higher than average level of most indicators of competitiveness, in particular those that evaluate criteria such as 'the academic reputation of teachers and researchers', 'the effectiveness of scientific research', 'attractive for students from other regions of the country', but with a rather large variability of academic rankings of universities. Among the regions that have fallen into this cluster, the Lviv and Kharkiv regions are especially distinguished with the highest values of the academic reputation of teachers and researchers, positions in national and international rankings and the education quality of university entrants.

The third cluster includes the six regions of Ukraine (Kherson, Mykolaiv, Zaporizhzhia, Kropivnitsky, Kyiv, Zhytomyr), that have values of most competitiveness indicator somewhat lower than the average level, s. At the same time, this cluster is characterized by a rather high level of training for certain branches of the economy, but the absence of classical universities with high positions in national and international rankings.

Table 5

Cluster analysis of the Ukraine's regions according to the level of the higher education system competitiveness: the k-means method

Cluster 1	Cluster 2
Kyiv (Ukraine's Capital), Lviv region, Kharkiv region	Donetsk region, Transcarpathian region, Ivano-Frankivsk region, Chernivtsi region
Cluster 3	Cluster 4
Dnipropetrovsk region, Zhytomyr region, Zaporizhia region, Kyiv region, Luhansk region, Mykolaiv region, Odessa region, Poltava region, Sumy region, Kherson region	Vinnytsya region, Volyn region, Kropyvnytsky region, Rivne region, Ternopil region, Khmelnytsky region, Cherkasy region, Chernihiv region

Source: calculated by the authors using data tables 2-4.

The fourth cluster comprises of seven Ukraine's regions (Chernigiv, Cherkasy, Khmelnytsky, Rivne, Volyn, Ternopil, Vinnytsya), that are characterized by a marked lagging behind the top regions by most indicators of competitiveness and the urgency of the problem of entrants migration to neighbouring regions with higher educational and economic potential. At the same time, each of the regions of this cluster has its own strengths. For example, Vinnytsia region has a high level of patent activity of researchers and the attractiveness of medical profile for foreign students. The high level of regional financial support for the universities is distinctive for Volyn, Ternopil, and Chernihiv regions.

Table 6

The results of the variance analysis of the indicators of the higher education system competitiveness of the Ukraine's regions

№	The indicators of competitiveness	Statistical parameters of variance analysis (ANOVA-method)			
		intergroup variance	average of group variances	Fisher's F-test	p-value
1	2	3	4	5	6
1.	The share of entrants with an average score 180 and above according to External Independent Evaluation, %	15.87179	8.12821	13.66875	0.000036
2.	The ratio of HEIs entrants in the region and the number of entrants who have participated the external independent evaluation in this region	14.83517	9.16483	11.33095	0.000124
3.	The number of publications according to the SciVerse Scopus database, per the 100 staff in the region HEIs, units	12.89748	11.10252	8.13170	0.000878
4.	H-Index per one HEI in the region according to the SciVerse Scopus database	10.12362	13.87638	5.10690	0.008247
5.	The highest ranking of the HEI of the region in the University Ranking 'TOP-200 Ukraine'	14.45647	9.54353	10.60355	0.000188
6.	The share of the region HEIs – participants of international associations of HEIs,%	10.34147	13.65853	5.30001	0.007046
7.	The share of foreign students in the HEIs of the region,%	4.16674	19.83327	1.47062	0.251226
8.	The share of the disability students in the HEIs of the region, %	12.35947	11.64053	7.43233	0.001417
9.	The share of students in the HEIs of the region among orphans and children deprived of parental care, %	7.23876	16.76124	3.02312	0.052417
10.	The percentage of students who are provided by dorms, %	3.76263	20.23737	1.30148	0.300182
11.	The number of students per 10 thousand population in the region, persons	14.12078	9.87922	10.00540	0.000268
12.	The share of students in the HEIs of the region who study at the expense of local budgets, %	14.75125	9.24875	11.16462	0.000137
13.	The number of recorded cases of violations of the rights with regard to students and staff per one HEIs in the region	0.07159	23.92841	0.02094	0.995756
14.	The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of the state order, %	7.55407	16.44593	3.21529	0.043657
15.	The share of HEIs graduates in the region who have been assigned to work among students who studied at the expense of a regional order, %	12.25113	11.74887	7.29924	0.001556
16.	The number of patents per 100 researchers who performed research in HEIs of the region	4.55766	19.44234	1.64093	0.210157

17.	GRP (Gross Regional Product) per capita in the region, UAH	7.95234	16.04766	3.46882	0.034435
18.	The share of innovatively active enterprises in the region, %	7.18851	16.81149	2.99317	0.053945
19.	The share of innovative products in total sales in the region, %	3.85378	20.14622	1.33903	0.288535

Source: calculated by the authors using data tables 2-4

Somewhat different clustering results of Ukraine's regions, although with many similar combinations, were obtained by using the non-hierarchical k-means method. Table 5 presents the results of the cluster analysis of Ukraine's regions by the k-means method.

When the results of a cluster analysis are obtained by the k-means method, it is possible to estimate how different clusters are. The results of statistical analysis of clustering indicators in terms of their contribution to the quality of formed clusters are presented in Table 6.

The application of mathematical and statistical methods for the analysis of large data sets requires inspection of data quality. This is especially necessary for indicators of analysis that have a significant impact on the final results, and, therefore, they should undergo a quality control procedure. For the cluster analysis performed in the present study the parameters of the analysis of variance are presented in the Table 6 to indicate a quality of clustering. For example, the best clustering is for the indicators of competitiveness for which the p-value is less than 0.05.

As can be concluded from the Table 6, a group of indicators (such as 'the share of foreign students', 'the percentage of students who are provided by dorms', 'the number of recorded cases of violations of the rights with regard to students and staff per one HEIs in the region', 'the number of patents per 100 researchers who performed research in the region', as well as 'the share of innovative products in total sales in the region') reduced the quality of regions classification into clusters. However, from the point of view of identifying the strengths and weaknesses of the higher education system in certain regions, these indicators should be subjects of special attention in the competitiveness management.

Thus, the use of cluster analysis allowed us to identify four competitive groups in the competitiveness management of regional higher education systems by criteria of quality, social responsibility and economic efficiency.

Taxonomic analysis of competitiveness of higher education systems of the Ukraine's regions.

Using taxonomic analysis, we can calculate the integral assessment of the competitiveness of the higher education system for each of the regions of Ukraine. It is correctly to carry out such calculations, in our opinion, within each of the clusters, that corresponds to a group of regions with similar values of competitiveness indicators. The value of the integral indicator of competitiveness, calculated using taxonomic analysis, can range from 0 to 1. The closer this value is to 1, the higher

the integral assessment of the competitiveness of higher education system in the region.

Fig. 8 shows the taxonomic coefficients of competitiveness of the higher education system in Ukraine's regions belonging to Cluster 1.

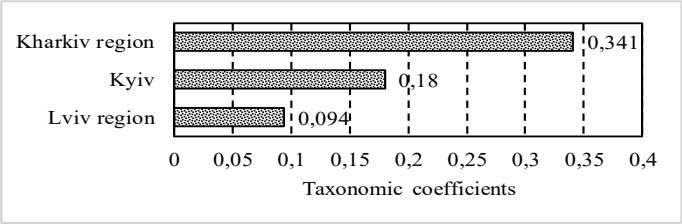

Fig. 8. Taxonomic coefficients of the higher education system competitiveness of the Ukraine's regions in Cluster 1
Source: calculated by the authors using data tables 2-4.

As can be seen from Figure 8, the leader in the ranking of competitiveness higher education systems in cluster 1 is Kharkiv. Kyiv and Lviv region noticeably lag behind the Kharkiv region in such indicators of competitiveness as the share of foreign students, the innovative activity of enterprises and the share of innovative products in total sales in the region.

Figure 9 shows the taxonomic coefficients of the higher education system competitiveness in Ukraine's regions belonging to Cluster 2. Chernivtsi region is a regional leader in this cluster.

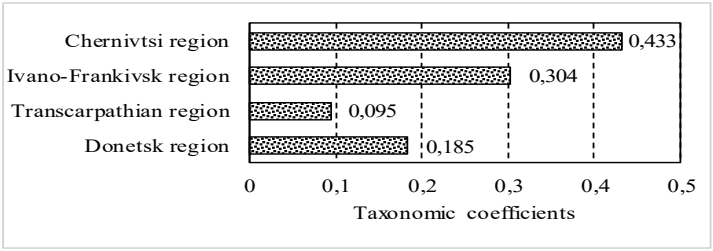

Fig. 9. Taxonomic coefficients of the higher education system competitiveness of the Ukraine's regions in Cluster 2
Source: calculated by the authors using data tables 2-4.

Fig. 10 presents the results of calculating the taxonomic coefficients of competitiveness of higher education systems in Ukraine's regions belonging to Cluster 3.

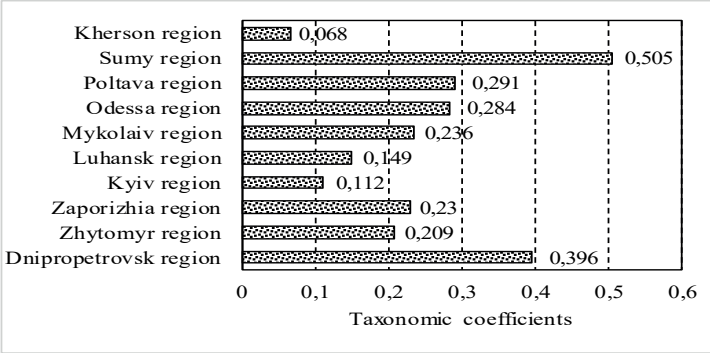

Fig. 10. Taxonomic coefficients of the higher education system competitiveness of the Ukraine's regions in Cluster 3
Source: calculated by the authors using data tables 2-4

Sumy and Dnepropetrovsk regions are leaders in Cluster 3. The leadership of the Sumy region in this cluster is provided by high values of indicators of academic reputation of educators and researchers, sales of innovative products in the region, as well as active cooperation of regional universities with international organizations.

Fig. 11 represents the value of taxonomic coefficients of higher education systems competitiveness in the Ukraine's regions, belong to the 4-th Cluster.

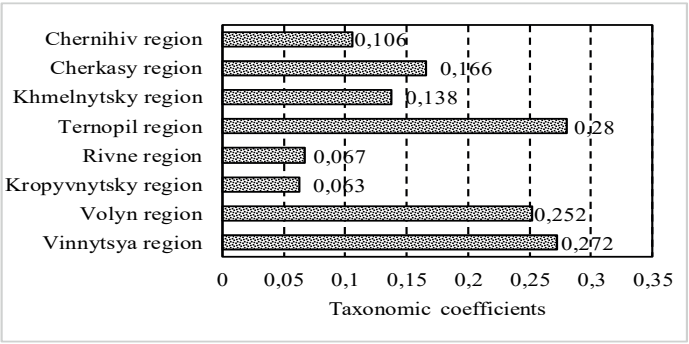

Fig.11. Taxonomic coefficients of the higher education system competitiveness of the Ukraine's regions in Cluster 4
Source: calculated by the authors using data tables 2-4

Ternopil, Vinnytsya and Volyn regions have the best values of taxonomic coefficients of higher education competitiveness in this cluster. The urgent problem for most regions of this cluster is the migration of potential students to regions and countries with the better competitiveness ratings in higher education.

The diversity of the functions of higher education system, its role in the realization of goals not only for personal development, but also the sustainable development of the society, regional and national security, dictate a rethinking of the criteria of the higher education system competitiveness and the application of interdisciplinary approaches to its analysis. The present study offers a conceptual model for the analysis of the higher education system competitiveness and is based on the following principles:

1. The main elements of the higher education system of the region/country are providers of higher education, the results of their activities – products, as well as internal and external stakeholders. The interests of stakeholders, the potential and performance of the providers form a core of the model and are the main objects in the competitiveness analysis.

2. Quality, social responsibility and economic efficiency are the main criteria for the analysis of the higher education system competitiveness, as well as take into account the multitude of higher education goals and functions in society (education, research, public services).

3. It is beneficial to develop various types of applied models for analysis of the higher education system competitiveness and corresponding sets of indicators that depend on the level of analysis (institutional, regional, national) and stakeholder priorities.

The proposed conceptual model was implemented for the empirical analysis of the higher education system competitiveness of Ukraine's regions. Based on a set of indicators of quality, social responsibility and economic efficiency the higher education systems of Ukraine's regions were divided into groups using hierarchical and non-hierarchical clustering algorithms.

Cluster analysis allowed determining four competitive groups of Ukrainian regions in managing the higher education competitiveness. Kyiv, Lviv and Kharkiv regions belong to the cluster with the highest values of the partial indicators of competitiveness.

The use of taxonomic analysis allows to correctly determine the integral assessment of the competitiveness of the region's higher education system within each cluster. The results of the calculation of taxonomic coefficients showed that the leaders in the respective competitive groups are Kharkov region (in Cluster 1), Chernivtsi region (in Cluster 2), Sumy and Dnipropetrovsk regions (in Cluster 3), Ternopil, Vinnytsya and Volyn regions (in Cluster 4).

Statistical analysis of partial indicators of competitiveness also showed that a threat to many regions of Ukraine (especially for Volyn, Donetsk, Zhytomyr, Transcarpathian, Kropyvnytsky, Kherson and Chernihiv regions) is the loss of intellectual potential of young people due to the mass migration of universities graduates of these regions to other Ukraine's cities (Kyiv, Kharkiv, Odesa, Dnipropetrovsk), as well as abroad.

The proposed approach to the analysis of the higher education system

competitiveness is based on the using of open databases of the State Statistics Service of Ukraine, the Ukrainian Centre for Educational Quality Assessment, educational portals of public organizations. This provides with additional benefits associated with the possibility of implementation and using the proposed approach at different levels. In this regard, we consider it expedient to introduce in Ukraine the monitoring of regional systems of higher order in managing enhancing their competitiveness and balancing of development.

The further research will be related to the study of the interconnection of integrated characteristics of the higher education systems competitiveness of Ukraine's regions with the intensity and directions of the educational migration flows.

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THE ROLE OF PEDAGOGICAL MANAGEMENT IN THE DEVELOPMENT OF ENTREPRENEURIAL COMPETENCES OF STUDENTS OF AN AGRICULTURAL UNIVERSITY

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The problem of developing entrepreneurial competences of students in higher education is conditioned, first and foremost, by the importance of small and medium enterprises in the socio-political and economic life of the state. Effective activity of small enterprises influences economic growth of Ukraine, provides employment in the country, which directly raises the standard of living of the population.

The problem of the development of entrepreneurship in Ukraine still remains relevant, despite the 2017 Strategy for the Development of Small and Medium-Sized Entrepreneurship for the period until 2020 [1] and other efforts of the state to create favorable conditions for small business. Researchers (I. Shevchuk, O. Petryshin), conducting research in this area, note that in developed European countries, small and medium-sized businesses account for 90% of all enterprises and provide approximately 70% of the employed population with jobs. The contribution of small and medium-sized enterprises to value added at cost of production is about 60% [2]. In Ukraine, the state of entrepreneurship development remains rather low, as evidenced by statistical data (Table 1).

As we see from table. 1, starting in 2014, the total number of business entities of large, medium and small entrepreneurship in Ukraine is gradually decreasing. According to the State Statistics Service of Ukraine in the sphere of entrepreneurship, only about 40% of the working-age population is occupied [3].

The discussing of the problems hindering the development of entrepreneurship in Ukraine, scholars for a number of reasons note «... a declarative form of state support; the lack of human skills, the lack of practical skills of entrepreneurship in the conduct of business, the imperfection of the system of training, retraining and staff training for entrepreneurial activity ... « [4, p. 58-66]. This view is shared by many scholars [2, 5], which emphasize the importance of training appropriate to the requirements of the new economy, which have an innovative type of thinking and new competencies.

Table 1

Indicators of structural statistics by economic entities with distribution by size

Year	2013	2014	2015	2016	2017
The total number of	1722070	1932161	1974318	1865530	1805059
Great	659	497	423	383	399
in percentage to the total number of entities	0,04	0,03	0,02	0,02	0,02
Medium	20983	15906	15203	14832	14937
in percentage to the total number of entities	1,22	0,82	0,77	0,80	0,83
Small	373809	324598	327814	291154	322920
in percentage to the total number of entities	21,71	16,80	16,60	15,61	17,89
Individuals-entrepreneurs	1325925	1591160	1630878	1559161	1466803
in percentage to the total number of entities	77,00	82,35	82,60	83,57	81,26

Source: built according to the official website of the State Statistics Service of Ukraine [3]

To such innovative and practical-oriented competences of a modern specialist include the ability to self-employment and entrepreneurship. Comprehensive analysis of scientific research, including dissertation [6, 7, 8] showed that the presence of established entrepreneurial competencies is considered by scientists as one of the indicators of the competitiveness of a specialist. At the same time, despite the widespread use in the scientific literature, mass media, the everyday life of the term «entrepreneurial competencies», scientists have not come to a common opinion about its definition.

V. Maikovskaya defines entrepreneurial competence as a personal or business quality, a skill, a model of behavior, the possession of which helps to successfully solve certain business tasks and achieve high results [9]. Y. Banit believes that this is the ability of a person to embody ideas in the sphere of economic life, and explains the term as an integrated quality based on creativity, creativity, innovation, ability to risk, the ability to plan and organize entrepreneurial activity [5]. According to T. Lytvyn, entrepreneurial competence is the ability of a person to effectively organize personal and collective labor and entrepreneurial activity, to analyze the situation on the labor market, to evaluate their own professional opportunities [10]. L. Trusova under the entrepreneurial competences understands the range of issues in which a person has authority, knowledge and experience to successfully conduct entrepreneurial activity; behavior that is demonstrated in the process of effectively performing business tasks [6].

It should be noted that in their research, scholars, despite different approaches to understanding terminology, are united in the idea that the lack of a person's entrepreneurial competence reduces its competence in business activities. Consequently, the more entrepreneurial competencies are in the human arsenal, the more likely it will cope with business tasks.

Most modern educators [9,10] note that both students and university graduates have enormous innovative and entrepreneurial potential, which should be developed by the institution of higher education through the provision of access to entrepreneurial business education and the creation of an environment that will foster entrepreneurial culture, aspirations and implementation of business ideas.

Quite logical seems L. Kowalska's opinion [11], which emphasizes that the formation of intellectual capital, as a factor in the development of entrepreneurial skills, should take place in the system of «teacher-student-entrepreneur-practitioner-business environment» and justifies the feasibility of creating an «intellectual platform» for the development of economic business education of students. The scholar emphasizes that entrepreneurship is associated with young people with the process of personal professional growth, social adaptation and formation through the formation of business ideas, the development of business projects and their implementation into real practice and offers a platform that will enhance the quality of economic business education of students.

We agree with scholars who believe that the development of entrepreneurial competences in higher education institutions requires concerted actions that will ensure the achievement of planned learning outcomes and the successful socialization of young people in terms of inclusion in entrepreneurial relations.

Analysis of the discourse of scientists on improving the quality of education in accordance with the needs of the economy, shows that the most frequent proposals on:

- viewing and adjusting the content of learning in the light of the dynamics of updating knowledge in the information society;
- creation of a specific business-centered entrepreneurial learning environment for further self-realization of youth in business organizations;
- providing the freedom to choose the varied content and programs of entrepreneurial education;
- taking into account the place and role of specialist in innovative processes of economic development and timely adjustment of pedagogical conditions of professional training [12];
- expansion of forms of interaction between higher education and business-oriented structures for success;
- the importance of developing creative thinking of higher education graduates;
- forming young people in the spirit of competition, innovation and entrepreneurship [7];
- implementation of tactics aimed at the preparation of a competitive, creative and mobile young person with entrepreneurial competencies [8].

According to Bengt Johannisson, a well-known theorist in the field of entrepreneurial education, for a successful entrepreneurial activity it is necessary to: understand why a person wants to do this («to know why»); be able to do this («know how»); understand who it is important to interact to make a business successful («know who»); Have a good intuition, that is, feel when you need to start your business («know when»); and, finally, to have knowledge on the subject of business («to know that») [13].

Consequently, we can assume that the development of entrepreneurial competences of higher education graduates must be carried out in dialectical unity, taking into account the abovementioned professionally significant qualities. The basis of the concerted efforts of the teaching staff of the institution of higher education should be the image of the future entrepreneur in its unity and integrity. The structure of effective systemic training of future agrarians may consist of the following stages (Table 2).

Table 2

Structure of the process of professional training of future agrarians

COMPOSITION	PURPOSE
Professional training	Mastering of professional knowledge
Professional skills development	Professional skills development
Professional education	Educating the personality traits necessary for the successful application of professional knowledge, skills and abilities
Professional practice	Acquisition of professional experience
Actualization of professional choice	Motivation for professional formation and professional activity
Immersion in a professional environment	Formation of professional culture
Individualization of "style"	Formation and development of individual technology of professional activity

It is known that the higher the qualification has a specialist, the more complicated is his professional activity, the more uncertain conditions of this activity, the more complex, more varied and more individualized should be its preparation. An analysis of modern scientific research, psychological and pedagogical literature gives us reason to assert that the development of entrepreneurial competences of the future specialist-agrarian is a purposeful, multicomponent, multifunctional, logical and dynamic process, which today requires not only the introduction of a competence-based approach to learning, but also the obligatory organization of the subject-subject management pedagogical process. At the same time, it is necessary to take into account that not only the content of education, but also the educational environment of higher educational institutions, the organization of educational

process, educational technologies, including independent work of students, plays a decisive role in forming the readiness of future agrarians in entrepreneurial activity.

According to the research of specialists, «... the customers of educational services are becoming more demanding for the quality of education. Going back to the past, when the main motive for joining the «high school» was a diploma. Modern youth needs a solid knowledge to use them in the future for their benefit [14].

Obviously, the main subject, designed to solve the tasks of developing entrepreneurial competencies, remains the personality of the teacher, and the high quality of educational services can only be achieved if the teachers continuously improve their skills [15] and mobile responses to changes occurring in the educational space.

To summarize, entrepreneurial competence provides the possession of personality means and techniques that allow it to effectively organize its own and collective entrepreneurial activity [9], therefore today it is very important, without breaking the continuity of the national education, to raise the quality of training of specialists to a new level, when the results of entrepreneurial professional the activities of graduates will be able to make an incomparably greater contribution to socio-economic development of the country.

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RISKS IN SOCIAL LIFE (SOCIO-PHILOSOPHICAL ANALYSIS)

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Risks always characterize the life of man and society, they represent objective reality, correspond to all spheres of practical activity. At the beginning of the 21st century a diversity and intensity of risks are growing at a rapid pace. Risk becomes an inalienable characteristic of a current social practice. The essence of the concept of «risk» was studied during the history of mankind, in particular in the writings of Plato, Aristotle, T. Hobbes, G. Hegel. The German philosopher G. Hegel considers the risk as a dialectical deployment of the whole set of moments of the reality in the process of knowledge, proves the necessary character of it. In the modern studies, the notion of «social risk» as an integral part of social development, which requires a profound socio-philosophical analysis, plays an important role.

Relevance of the research. Risks constantly accompany the life of a human and society. They represent objective entity, correspond to all areas of human practice. The urgency of their in-depth analysis is connected with the current global range of problems. In the present world there is a growth of chaos, uncertainty, aggravation of crisis phenomena in the economy, political, social and spiritual life of society, caused by acute competition, restriction and non-reproducibility of natural resources, mass introduction of high-risk innovations, uneven development and the lack of stabilisation foundations of society.

The state of theme research. At the beginning of the 21st century the diversity and intensity of risks are growing at a rather rapid pace. Scientists around the world began to prove the need for risk as an integral feature of the modern society, capable to cause devastating consequences, and eventually – ruin. Today, society generates a variety of risks that contribute to its instability and self-destruction. Risk becomes an inalienable characteristic of the current social practice. The modern society implicitly includes the possibility of risk, it is a carrier of a permanent high degree risk.

Social risks include such phenomena and processes of the social sphere of society, which carry the danger of social destabilization, are quite complex in their structure with possible societal consequences that complicate the objective prediction of sustainable development. Social risk determine the appropriate level of social and economic tension both at the local level and at the level of the entire world community. Social risk poses a certain danger that arises within the social sphere of society, and has destructive consequences affecting the life of individuals, social groups and society in whole. Social risk is a specific way of organizing social

relationships, interactions and people's relationships in conditions of uncertainty, manifestation of chaos. In this case, the physical and spiritual forces of a man acquire not predictably defined character, but mainly random, probable, unpredictable.

The purpose of the study. The notion of «risk» comes from the Late Latin-»outbreak», which is not observed. At the level of public practice, risk means the measure of a possible, anticipated defeat due to one or another action, or a certain line of behavior. Risk is regarded as a kind of activity whose purpose is to overcome an uncertain situation, an uncertain choice and the possibility of achieving an unpredictable result, and in another respect - the possibility of a defeat and deviation from the goal. The basis of social risk is a kind of activity aimed at obtaining results by extraordinary means in conditions of uncertainty and the inevitability of free choice. The phenomenon of uncertainty in the manifestations of social risk proves the need for a substantial analysis of gnosiological aspects in its definition and existence.

The concept of «risk» is not an absolute innovation in scientific researches of the 21st century. Risks in all spheres of social life and knowledge existed throughout the history of mankind and were studied in the writings of ancient Greek philosophers, in particular Plato, Aristotle, Epicurus, and Seneca. At the stage of the primitive society, the most significant risks to which people were subjected were natural risks, as well as illnesses and high mortality. During the period of the slave system, economic and military risks became significant. In the Middle Ages there is a new type of risk - spiritual. At the end of the eighteenth and early nineteenth centuries there is the formation and development of technogenic risk associated with scientific and technological progress, which was ensured by the mechanization of production processes, numerous scientific discoveries at the experimental and theoretical levels of natural science. Throughout the nineteenth century the accumulation of social and national risks is realized. In the middle of the twentieth century a transition to a new level in social development is taking place – the emergence of postindustrial and informational societies, which absorb previous types of risks and generate a lot of new ones. These include terrorism, information risk, which has a global character.

The philosophical comprehension of the category of «risk» is reflected in the works of thinkers of the 17th – 19th centuries, in particular in the works of T. Hobbes, B. Pascal, I. Kant and G. Hegel. Thus, the English philosopher T. Hobbes analyses the state of the society of that time, the society of «absolute risk» and proposes a «social contract» as a certain way to «minimize a risk». Mathematical theories of the French philosopher B. Pascal lead to the understanding that a person can make decisions in a situation with an indefinite result and predict the future with the help of mathematical calculus, that corresponds to the appropriate level of the development of formally mathematical methods of the 17th century. In his discourse, the Germanan sociologist of the 20th century O. Renn characterizes the category of «risk as a division of the reality and the possibility».

The dialectical definition of the problem of risk is found in the philosophical

works of the classic of German idealism of the first half of the 19th century G. Hegel. From the very beginning it should be noted that the explanation of the category of «risk» as a division of the true reality and the possibility in the modern studies has essentially a distinct metaphysical character. The appeal to classical German philosophy reveals the deep dialectics of the essence of the relationship of the possibility and the reality as an epistemological basis for determining the category of «risk». In his most famous philosophical work «Science of Logic» G. Hegel reveals the essence of dialectical knowledge as the deployment of the totality of the reality's moments.

The German philosopher makes statements absolutely unheard for that time, that a chance is necessary, and the very necessity defines itself as a chance. A chance has a certain ground, because it is random, but at the same time it does not have a reason, because it is accidental. A certain chance, most likely, is an absolute necessity. Deployment of reality, according to G. Hegel, takes place in complex dialectical processes of the intercourse of the possibility and the reality. «The kingdom of the possibility is an infinite variety, but a variety is a contradiction,» argues the German philosopher. According to the author of the «Science of Logic», the unity of the possibility and the reality is an accident, but an accident is something real, defined at the same time only as possible. «The true reality is, first and foremost, a thing with many properties, an existing world; it is preserved in the variety of simple existence» [3, p. 193-194].

G. Hegel, relying on the spiritual and practical principles, proves that in the process of activity the reality changes, «something manifests itself due to things that it produces». The transition from the real possibility to the reality is a movement, a process that has moments of constant change of the opportunity, each of which arises from the other. There is not only a transition in this denial, but a merger with oneself – a specific dialectical synthesis. This movement forms certain real possibilities, the available moments in such a way that «each of them arises from the other, that is why in this denial it is not a transition, but a merger with oneself» [3, p.195]. The true reality has its certainty as a direct being, it is a variety of existing circumstances. The unity of a necessity and a chance, Hegel calls the absolute reality, the whole set of its moments, at the same time, the necessity is relative, because it has its source point of existence only is in the accident.

If something is possible or impossible, depends entirely on the variety of content, that is, from the whole set of moments of the reality, which, in its deployment, manifests itself as a necessity. Thus, the dialectical development of the whole set of moments of the reality in the process of knowledge proves the necessary moment of transition of a specific possibility to reality, and vice versa, indicating the objective nature of the existence of the category of «risk», as a reflection of the complex process of the relationship between possibility and reality. Risk is an objective category of a modern scientific search, as it brings the moments of uncertainty into practical activity of a man, always present in the surrounding reality. And in the

form, the concept of «risk» is subjective as a conceptually perfect reflection of the objective process of the development.

Further development of the category of «risk» is based on the principles of synthetic and analytical activity, which characterizes the variety of objective spheres of its existence. The concept of «social risk» was first proposed by a German sociologist of the 20th century. U. Beck in the work «Risk Society: Towards a New Modernity». The subject of the study is the social changes that make up the risk factors in the society in the era of late modernism. Beck outlines two basic concepts: «risk society» and «reflexive modernization». In the first theory, the German sociologist argues that in the process of development the modern industrial society, which is characterized by the distribution of material goods, is gradually replaced by a «risk society», a characteristic feature of which is the production and consumption of risks. According to U. Beck, «risk society» starts forming when the risks inherent in an industrial society begin to go out from the control of social institutions that ensure the safety of an industrial society. The leitmotif of his work «Risk Society» is the thesis that the creation of new technologies leads to the production of new technological risks.

The problem of risk is directly related to rapid industrialization and unpredictable negative consequences of modernization. Risk is a systematic interaction of society with threats and dangers that characterize the modern process of modernization. Risks are a consequence of the threatening power of modernization and the resulting feelings of uncertainty and fear. The German sociologist argued that social risks are not one-offs, but processes that have the appropriate phases of extension and risk taking. The phase of risk consumption leads to its accumulation and growth. The risk concentration leads to the «boomerang effect», that is, the feedback is born, and consumption of risk becomes both its beginning and its production. Social risks are characterized by the impossibility of their formalization and control. Risks are comprehended by people based on relevant knowledge. U. Beck divides the whole society into risk experts and not experts. Certain mediators between the scientific knowledge and the public belong to risk experts, for example, the mass media, educational and scientific institutions, which influence the readiness of the population to perceive the relevant phenomena and processes as a risk [1].

The study of social risk is a subject of research in the works of the modern German sociologist N. Luhmann. In his work, «The Notion of Risk», N. Luhmann explores the ontological reasons for risk. In his opinion, the concept of «risk» raises the question of the possibility of rational forms of human activity. The German sociologist argues that risk is the main feature of social reality, in which there is a free choice of human activity – the choice of a multitude of alternatives, that forms an uncertain nature of the future. Thus, N. Luhmann claims that there is no behavior free of risk-. Determining the concept of «risk» a researcher must operate not a real object, but opposite distinctions. N. Luhmann uses two oppositions to determine the risk: «risk and reliability» and «risk and danger». In these contrasting

terms, the concept of «risk» means an overly complex set of circumstances with which you usually have to deal, at least in modern society. The opposition «risk-reliability» reveals the problem of quantitative measurement, and the opposition «risk-danger» emphasizes that the decision on the impartiality of risk is of constant importance. According to a German sociologist, there is no risk-free behavior, for the aforementioned oppositions, «risk and reliability» and «risk and danger» there is no absolute value [4].

The modern English sociologist A. Giddens believes that the invasion of abstract systems, such as information, money systems, labor distribution, utilities, etc., along with the dynamic nature of knowledge, means that the perception of risk enters into practically every person's activity. The whole world of upcoming events is open to human transformation within the limits set by risk assessment. «Colonization of the future» creates new forms of risk, often institutionalized, which influence every person. Reflective monitoring is inherent for such risk forms. A. Giddens singles out «adaptive reactions of subjects» in relation to risk awareness. The English sociologist refers to them: the pragmatic acceptance of risk, which means concentration on everyday problems for survival; constant overcoming of obstacles; restrained optimism, despite any dangers which exist nowadays; cynical pessimism, which expects direct involvement in troubles caused by dangers with significant consequences; a «radical commitment» – is a practical struggle with existing sources of danger. A. Giddens considers the notion of «risk» in close connection with the notion of «trust». He believes that social action, which is always risky, arises as a result of a decision that concerns to a certain confidence in the social system. Trust is a necessary condition for reducing or minimizing the risk. Thus, lack of trust can lead to destructive consequences for the social system [2].

Summing up, it should be noted that the specificity of modern society is that social reality changes with extreme speed, forcing all members of society and society as a whole to function in such situations. In this case, the uncertainty serves as the constructive basis, that is, the necessary environment for the emergence of risk, so the growth of uncertainty can entail even more risk. «Risk» is an objective category of modern scientific search, since it introduces uncertainty in our actions, present in the surrounding reality, while the content of «risky behavior» is a subjective, perfect reflection of the scientific process of cognition.

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MODELING OF COMMUNICATION BETWEEN GOVERNMENT AND PUBLIC DURING REALIZATION OF SOCIAL PROJECTS IN UKRAINE

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The feedback from the public to the institutions of governance of the state, region or community is a decisive factor in ensuring the effectiveness of these institutions' activities. The absence or even the difficulty or delay in the transmission of information from the public to the institutions of governance and from the institutes of governance to society necessarily leads to negative consequences.

During the social projects implementation e-democracy tools provide a large number of new channels for feedback from the public to the authorities. They also allow the justification of decisions from the authorities to the public. This new factor for Ukraine requires significant communication between the authorities and the public.

Thus, the study of the peculiarities of communication between the public and government in the process of social projects implementation under the conditions of electronic democracy is an actual scientific and important practical problem.

As it's shown in [1,2] the necessary factor for the success of the public or region development, especially in the context of social projects implementing, there is the presence of inclusive political and economic institutions.

Inclusive institutions [2] involve the widest possible population in participating in decision-making. Electronic democracy (e-democracy) is a powerful tool for the effective functioning of such institutions.

In the strategy for the development of the information society in Ukraine [3], e-democracy is defined as «a form of social relations in which citizens and organizations are involved in state-building and public administration, as well as in local self-government through the wide use of information and communication technologies».

It is emphasized in [4,5], that in the general sense e-democracy implies involving the public in solving various socio-political tasks with the help of modern information technologies.

Today, Ukraine is in a state of hybrid war, when the informational and psychological influence from the outside sometimes affects the lives of citizens both at the state level and at the regional level [6]. As a result, electronic media become almost the only source of information for the population. Today, all mass media actively operate in electronic form, therefore, in our research the term «mass media» will be applied to their electronic form. Social networks are not yet controllable; besides, in emergency situations they usually carry out destructive influence, causing panic, violence and fatalism. So it does not help in emergency resolution. The psychological reasons of this are described in [7], and consolidated effects (mostly destructive) are called in [8] «crowd effects».

The purpose of the investigation is to develop approaches to modeling the communication channels of the public and authorities under the conditions of social project implementing in the context of e-democracy and public administration.

Consider the construction of a model for describing the peculiarities of making decision by the public in the process of it communicating with the state and regional authorities. To do this, we modify the well-known model of Hoteling [1,9,10], which allows aggregating of the individual preferences.

Let's consider the individual preferences of people for their use when they make a common choice by voting. To do this, we will use the well-known «utility function» [10,11], which allows analyzing of the various alternatives. The utility feature helps a person to organize his thoughts, choose the best of all solutions, comparing them with each other. In other words, the utility function can reveal the benefits of one solution compared to others.

Let's consider the case when the utility function of an individual is convex upward and has one maximum (has one peak). This means that our individual chooses the only one opinion (decision) that is most appropriate for him from all possible choices. Every other decision (opinion), information and alternative the individual considers «less important» for himself. And the «further» this thought, this alternative lies on the «peak», so it is less important for him or the less he trusts her.

Let's introduce the concept of «median» individual. The median individual is called an individual M, for which the number of individuals with individual preferences satisfying the relationship $q_i<q^M$ is the same as the number of voters whose individual preferences satisfy the relationship $q_i>q^M$..

The wide application of the above-described approach to the description of social choice is based on the median voter's theorem (MVT) [9]. The formulation of the theorem is given in [1] and a translation into Ukrainian in [10].

The median voter's theorem of Hoteling. Consider a set of possible choices for an individual, let q is the individual choice, and let M is the median individual who chooses the ideal point q^M. If all individuals have the one-peak functions of, then:

1) q^M always wins any other alternative $q' \epsilon Q$ if $q' \neq q^M$ at pair competition;

2) q^M is always the winner in a direct voting with an open list.

Apply MVT to modeling of communication between the public and authorities during the social projects implementing in the context of e-democracy and public administration.

Public opinion, that is, the aggregated set of human preferences, is formed now by the media. Caused by development of e-democracy, the intensity of this process will only grow. Using MVT proves that the main contribution to public opinion is made by the median individual. Therefore, the formation of the median individual «necessary» thought is an important component of the interaction of management structures and mass media both at the national and regional levels.

During communication between authorities and the public it is important to create such a public opinion that will help society in its effective development, primarily by implementing social projects and will eliminate the unwanted deviations (for example, the negative consequences of emergencies). The most powerful channel for this is the electronic media.

The electronic communication channel between the public and government provides a unique opportunity for Ukraine to justify those decisions which are making by state and regional authorities. Moreover, only the electronic communication channel is capable to provide an effective feedback from the public to the authorities at the stages of discussing proposals and analyzing of the consequences of proposed government making decisions. From this position, such a method of using electronic mass media becomes the most important factor of e-democracy in Ukraine.

The Hoteling's theorem MVT is, in essence, the main model that describes the mechanism of making decision by society. It has led to the emergence of a concept of «middle class». To be able to reliably forecast the public making decisions we need information on the preferences of those individuals who are located near the «medical voter». And the more preferences of this society do not differ much from the median voter's preferences, the more reliable will be the prediction of the public decision making.

Another limitation of using the Hoteling's theorem is that individuals must consciously make their choices. That is, they should have full and objective information about the consequences that follow from it.

Thus, forecasting the future development of the society requires, in essence, the existence of two conditions:

1) the presence of a large number of people belonging to the «middle class», the choice of which does not differ from the choice of the median voter;

2) all «middle class» voters should have full and objective information about the consequences of the their decision.

E-democracy and e-government [4,5] should focus precisely on the implementation of these two conditions. In particular, the condition of increasing the «middle class» belongs mainly to economic conditions. However, economic

conditions (more precisely, economic institutions) are the result of the public choices. In this very sense we have should understand [2] thesis that the political institutions (which are crucial for involving as much as possible the public to making decision) determine successful development of society.

Today in Ukraine the channel for electronic communication between the community and the government is ineffective. The functional model of the activity of this channel today during the implementation of the social project is shown in Fig. 1.

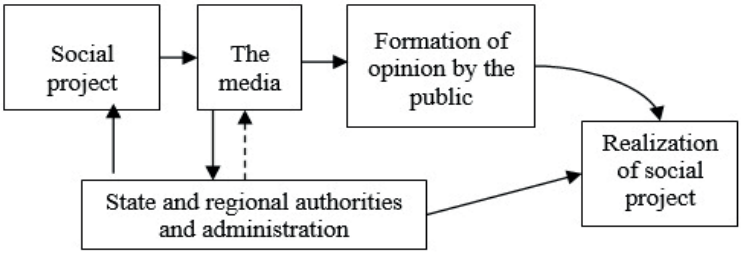

Fig. 1. Existing functional model of the public and authorities communication during implementation of social project

State and regional authorities propose to the public a certain social project (for example, for local budget expenditures). Electronic media inform the public about this project. Unfortunately, such process is realized practically without analytical support. In addition, often the employees of state and regional authorities become the «experts» although they are not impartial. In addition, electronic media often observe only the interests of their owners. All this leads to the fact that information that comes to the public is usually incomplete and distorted (biased). And even the presence in Ukraine of quite a large number of different electronic media does not help citizens to obtain objective information, because for this he would have to carry out a serious analytical study which demanding from the citizen considerable professional skills and great resources of time.

In essence, the state and regional authorities appear in the media only «as necessary», like a result of a request from the media it's shown by dotted lines in Fig. 1. As a rule, they are not interested in the opinion of the public. In particular, so-called «public discussions» are carried out only formally: reactions and arguments from the authorities to such discussions are usually not announced.

Let's describe the model of channel operation for optimal communication between the authorities and the public during implementing an social project, which meets the requirements of e-democracy [4,5]. According to [3-5], the main subjects of communication are the power and the public, and the main actors are the media and public opinion (which reflects the information processes in the society). Today in Ukraine there is not yet another very important participant of the information process – experts and analysts.

Activities of state and regional authorities are carried on the basis of implementation of individual projects, which are limited by the given time. Electronic democracy requires the public to be involved in this activity at all stages of project development and implementation. Schematically, the implementation of this is depicted in Fig. 2.

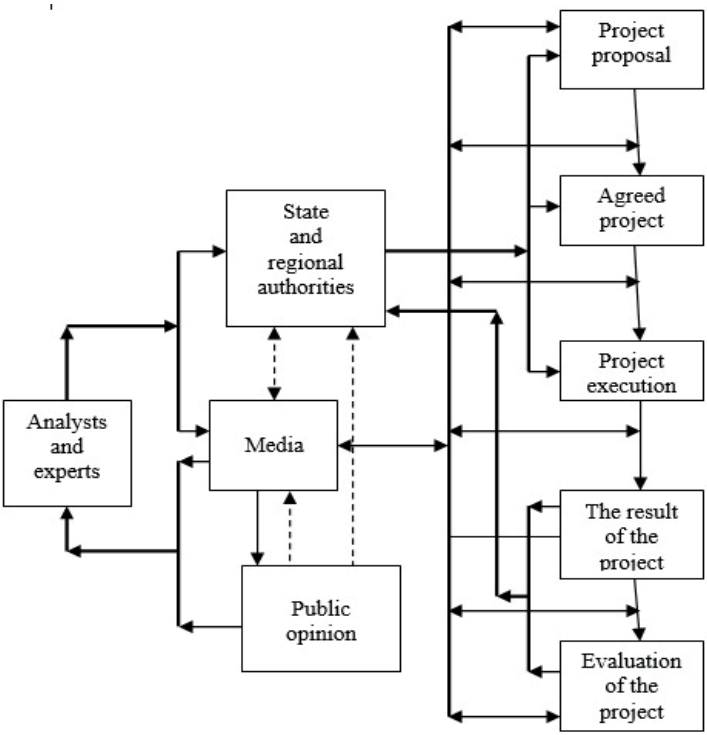

Fig. 2. The scheme for optimizing the communication of authorities and the public during the implementation of the social project

The role of experts and analysts in Ukraine is significantly underestimated and it's ignored too often. Besides, unfortunately, in Ukraine lots of «analysts and experts» are unable to complete their tasks.

At the first stage of communication a new social project begins from the analysis of the public opinion by analytical structures it allows to allocate a certain task as an urgent one.

At the second stage, mass media are launching public discussion of the problem.

At the third stage the government is involved in communication, starting to develop an social project. The proposition of social project is presented to inform the general public.

The fourth stage is a broad discussion of the version of social, which is consistent with the government. Analysts and experts are involved in all channels of communication both with the authorities and with the public.

At the fifth stage, the government adopts the coordinated social project and submits it for information to the public.

The sixth stage is the implementation of the social project. This stage is widely described with the media and is controlled by the authorities. Experts and analysts also have to take into account the response of the public opinion to the implementation of the social project.

The role of independent experts and analysts at this stage is important. In fact, immediately after the social project presentation, experts and analysts and media should co-work both in the direction of «mass media → experts and analysts», as well as in the direction of «experts and analysts → mass media».

In fig. 2 it's shown with dashed lines the interaction between subjects which is carried out indirectly and implicitly. Public opinion influences the activity of the media implicitly, creating ethical and aesthetic norms and rules of journalist's behavior or rules of communication in social networks. Mass media implicitly affect to employees of state and regional authorities, informing them about the needs of the population and its reaction to the actions of the administrative structures. Public opinion also affects to the power, for example, through communicating with friends, comrades and relatives.

Thus, the application of the proposed channel model for optimal communication between the authorities and the public during the implementation of social projects allows not only to transfer effectively information for analysis and substantiation from the government to the public but also to the public effectively influence to the decisions taken by the power. A main factor here is a set of experts and analysts, as well as their relationship with the community, communication channels (like the electronic media) and authorities.

As a result of such a model, the median voter (i.e. the social group in which the median voter is located) gets all the information he needs to make the best choice. The set of feedbacks between the public and the authorities allows effective management of society socio-economic development.

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MODERN MODELS OF BUSINESS EDUCATION AT THE GLOBAL MARKET OF EDUCATIONAL SERVICES

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In today's world education is becoming a key determinant of economic performance and the potential of countries all over the world. Business education, which conceptually is defined as a kind of specialized professional training in the field of corporate management occupies an important place in its system. Separating business education into a separate component is related to a growing need for the effective managers and anti-crisis managers, possessing modern technologies of business management, ability to develop innovative business projects, act on the basis of non-standard decisions. The analysis of masters of business administration models in developed countries studying the trends of their development at the global market of educational services is relevant due to adapting the foreign experience to national system of higher education.

A master's degree in business education – «Master of Science in Commerce» was, for the first time, granted to graduates from Dartmouth College (USA) in 1901. Special «Master of Business Administration» (MBA) program, which provided a qualification degree for professional training of senior managers, was developed in 1908 by School of Business Administration at Harvard University (Harvard Business School). In 1924, it introduced the method of «case study» as the main learning tool within the MBA. Methodology of Harvard Business School was taken as the basis for the American model of business education and became a step

towards the emergence of modern MBA programs analogues. The first business school with the MBA program in Europe – INSEAD, appeared in 1957 in France.

The model of business education in the United States is based on the idea of forming a professional manager. It involves obtaining higher professional education in management based on an already existing diploma of general higher education in the amount of a bachelor's degree by any major. The leading place belongs to Graduate Business Schools, which offer basic types of business administration programs: 4-Year Bachelor of Business Administration programs; 2-year MBA programs; annual specialized master's programs; 3-year PhD programs, which are being considered in an indissoluble organizational and methodical unity. Combining all types of educational programs in business and management within one educational institution is the essence of the American approach to business education. At the same time, every business school cultivates its uniqueness. The Master of Business Administration program is designed for those who want to gain knowledge in business management, seek a successful career or change their field of activities. US dominant positions in the global economy and the presence of large research centers have made the American model of education the most effective and demanded. Except for the United States such model was adopted in the UK, Denmark, Norway, and Cyprus. Business schools of the Eastern Region countries (such as China, India and Singapore) are also attracted to it [1].

European model of business education is based on the training of skilled managers. They receive basic knowledge and a major (engineering, economic, legal, etc.), and advanced training is conducted in the process of practical work, usually on a short-term basis. This model is characterized by a division into pre-experience management education and post-experience management education, depending on whether or not students have practical experience. The undeniable advantages of European business schools are the flexibility of educational programs and entry procedures: most of them, including the prestigious ones, use the so called «rolling deadline» system. Such model of management training is adopted in Germany, Austria, Belgium, Finland, Japan. Programs of British schools are close to the American model. In France, Italy, Spain, the Netherlands and Switzerland, there is a mixed model – a combination of the continental European system of university education with the American business education. The aggravated competition between European schools makes them open campuses in Asian and Eastern European countries, enter into partnership agreements with American business schools, etc. [2].

In Asia, business schools are guided by national traditions and internal corporate peculiarities, in particular, group participation in making managerial decisions and equal responsibility for their implementation. The popularity of business education (only in Taiwan there are about 40 business schools) may be explained by the fact that the teaching content is largely identical to the traditional American programs, but it focuses on analyzing the regional markets. In 2018, the top 100 best business

schools in the world included 15 of the Asian region – China, India, Singapore, South Korea, Japan and Philippines. Leaders among them are: Indian School of Business, Indian Institute of Management (India); INSEAD, NUS Business School, HKUST Business School and Nanyang Business School (Singapore); University of Hong Kong, Peking University (China); Graduate School of Business (Korea) [3].

The world market of business education is presented by several types of educational institutions: 1) classical business schools at the universities, providing education close to academic one (Harvard Business School, University of Pennsylvania: Wharton, Columbia Business School, Chicago GSB, Northwestern University (Kellog), MIT Sloan, University of Michigan (Ross), etc.; 2) close to the university ones, private business schools (HEC Paris (France), London Business School (Great Britain), INSEAD (France/Singapore); 3) business schools, which are created by corporations, but not their structural divisions. (the best known IMD-Lausanne (Switzerland); 4) corporate universities with their own training programs, aimed at providing a strategy for corporate development (General Electric, General Motors, Boeing, Siemens, Cisco, Hitachi, Samsung, Unilever, etc.); 5) educational divisions of large consulting firms (McKinsey & Company (USA); 6) various training organizations, specializing in short-term programs related to advanced training in corporate management [4].

All organizational forms of business education infrastructure support can be reduced to two basic types: classical business schools, that usually exist at universities and mainly prepare experts, business analysts and top managers, and entrepreneurial schools, that function as commercial organizations and prepare mid-level entrepreneurs and managers. According to the Graduate Management Admission Council (GMAC), around 200,000 people enter the business schools around the world every year.

Business administration is a key element of any company, regardless of its field of activity, therefore the demand for MBA programs as educational services is primarily determined by business. Employers pragmatically evaluate the graduates of which schools suit their requirements the most and can bring maximum benefits to the company. Thus, the programs are complex, multidisciplinary (contain disciplines from a wide variety of fields of activity, such as management, economics, finance, marketing, etc.) and universal in terms of implementation of knowledge and skills, received by students during the training. At the same time, they are characterized by a significant variability and clear segmentation of the client base. The advantage of the business world is the use of the MBA programs: «Master of Business Administration», «Master of Business Administration in International Business», «Master of International Management in International Business».

The classical Master of Business Administration program is designed to prepare middle and senior level managers, and involves compulsory practice in large companies. the Full Time MBA Its are – the Full-Time MBA and Part-time MBA – a combination of training and work in the format of modular forms of

conducting classes. A tangible academic slope has the DBA program (Doctor of Business Administration), which provides the degree of a specialized master or a doctor of sciences (PhD) and opportunity to work in an academic environment. The Executive MBA program is focused on senior executives – top managers and big business owners, for whom not only the theoretical training and practice are important, but also the exchange of experience with the colleagues from different global corporations. The program is aimed at forming leadership qualities, creating an effective management team in their own company. For managers who do not have specialized education, accelerated profile training programs (so called pre-MBA, mini-MBA, Distance-learning MBA) are offered.

The basic principle of MBA programs is a practically oriented approach based on the «learning by doing» methodology. To form a person, capable of creative thinking and action in conditions of uncertainty and risk, the innovative educational technologies (such as business cases, coaching, brainstorming, «flipped learning») and active teaching tecniques (master classes, situational games, trainings, webinars, etc.) are applied. Visits to different companies and meetings with their staff during popular abroad «guest lectures» contribute to acquisition of applied knowledge and establishing professional contacts (networking). It develops the skills of solving various business problems in the future. Methods of training also determine the special approach to selection of teachers: they are required to have not only the theoretical knowledge, but also a successful innovative practical experience in creating and maintaining their own business [5].

An indicator of compliance of business schools and MBA programs with international standards is their accreditation. The leading accreditation institutions are:

– British AMBA International (Association of MBA's). Accredits MBA programs to meet their own standards;

– American AACSB International (Association to Advance Collegiate Schools of Business), conducts the accreditation of university business schools;

– European EFMD (European Foundation for Management). Accredits business schools (EQUIS), certain programs (EPAS) and distance programs and courses (EOCCS).

Comprehensive analysis of programs, quality of educational products, their compliance with the expectations of students, qualifications of teachers, career growth of graduates, ethnic and socio-cultural diversity of students and teaching staff are the evaluation criteria for accreditation. The most prestigious is the so-called «triple accreditation» – recognition of a business school or a program by all accrediting entities. It confirms that the business school demonstrates high quality and innovativeness in all aspects of its work, including the quality of teaching and program development; its diplomas are recognized globally and meet all the international standards; the theory is balanced with practice and is easily integrates to the activity of corporations [6].

The rating of the MBA schools is determined by authoritative global editions, such as: «Financial Times», «Business Week», «The Economist», «Forbes», «Wall

Street Journal». According to the British tabloid «Financial Times» American business schools dominate (50 out of 100); followed by the British ones (14), Chinese (7) and French (5). Ukrainian business schools are not represented in the list. Fifty schools of MBA received a worldwide recognition, but only schools that are in the top ten rankings are considered to be the status ones. The advantage of studying in the status business schools is the opportunity to get a job in leading companies of the world, as well as transition from the lower management level to the higher one. According to «Financial Times», the world ranking of TOP-10 business schools in 2019/18 looks as follows (table 1).

Presented data confirms the leading role of the US business schools. Stanford Graduate School Of Business, which is part of the top 10 for several years in a row, is one of the faculties of the Stanford University, among its graduates of which there are Nobel Prize laureates and founders of the largest international companies. Traditionally, high places in the rankings belong to London Business School, INSEAD (France/Singapore), IMD (Switzerland), CEIBS – Chinese-European International Business School.

Table 1

Global MBA Ranking 2019/18

Rank in 2019	Rank in 2018	School name	Country
1	1	Stanford Graduate School of Business	US
2	4	Harvard Business School	US
3	2	INSEAD	France / Singapore
4	3	University of Pennsylvania: Wharton	US
5	4	London Business School	UK
6	5	CEIBS	China
7	6	University of Chicago: Booth	US
8	7	Columbia Business School	US
9	8	University of California at Berkeley: Haas	US
10	10	Iese Business School	Spain

Source: [7].

The general tendencies of business education development are determined by the influence of global processes and consist in globalization of the educational services market, internationalization and integration of education, international student mobility, the growth of innovative methods and technologies of adaptive learning, which consider students' individual needs.

Modern trends of global business education, recently formed at the market of educational services, can be characterized by a number of new features.

1. Life Long Learning. The rapid change of the market situation and the obsolescence of the acquired knowledge led to the emergence of a lifelong learning concept – continuing education of adults. According to it, every person should be interested not only in the professional development and career growth, but also in individual development, self-improvement, through a network of educational institutions or through self-education. To maintain its own professional competence and demand on the labor market, any specialist – business owner, manager or a hired employee has to constantly improve its qualifications. For a manager in particular, it means that advanced training courses, extension in related fields, business seminars and workshops for personal development based on their individual interests and value orientations should be conducted on an ongoing basis. Implementation of this concept leads to a significant increase of the global market of business education.

2. Focusing on the distance formats and interactive learning technologies. The peculiarities of the distance MBA programs are the relevant organization of the educational process; high flexibility; opportunity to use new controlling systems; communication through the different electronic means and devices, such as web-pages, social networks, various mobile applications and programs, participation in webinars, Internet conferences, etc. [8].

The «blended learning model» combines traditional and interactive methods, based on network communication technologies. This leads to changes in the organization of training process and allows MBA programs to become more flexible and personalized. The focus on the «learning by doing» methodology creates conditions for working on specific projects, thereby contributing to the development of entrepreneurial potential.

Currently the «pear-to-pear» concept is also becoming widespread. The large companies and start-ups conduct the knowledge sharing sessions, to which third-party facilitators or moderators are invited. The practice of inviting guest speakers from one industry, for methodological forums, round tables, conferences, where specialists are looking for the common ways to solve a particular problem, is becoming popular.

3. Digital technology breakthrough. There currently a change in technological paradigm is going on: information technologies that have defined the essence of the twentieth century, give their way to Smart-learning technologies, which open the development of Smart-education of the twenty first century. Smart learning is a flexible learning experience in an interactive educational environment with the content from around the world, freely available. Its main goal is to receive learning results, based on the use of tools and technologies of virtual reality systems.

Gamification technologies – the use of gaming practices and mechanisms in a non-gaming context, to engage users in solving problems, to the experts' opinion, give a unique opportunity to get knowledge about the real world through interactive immersion in the virtual one. A key factor in gamification is the creation of an educational electronic environment that promotes a sense of competition, teamwork,

forming a research thinking about the predictability of the result [9].

Leading business schools of the world are also actively implementing one of the forms of distance education – the Massive Open Online Courses, presenting their lectures on the Internet resources, such as YouTube or iTunes. The most popular projects in the field of online education are such projects as Udacity, Udemy and Coursera. The last one, founded by Stanford University, where educational materials are published in the form of online courses. The program involves 108 leading universities of the world, which presented 617 courses, 68 of which are related to business education. Massive open online courses provide the ability to use the interactive user forums that help to build and maintain the community of students and teachers. Some business schools have started launching the online versions of their MBA programs for executives, including Durham è Warwick [10].

4. The transition from standardized to client-oriented learning. Today, managers are in demand in areas that previously were unrelated to business – from freelance to medical services. The need for additional skills and competences led to the emergence of the Specialized MBA, for specific types of business. Prospective ones are those that combine several specializations, for example, business administration in education, engineering, medicine, tourism, etc. There is a need for specialization in classical subjects (for example, not just marketing, but the digital marketing, not just HR, but HR in the era of agility, etc.). Offline specialized programs retain the ability to create and receive not only the new knowledge from teachers, experts, but also the expertise from their colleagues in training [11].

5. The growing demand for creative professionals, able to make non-standard decisions. Dynamic global changes require the leader and his team to work effectively in a state of uncertainty. Therefore, courses in business schools (especially MBA and Executive MBA) are aimed at developing of so-called soft skills – effective communication, team building, ethics and aesthetics of business. Leading business schools believe that the education of a top manager should be based not on the principle of copying the well-known models of charismatic leaders, but within the framework of the mindful leadership concept – conscious leadership. Increasingly popular become leadership programs with a focus on self awareness, which create conditions for team work, contribute to the development of leadership qualities and competences, necessary for successful conducting of business [12].

The formation of business education in Ukraine has began in 1989 with creating of the International Institute of Management (MIM) in Kyiv, in conjunction with the Swiss School IMD. The largest share of the Ukrainian educational services market belongs to the Kyiv International Institute of Management (44,6% of MBA market share), Kyiv Mohyla Business School (16,4%), Kyiv International Institute of Business (15,8%), Kyiv Business School (6,8%), Lviv Institute of Management (4%). In addition, there are a number of other educational institutions and about 90 different training companies. In 2002, the Ukrainian Association for Management and Business Education Development, was created, and united 52 educational

establishments. However, national business schools are mainly focused on the domestic market, and MBA programs are still at the level of advanced training for the mid-level managers. National business education still lacks a practical component. Its problems also include: lack of clear legal regulation and economic resources for development; distrust to the quality of education; absence of specially adapted teaching methods, assessing the quality of knowledge and accreditation systems for MBA programs, increasing competition with Western business schools, etc.

On the pages of special editions the reviews of national MBA programs are usually reduced to their comparison with the programs of developed Western countries. Meanwhile, the subject of a detailed discussion by experts and representatives of the business community should become the correlation between the shifts in business and the situation in business education. Solving these problematic issues will create the conditions for using the potential of national business education for the interests of socio-economic development.

Consequently, the review of global experience of business education allows us to conclude that the training of specialists by the MBA programs is an objective necessity in the current conditions of globalization, which allows to more quickly adapt to current demands of the market. Ukraine's economy, integrated into the international business environment, increases the quantitative and qualitative demand for the leaders of new formation. In its turn, it gives an impulse to important innovations in domestic business education, one of the main evolution vectors of which today is the development of international standards of managers' professional training.

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THE ROLE OF BUDGET FOR CITIZENS IN THE PUBLIC FINANCE MANAGEMENT SYSTEM

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The important role in the development of the public finance system in Ukraine was played by the distinction in the Budget Code of the expenditures, in particular on education, health care, social protection and social security between the budgets of different types. The key criterion for such a distinction was the financial side; it was not the nature of the relevant services and their characteristics.

The provision of education and health services by the state is financed not only through the Ministry of Education and Science of Ukraine and the Ministry of Health of Ukraine, but also through other Ministries and Departments, local budgets. This is historically linked to maintaining on its balance with other Ministries and Departments of various institutions that provide health care services to workers in the relevant industries or train professionals in the respective occupations for these industries. The existence of most such institutions is a historical fact, but in recent years there has been a desire for the leadership of various Ministries to create higher education institutions in their structure.

For example, the education expenditures, financed directly through the Ministry of Education and Science of Ukraine, constitute an average of 70.0% of the total amount of state budget expenditures (general and special fund - together) for this branch. The analysis of the reporting data shows that the largest part of expenditures

for these industries in both the state and local budgets is carried out at the expense of the general fund. However, for different sectors and levels of service delivery, the share of general and special funds does not coincide, due to the peculiarities of the legislative capacity to receive payment for services from the clients.

The structure of expenditures by economic classification in the public finance management system reflects the main directions of the using of funds, and the analysis of these areas gives an opportunity to make conclusions about the goals for which budget funds are directed. In the structure of expenditures according to the economic classification is the largest the share of current expenditures of the general fund of the state budget, which since 2002 amounted to more than 88.0% of the annual plan.

The studying of the dynamics and structure of expenditures by economic classification shows that the increase in expenditures on education, health care and social security is mainly due to the increase of the minimum wage and energy costs (in terms of expenditures for the maintenance of budgetary institutions), as well as the subsistence level (in the part of social protection of the population). Given the fact that a significant part of education and health services is financed from local budgets, state support can be provided through the using of intergovernmental fiscal mechanisms.

So, at the expense of a subvention from the state budget for the implementation of investment projects in 2003, it was aimed at education - 32.9 billion UAH, for health care - 41.5 billion UAH; in 2004 for education - 97.1 billion UAH, for health care - 76.7 billion UAH; in 2005 for education - 35.6 billion UAH, for health care - 37.5 billion UAH. In the 2009 budget, due to the economic crisis, there was no such financing [3]. In 2015, education was directed at - 33.3 billion UAH, for health care - 12.7 billion UAH; in 2016 for education - 38.6 billion UAH, health care - 12.8 billion UAH; in 2017 for education - 41.2 billion UAH, health care - 15.8 billion UAH, which indicates an increase every year [3].

Thus, it is clear from the data that there is no stable tendency regarding the amount of state support. It can be argued that in general both dynamics and the structure of these expenditures are influenced by the factor of insufficient reformation of these spheres and the lack of an effective strategy for their development. In expenditures of the consolidated budget of Ukraine, education is the largest share of expenditures for general secondary education (more than 40.0%), since it is the most massive and compulsory.

The expenditures for higher education occupy the second place in the structure of the consolidated budget expenditures on education (their share is equal to 30.0% per year for the specified period of time). Funding for preschool education is carried out annually in the amount of about 11.0% of the consolidated budget expenditures for education. The share of consolidated budget expenditures for organizing of vocational education is approximately 6.0% per year. Only 1.0% of education costs provide funding for advanced training and other types of post-graduate training [2].

The processes of budget decentralization that began in Ukraine in 2015 led to a decrease in the share of expenditures on education in the state budget and a corresponding increase in their share in local budget expenditures at all educational levels. Unfortunately, the state still continues to consider the cost of education as an element of social policy, and not as an investment in the human capital of the country [4]. An intelligent and balanced strategy for financing science and education should demonstrate that funds are used rationally, thoughtfully and transparently. It will form an appropriate level of trust between the various interest groups and agencies in the financing of education and science.

The basis of structuring sources of financing for all parts of education (preschool, extracurricular, secondary, vocational, higher) should be a balanced approach based on a combination of funding from local and state budgets, and from private sources. All levels of education, except for higher education, are financed through an educational subvention from the state budget, as well as financing from the local budget. For vocational education, state funding should be provided for the training of specialists in the professions of national importance.

The amount of educational subvention depends on the formula, which is developed taking into account the following parameters: the contingent of pupils of different types of educational institutions; fullness of classes; adjusting the rates used for the number of pupils of different types of educational institutions and depending on the location of the educational institution [1].

The network of budget institutions and educational institutions, which are directed to the state budget, is also located in different regions of the country. However, there are no data on the implementation of state budget expenditures in the regional section. It applies not only to expenditure on education but also to all types of expenditures. The inability to estimate financial flows in the region is a systemic methodological problem.

The state budget funds that are used to keep institutions and institutions or to carry out any national measures in the region (for example, centralized procurement of computer classes) also have an impact on the socio-economic development of this region. The lack of transparency in the process of regional distribution of state budget funds, and the lack of interest of central executive authorities in obtaining such information testify to the imperfection of the education management system [6].

The facts on the share of the special fund show that the volume of funds received for paid services by higher educational institutions is almost equal to the amount of funds financed from the general fund of the state budget. This tendency requires an assessment of the appropriateness of transferring funding from institutions of higher education from the system of maintenance to the system of public procurement of services in the system of public finance management.

The solution of this question has considerable potential for more effective use of state budget funds. Therefore, the average annual share of expenditures of the special fund of the state budget directed to the maintenance of institutions of higher

education is 52.0%. For comparison: in local budgets, which almost do not finance higher education, the share of general fund expenditures significantly exceeds the share of special fund expenditures and equals more than 92.0%. The important principle of financing education should be the focus on the consumer. The true interests of the state are inseparable from the interests and needs of citizens. If education does not serve the needs of education providers, then applicants ignore such education.

It was established by the Budget Code of Ukraine that at the expense of the state budget, services are provided for almost all types of health care [1]. However, not all people have access to these services. Only institutions of highly specialized care and clinics of research institutes provide services for the entire population, based on medical necessity and subject to the availability of referral from primary or secondary care institutions, and in certain cases for the payment of their services. For the rest of the institutions, access to the population is limited. This is mainly due to the departmental subordination of such institutions and their focus on servicing only employees of the relevant Ministries and Departments.

The average annual share of state budget expenditures on health care in the structure of consolidated budget expenditures is almost 25.0%. Article 87 of the Budget Code of Ukraine defines the list of health care expenditures financed from the state budget funds [1]. Despite the fact that public health is a public function, its implementation is largely delegated to local self-government.

Health care institutions that provide primary and secondary care, serve the entire population of Ukraine, which explains the significant proportion of local budgets in financing this industry. The largest share of expenditures on health care in the structure of local budgets belongs to oblast budgets and city, Kyiv. This is due to the fact that at the expense of these types of budgets funded the provision of almost all types of assistance.

The differentiation of health expenditures between budget levels is, of course, a positive step in the development of a public finance management system. In general, it provided a systematic approach to financing the industry and made it possible to formalize inter-budgetary relations, make them more transparent and stable. However, for example, in the area of public health, a clear separation of costs has largely broke a unified management and financing system for healthcare, which has been particularly badly affected by primary care. This problem should be addressed during the next stages of the budget reform and health care reform.

The calculation of the amount of intergovernmental transfers (equalization grants) from the state to local budgets is carried out taking into account the factor of population. The problem with this is that the distribution does not take into account the availability of budget institutions, age and gender composition of the population, the level of morbidity, etc. When approving the amount of financing for health at the local level, these factors are trying to take into account, but they are limited by the amount of financial resources.

In addition to the maintenance of institutions and health care facilities belonging to the respective territorial community, local budgets may provide intergovernmental targeted transfers for the financing of institutions belonging to other administrative-territorial units (such a right is provided under Article 101 of the Budget Code of Ukraine) [1] Mostly this right is used at the district level, when at the expense of the budgets of villages, settlements and cities of district significance, subventions are proposed to the rayon budget to improve the level of financing of the district hospital servicing the inhabitants of these territorial communities.

Historically, the existence of a balance of Ministries and Departments of the network of institutions and health care institutions that provide medical care to certain categories of citizens, determines that health care expenditures are made not only through the Ministry of Health of Ukraine, but also through other state institutions and establishments. The planned amount of expenditures for any branch of socio-cultural sphere, in particular health care, is set for the state budget expenditures in the law of Ukraine on the state budget, for local budget expenditures - in the decision of the respective local Council.

The social transfers and their share in GDP and total public expenditures have been rising almost continuously since the beginning of economic growth (in 2000). The share of social spending in the structure of the consolidated budget expenditures in 2012 was 25.4%, in 2013 – 8.7%, in 2014 – 29.0%, in 2015 – 26.3%, in 2016 – 29.8%, and in 2017 – 25.5% [2].

If the social security and welfare expenditures accounted for 19.0% of the state budget in 2012, in 2013 they were 21.9%, in 2014 – 19.8%, in 2015 – 17.9%, in 2016 – 22.2%, in 2017 – 17.2% [2]. In social protection expenditures, the great share is paid to pensioners – In 2012 – 16.3% of the state budget, in 2013 – 20.6%, in 2014 - 17.6%, in 2015 – 16, 4%, in 2016 – 20.8%, in 2017 – 15.9% [2].

It should also be noted that there was some chaotic and inconsistent increase of state social guarantees with modern economic realities in Ukraine. Ukraine belongs to countries with a powerful social security system, both in the list of legally approved state obligations in the social sphere and in the share of social expenditures in the state budget.

The system of state social assistance is financed mainly from subventions by local budgets. In 2012, 50.1 billion UAH was allocated to social protection and social security from local budgets, in 2013 – 56.5 billion UAH, in 2014 – 57.4 billion UAH, in 2015 – 72.6 billion UAH, in 2016 – 106.4 billion UAH, in 2017 – 107.2 billion UAH. [2]. The excessive government commitments in the area of social protection of the population distort the basic economic relations, but in conditions of economic growth they do not lead to a critical deficit of the budget.

In modern conditions of rising public debt, the significant impact of the economic crisis on the revenue side of the budget, and the ability to spend money on social support for the population, there can be no question of increasing the financing of the social assistance system. The pressure on the budget of ever-increasing debt

service costs reduces the social potential of the budget. At the same time, the growth of absolute poverty due to crisis phenomena predetermines the need to protect a more populous group of people. It is possible to resolve this contradiction only by increasing the efficiency of spending money on the social assistance system and improving its targeting.

In order to justify the amount of budget support of the social sphere, the norms of expenditures (financing) are introduced: indicators of current and capital expenditures from budgets of all levels for meeting needs at a level not lower than state social standards and norms [5]. Factors that affect the volume of subventions provided from the state to local budgets can be divided into several blocks: demographic, political and economic.

The problems of intergovernmental relations are rather outdated in Ukraine. Among them it may be the excessive centralization, limiting the financial and administrative capacity of local self-government bodies. Given the significant volumes of delegated powers and the regulation of certain items of expenditure at the central level (for example, the size of the minimum wage), as well as the very low level of own revenues of local budgets, their powers are not fully secured by financial resources. Although the problem of resource constraints is mostly solved by providing additional subsidies from the state budget, this only partially mitigates the shortage of short-term problems without affecting its principled solution.

At the present stage of the state building, the main constitutional rights of citizens in the social sphere, including state social standards and guarantees, are not fully realized in practice. This is primarily due to the limited financial capacity of the state, the imperfection of the mechanism of providing social guarantees, the ineffectiveness of the system of social support of the population and the imperfect budgeting system.

The filling and redistribution of the State Budget of Ukraine depend on the country's economic development. Therefore, the formation and implementation of social policy in the field of basic social guarantees directly depends on the size of the revenue and expenditure parts of the consolidated budget of Ukraine. In addition, the monitoring of this dependence, its quantitative assessment, the establishment of the directions of the relevant interactions and their intensity are very important scientific and practical meaning, since they directly affect the main macroeconomic processes in the state.

So, one of the most urgent questions regarding the provision of social guarantees in Ukraine remains developing of a methodology for their financial support. The system of state social standards and guarantees requires significant improvement, substantiation and coordination of all components in order to achieve rational correlations between them on micro, and then on a macro level. The main goal of the state is to raise the level and quality of life of the population.

In spite of the crisis in the economy, in the state budget for 2014-2017, socially significant commitments (social assistance, compensation, scholarships, pensions)

have been fully established in the state budget, but they are not indexed and not significantly increased, which affects the public the value of socially significant commitments. Thus, for example, the level of inflation in the period 2014-2017 was 360.0%, and the level of increase of pensions on October 1, 2017 amounted to 15.0% [3]. Accordingly, pensioners almost did not feel this increase.

The problem is also a significant rise in consumer prices. The government only intended to raise pensions, while consumer prices for essential goods and foodstuffs increased by 22.4%. In accordance with the Government's ruling, price policy is not controlled by the state. In conditions of imperfect market environment, crisis phenomena in the economy - it negatively affects the financial state of the population, which ultimately leads to an increase in the number of poor citizens.

The increase in living standards is influenced by the growth of real wages and real incomes of citizens. The minimum wage in 2017 has doubled and reached 3200 UAH. However, this level of minimum wages does not cover citizens' expenses, even for food and utility costs. The average wage is 5200 UAH.

As a result, the main benefits of the budget for citizens in the public finance management system in the context of long-term administrative and territorial reform are: establishing a dialogue between citizens and government representatives to transform the basic requirements of citizens into concrete and substantiated proposals; the impact on the direction of budget funds to the most in need of administrative territories and social groups; provision of activity of social groups in public discussions; focusing on the long-term goals and priorities of fiscal policy at the local level; support for the sustainable development of regions in terms of economic, social, cultural and environmental situation.

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NORMS OF INTERNATIONAL LAW FOR SUPPORTING THE ENERGY POLICY OF AGRIFOOD SPHERE ENTERPRISES

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Taking into account that the issue of energy efficiency is becoming more and more important, it is being addressed in the legislative area. As Ukraine is a subject of international law, international legal norms, commitments in terms of energy efficiency and generally accepted global development trends must be acted upon and fulfilled. Scientific approaches to energy efficiency management need further research, but with due regard to the requirements of current legislation and norms of international law. Similarly, domestic legislation in the field of energy efficiency should be based on scientific and methodological approaches. Consequently, management of energy efficiency and agrifood enterprises should be based on scientific, methodological and managerial approaches, taking into account the requirements of the current legislation of Ukraine, with due consideration of the best world experience and standardization in the field of energy efficiency.

With independence, Ukraine began to pursue the all-European policy for the efficient use of fuel and energy resources (FER), which was first and foremost reflected in the legislative and regulatory framework of the country.

The development of energy efficiency in Ukraine was significantly affected by the following factors:

1. Implementation of Ukraine's commitments to the countries of the European Union with the adoption of the Council Resolution on the improvement of energy conservation programs in the member- states (85/C 20/01) dated January 15, 1985. It provides recommendations to the member-states on the basic principles for the development of a national energy saving program.

The Council of the EU proposed the member-states to work on developing integrated energy conservation technique. This technique must have been based on the following principles:

– realistic pricing policy;

– compliance with energy conservation policies;

– rational use of energy resources through the development of standard measurement methods, identification of basic standards for equipment;

– program preparation according to sectors, sharing experience with the community, publication of research results;

– rational use of energy: information support and consulting; financial incentives; regulations and standards [4].

Since 2012, the principle of pricing characterized by a significant and constant

increase in the cost of FER has been actively implemented in Ukraine. The principle of pricing is the most rigorous and, at the same time, an effective way that forces heads of agrifood enterprises to implement energy-efficient policies at their own enterprises.

2. Active legislative activity in Ukraine, which began in 1994 when the Law of Ukraine «On Energy Saving» was adopted, which is still the main platform for development in the direction of energy efficiency. This law determines legal, economic, social and ecological bases of energy saving for all enterprises, associations and organizations situated on the territory of Ukraine, as well as for citizens [1].

3. Government financing of energy saving measures in the budget and communal spheres [2].

4. External financing of the projects aimed at increasing the level of energy efficiency in Ukraine.

5. Development of initiative groups among the public of Ukraine and specialized public organizations, attracting foreign capital to implement energy-efficient policy.

6. Ukraine's partnership with European Energy Cooperation.

Within the partnership, Ukraine has confirmed the intentions to work with Energy Cooperation by adopting the following directives:

1) Directive 2006/32/EU on energy efficiency of the end use of energy and energy services. The purpose of the Directive is to increase and improve the cost-effectiveness of the rational end use of energy in the member-states by means of:

– providing the necessary indicative targets, mechanisms, incentives, institutional, financial and legal systems to eliminate existing barriers in the market, as well as drawbacks that impede the rational end use of energy;

– creation of conditions for the development and promotion of the energy services market, as well as taking other measures to improve the rational use of energy by end users.

– Directive 2006/32/EU has played an important role in the further development of energy efficiency, since it establishes that member-states can create the fund or funds to subsidize the implementation of the programs on improving the rational use of energy and other measures, as well as on promoting the development of the measures market to improve the rational use of energy. Such measures consist in energy auditing, implementation of financial energy saving instruments and, if applicable, the improvement of measuring and informative billing.

Funds should also focus on the sectors of consumptive use with higher operating costs and risks. They can provide grants, loans, financial guarantees and/or other types of financing, which help to obtain results [4];

2) Directive 2010/31/EU on energy efficiency in buildings. It notes that the European Council emphasized the need to increase energy efficiency in the European Union in order to accomplish the aim of reducing its energy consumption by 20% by 2020 (March, 2007). It called for a rapid and comprehensive use of the priorities

set out in the Commission's Statement "Action Plan for Energy Efficiency: Potential Implementation" [6], which identified the significant potential owned by the sector of buildings for economically effective energy saving.

The importance of the Directive lies in the fact that it announced the creation or adaptation of new financial mechanisms and other measures of the European Union to promote measures connected with energy efficiency. It determined the financial mechanisms at the EU level that include, but not limited to, the following:

– Regulation No №1080/2006 of the European Parliament and of the Council (EU) on the European fund of regional development, which has been amended to allow for more investments in energy efficiency of buildings;

– public-private partnership within the framework of initiative "Energy efficient buildings" with the aim to promote ecological technologies and development of energy efficient systems and materials in new and reconstructed buildings;

– initiative of the European investment bank (EIB) of the EU "Initiative on financing of sustainable energy", which aims, in particular, to allow for investments in energy efficiency projects and "Marharyta Foundation" that is run by the European investment bank;

– the European Energy Fund, changes in climate and infrastructure;

– Council Directive 2009/47/EU of 5 May, 2009 amending Directive 2006/112/EU as regards reduced rates of value-added taxation;

– mechanism of Jeremie Structural Funds and Unity (Joint European Resources for Micro- and Medium-sized Enterprises);

– mechanism of energy efficiency financing;

– the Framework Program for Innovation and Concreteness, which includes the Intelligent Energy – Europe II Program focusing on overcoming trade barriers in energy efficiency and renewable energy through the ELENA technical assistance mechanism (the European Local Energy Assistance);

– the Covenant of Mayors, the Business Initiative and Innovation Program;

– TIC 2010 Political Support Program and the Seventh Framework Research Program. The European Bank for Reconstruction and Development also provides financing to promote energy efficiency measures.

It is noted that the EU financial instruments should be used to have a practical effect on the objectives of Directive 2010/31 / EU, but not replacing national measures. In particular, they should be used to provide appropriate and innovative funding to accelerate investment in energy efficiency measures. The mentioned instruments could play a significant role in the development of funds, instruments and mechanisms in the field of energy efficiency at the national, regional and local levels, which would enable to finance private owners, small and medium-sized enterprises and service enterprises in energy efficiency [7];

3) Directive 2010/30/EU on labelling of energy products. The labelling standards and providing consumers with full information on volume of energy consumption are determined in it. In terms of protection of enterprises, it is stressed

that the member-states, when implementing the given Directive, should refrain from adopting measures that could result in unnecessary bureaucratic obligations on the market of the mentioned participants, in particular small and medium-sized enterprises. Besides, evaluation of the impact of the adopted acts on environment, end-consumers and producers including small and medium-sized enterprises with regard to their competitiveness is provided for at all stages. At the same time, transitional periods are considered, taking into account possible consequences for small and medium-sized enterprises or for specific groups of products produced mainly by small and medium-sized enterprises [5].

- Development of the national action plan on energy efficiency for the period 2012–2020. The national action plan on energy efficiency provides for 9% reduction in consumption of energy resources compared to the previous period (as of the ninth year of application of the Directive). The plan clearly identifies the required amount of energy saving in physical terms [4].

– Opening of the Energy Saving Loan Centre in Ukraine in 2014. The introduced loan program offers low interest rates for energy saving loans [4].

As the directions of energy saving and energy efficiency are closely connected with social, economic and ecological spheres, in Ukraine, organizational and legal support of the development of energy efficiency is conducted by the following state institutions:

– State Agency on Energy Efficiency and Energy Saving of Ukraine (on State Energy Efficiency), which is responsible for the formation and implementation of the state policy in the field of energy efficiency, use of fuel and energy resources, energy saving, ensuring the increase of renewable energy sources and alternative fuels in the overall energy balance of Ukraine;

– the Ministry of Energy and Coal Industry of Ukraine – the main body in the system of central executive bodies that is responsible for the formation and implementation of the state policy in electrical energy, coal, nuclear-industrial, peat digging, oil and gas complexes;

– the National Commission that regulates the field of energy and public utilities (NCREPU);

– the Ministry of Economic Development and Trade of Ukraine (Mineconomdevelopment of Ukraine), the main task of which is to form, provide and control the implementation of the state policy in the following directions: energy saving, efficiency, economic and social development, industrial, investment, pricing, foreign economic policy, state regional policy, state policy on promotion of entrepreneurship, state policy in the field of trade, technical regulation and consumer protection. Besides, the integral function of the Mineconomdevelopment is interdepartmental coordination of cooperation with the European Union on issues of social and economic development of Ukraine;

– the Ministry of Ecology and Natural Resources of Ukraine (Minnature of Ukraine), which is responsible for an efficient and rational use of natural resources,

ecological safety of Ukraine, conservation of biodiversity. Within the authorities, it ensures satisfying the requirements of the United Nations Framework Convention on Climate Change and the Kyoto Protocol to it.

– the Ministry of Regional Development, Building, Housing and Communal Services of Ukraine is responsible for development and coordination of programs on increasing energy efficiency and energy saving in the housing and communal sector as well as approves the procedure for conducting an energy audit of the housing and social spheres;

– the Ministry of Agrarian Policy and Food of Ukraine, which takes measures aimed at modernizing the technical and technological re-equipment of the agrifood branches in order to increase the efficiency of the use of fuel and energy resources, the development of efficient agricultural machine building, energy saving, biofuel supply and production, etc. [3].

In figure 1 there is a schematic definition of energy policy. Structural energy management operates in the majority of foreign companies.

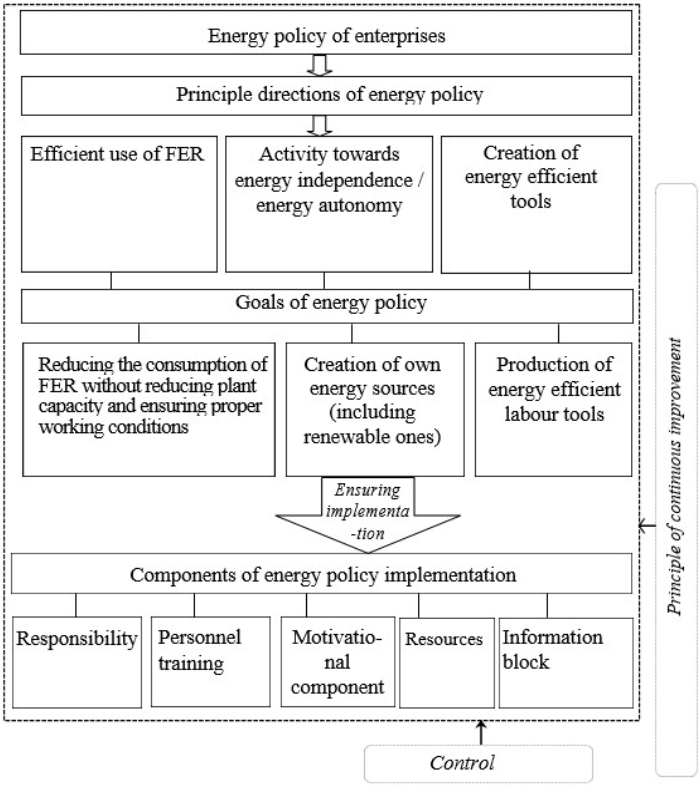

Fig. 1. Scheme of the energy policy of agrifood enterprises

The well-organized system of energy management enables to distinguish effective ways to increase the level of energy efficiency. Among the leading countries, the pioneer in the implementation and structuring of energy management is considered to be the United States, which in 2000 adopted the national standard – ANSI/MSE 2000:2008 A Management System for Energy (System of energy management) [6].

Denmark became the first European country to adopt the national standard for energy efficiency. On a joint initiative of the Confederation of Danish Industrialists, the Danish Federation of Small and Medium-Sized Enterprises, the Danish Energy Agency, a number of scientific institutions and several organizations, the first national standard was written:

– Denmark: DS 2403:2001 Energy Management – Specifications;

– Denmark: DS/INF 136:2001 Energy Management – Guidance on Energy Management.

Other countries followed Denmark's way afterwards.

– Sweden: SS 627750:2003 Energy Management Systems – Specification);

– Ireland: I.S. 393:2005 Energy Management Systems – Specification with Guidance for Use;

– South Korea: KS A 4000:2007 Energy Management System;

– China: GB/T 23331:2009 Management System for Energy – Requirements;

– RSA: SANS 879:2009 Energy Management – Specifications.

Adopted national standards immediately began to be justified and ensure positive growth rates at enterprises. However, each of these standards had a number of features associated with peculiarities of the country and specifics of the management process. Therefore, the specialized working group of the European Committee for Standardization (CEN) was created in 2006.

With its support, during the presidency of Sweden, which considered the standardization of the energy management system as an important step towards increasing energy efficiency in European industry, European standard EN 16001 was agreed in the short term.

Standard EN 16001: 2009 was approved on September 10, 2009 in Brussels. Companies that used principles of the given standard significantly increased the level of their own energy efficiency even before its official presentation (on a voluntary basis) and then achieved certification according to EN 16001:2009.

The success of principles of standardizing technological processes has increased the interest to energy management and development similar national standards in other countries. As a result, a lot of countries in the world have developed their own standards, and the process of standardizing energy management has come to a global level.

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FINANCING OF THE HIGHER EDUCATION AT THE PRESENT STAGE

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The decisive trend in the development of the global education system is the constant rapid growth of educational budgets over the past 15 years. The total volume of the world market for educational services in 2012 amounted to more than 4.4 trillion dollars (almost three times more than the total military budget of all countries of the world), while in 2002 - 2.5 trillion dollars. According to the forecasts of specialists, which presuppose the preservation and even increase of high current growth rates of the world educational market, in 2017 its volume will exceed 6.3 trillion dollars, while the largest volumes of financing growth will come to the higher education and public and corporate education during the lifetime [9].

The key feature of the development of society is the creation of a new model

of the economy - the knowledge economy, under this condition education becomes one of the key factors of economic growth and sustainable development of the state. According to experts from the World Bank, one of the four main conditions for the formation of the knowledge economy is education and training that characterizes the availability of an educated and professionally trained population capable of producing, distributing and using knowledge.

Consequently, the problems of the educational system are exacerbated by the impact of globalization and the intensification of economic, international, scientific and technical, educational and cultural relations; rapid development and intensive dissemination of computer technology and information technologies; the increasingly pronounced orientation of social production to man, to meet its rapidly changing needs, aspirations and interests; displacement of the problems of resource supply of business structures in the sphere of awareness and recognition of the decisive role of the human factor in ensuring the proper efficiency of production and management [4, p. 13].

Universities are the main generators, drives and distributors of knowledge, information, experience and cultural wealth and today they become the key public institution in modern conditions. Evidence of their significant role in the modern social progress is, in particular, confirmed by western scholars of the existence of close interconnectivity between the development of universities and the economic growth of countries. It is no coincidence that those countries that recognized the priority of the development of university education were able to move on to the development of an innovative economy, which for a long time provided them with high competitive positions in world markets.

But all the components of the transformation of higher education in Ukraine face a range of problems, as concrete as economic ones, and general civilizations. First of all, it is the growing internationalization of educational activities. The emergence of international forms of organization and financing of education, increasing the need to address the problems of standardization of education, determine the need to ensure and improve the quality of educational services in the face of growing openness of the economies of countries, the increasingly free movement of people, capital and goods between countries. Consequently, global competition intensifies, which is why the national educational system of any country should be oriented not only to train qualified personnel for the development of its economy, but to train personnel who, along with this important goal, will also ensure the competitiveness of its economy in today's global environments.

The second problem is due to the fact that the decisive role of education in social development and the formation of the knowledge economy requires a powerful diversified mechanism for its functioning and financial support. In Ukraine, during the transformation period, there are diversification processes: and in relation to sources of funding (along with public resources, private, corporate funds, external resources are involved) and in relation to the forms of organization of educational

activities, content and technologies of the educational process. At the same time, the experience of the advanced countries of the world proves that economic mechanisms can be more effective, effective, aimed at concrete results.

In order to solve the problems that today is facing the system of higher education of Ukraine in particular, a substantial increase in the financing of education will be required. This will ensure the dynamic development of the educational sector, stimulate the processes of commercialization of knowledge, promote the growth of market positions of state universities, increase their competitiveness, because only with the availability of reliable and stable sources of funding, education will fulfill its mission of developing the human potential of the country.

The structure of funding sources on higher education varies widely among countries and was not unambiguous in its historical development. In the last decade of the 20th century, the tendency of diversification of funding sources on education became widespread in all countries. Thus, the main funding sources for higher education in Ukraine are the state budget funds, tuition fees for individuals and legal entities, grants from private, national, and regional funds of entrepreneurial structures in the field of innovation (Table 1).

Table 1

Gross Domestic Product and Consolidated Budget Expenditures on education in 2007-2018 [11]

Indexes	2007	2009	2010*	2012*	2014*	2018*
GDP by production method, mln UAH	720731	913345	1079346	1404669	1586915	1979458
incl. education, mln UAH	33194	49239	53462	71771	76068	83285
- share on education in GDP,%	4.61	5.39	4.95	5.11	4.79	4.21
Total expenditures in the consolidated budget, mln UAH	226054.4	307399.4	377842.8	492454.7	523004.8	433159.8
incl. on education, mln UAH,	44333.6	66773.6	79826.0	101560.9	100105.6	75907.0
incl. for higher education, mln UAH	12827.8	20966.3	24998.4	29335.9	28340.5	21059.8
share of expenditures in the consolidated budget: - on education,%	19.61	21.72	21.13	20.62	19.14	17.52
- on higher education,%	5.67	6.82	6.62	5.96	5.42	4.86

* - excluding the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and part of the zone of anti-terrorist operation (calculated by the authors).

The structure of the funding sources can be divided into the state budget (up to 60%), local and sectoral budgets (2%) and funds of individuals and legal entities (up to 40%). Speaking about the ratio of the proportion for universities of different ownership forms in Ukraine, it should be noted that initially there was an increase in the proportion of higher educational institutions with private ownership - up to 22.25% (maximum) at the beginning of the 2009/2010 school year. This indicator is slowly decreasing. As of 2017/18, the share of state and municipal higher education institutions is 79.67%, private - 20.33%.

The analysis of the tendencies of financing higher education in the EU makes it possible to state that the EU countries use different financing strategies for higher education, but do not have a universal mechanism for this. The funding of higher education institutions depends on both the quantitative (number of students) and the qualitative (number of credits, diplomas issued) indicators. There is a tendency to allocate public funds to higher educational institutions based on learning outcomes, as well as the tendency to combine different funding instruments.

Today, a significant amount of funding on the higher education system is based on market mechanisms: state resources are directed for the support of students rather than transferred directly to universities, as it is happening now in almost all countries of the world. In modern conditions, more and more countries are introducing a new type of financing for higher education - student loans. Recently, a rapid increase in the number of students became an overwhelming burden for the budgets of those countries where higher education in public universities was traditionally free or cheap. More and more countries begin to decrease budget funding. Providing educational credits, along with studying at their own expense, should prevent the transformation of higher education into the exclusive privilege of the rich sector in society. However, world experience suggests that such a way does not always give the desired results [2, c.132].

Although no country fully applies this type of financing, different tools may be used in the implementation of this approach:

• scholarships and grants. Most countries and universities offer financial assistance that does not need to be reimbursed, based on needs or scholarships for educational achievements;

• student loans. Student credits (loans) exist in different forms more than in 60 countries. A large number of HEIs arranges and finances student loans;

• Human capital contracts are offered by private firms and differ from student loans. The Student Participant agrees to repay a part of his/her income to investors who have a share of the student equity capital after graduation. Human capital contracts exist on a pilot basis in Chile, Colombia, Germany and the United States;

• vouchers. Among the six countries in the world, Bulgaria and Hungary have introduced the form of vouchers in higher education. Students receive the right to study at universities of their choice;

• Education savings accounts. Savings accounts on education (sometimes called

«Individual Learning Accounts»), aimed at encouraging families or individuals to save on higher education. The state (in Belgium (Flanders), the Netherlands, Spain, Sweden, Scotland and Wales) encourages families to put money on their children's savings accounts, offering either tax benefits or donations, such accounts are used for professional training purposes, employees and employers are encouraged to open accounts and use money for their further education [4].

Along with the above-mentioned tools (state financing of higher education institutions and elements of market allocation of funds individually for the benefit of students), a new system of financing higher education is being developed, which is reflected in the introduction of a multi-stage and multimodal system for attracting finance, including through the provision of additional educational services in higher education institutions.

Higher education leads to an increase in labor productivity, which should manifest itself in the growth of individual employee income. The higher is the level of education of all employed, the higher is the potential for growth in labor productivity in the national economy and the greater is the aggregate income of society. However, in a modern information society, one cannot learn once and for all life. Therefore, the most important skill for a modern person is the learning agility - the ability to learn, to forget unnecessary, to acquire difficult-related new knowledge quickly and to embed in the structure of personal experience. At the state level, the mass distribution of education is seen as a guarantee of its international competitiveness in the new global economy.

Over the last decade, the business environment changed considerably. As a result, the requirements for skills and abilities of employees, their education and professional experience change. There are professions that were unknown at all ten years ago, and in a few years, the labor market would again dictate its new demands, create new roles and seek for experienced professionals.

Therefore, state policy in the field of higher education development should be aimed at achieving its current world level, which is reflected in the introduction of a multi-stage and multidimensional system of higher education, the provision of additional educational services by higher educational institutions, in particular, within the framework of implementing the concept of life-long education; state funding is not the main form of providing retraining for employees or training in the training program for labor force throughout the working life.

Employers are the source of funds for the implementation and dissemination of lifelong education and continuing training of the workforce. Thus, the world's leading universities are private, they create trust funds - endowments, which accumulate donations from sponsors and patrons, invest profitable and use profits according to their academic needs. In the fierce struggle for sponsorship, Western universities defend their reputation, improve educational programs, and build profitable partnerships with businesses. the prevalence of an entrant abroad fully justifies itself: universities decide on themselves what specialties are demand and

purposefully use sponsorship money. As a rule, the main part of contributions from endowment funds is one-time donations from individuals or corporations: a philanthropist can create a separate fund for financing a particular direction, program or scholarship. For this, the leadership of the university provides the patron with honorary status or post in universities after retirement.

There are also annual «fundraising campaigns» when each university is competing for its sponsor - this is where the image, reputation and business relationships of an educational institution play an important role. In addition to the direct contributions of individuals, a significant part of the proceeds of the entangements is made up of funds transferred under the will, with the share of these assets in private universities reaches 50%. Unlike private universities, state universities have endowments, although they accumulate significant amounts, but are not the main source of income.

Thus, the country needs to create the necessary socio-economic conditions for more efficient use of budget funds. It is unlikely that the budget funds will cover all the prospective directions of development of the system of higher education. The state must fulfill all the conditions for legislative improvement and facilitate the implementation of the use of alternative sources of funding for these areas, on which the future economic development depends. The developed countries of Europe currently offer many educational programs that promote the development of not only all parts of national education and training systems, but also the development of national business structures. Therefore, the special significance in our time, the significant need for additional funds for the improvement of the educational system is cooperation with enterprises - potential employers and international funds, foreign higher educational institutions.

The most striking example of business collaboration and universities is the collaboration between Siemens and Lincoln University (UK) and Transylvanian University (Romania). For more productive and effective interaction, the corporation has located its headquarters directly on the basis of university campuses, which allows them to adapt students to the real needs of production, to involve the company's experts in teaching, to hold contests, to select scholars, to provide advisory services, to join the joint work with academy in R & D. At the initiative of Siemens, the Master of Science at Lincoln University has been complemented by a new program on renewable energy sources (MSc Energy Renewables and Power), and the University of 2015, as a result of the collaboration, has been recognized as a Global Lead Partner. Such cooperation greatly improves the quality of educational services, ensures the competitiveness of universities, promotes the mobility of students and teachers in the educational space, which already provides the country's economy with new high-quality specialists with knowledge and training at the world level.

Consequently, the tasks of transforming the system of higher education in the modern conditions are as follows: the training of specialists taking into account

the requirements of employers and the needs of the labor market and economy; realization of measures aimed at introduction of programs of retraining specialists, in particular directly at enterprises (by means of intensifying cooperation between higher educational institutions and employers); with the assistance of the state and with the help of various funds, the expansion of the network of retraining centers at universities.

Therefore, it is advisable to involve employers more actively in the scientific and educational process, which will allow to optimize the system of preparation of specialists in higher education in demand in the national economy and to bring education programs closer to the needs of the real economy sector, to take into account the European experience of planning the training of higher educational institutions of the diploma specialists for the economy as a whole, developed in the developed countries, innovative research universities, to ensure the priorities of educational policy in international science technical cooperation, as well as provide a new impetus for the active participation of entrepreneurship in the development of higher education.

Government regulation measures should focus on creating a multi-channel financing system based on the expansion of the list of extrabudgetary sources, including the attraction of charity funds, which could be a promising direction for financing higher education institutions and a significant increase in investment for the provision of the scientific and educational process. Considering that the structure of investment in the field of higher education of Ukraine can be considered ineffective, at the national level it is proposed to develop measures to stimulate business structures to increase investment in the process of training specialists for specific industries and conducting research work, by optimizing the structure of costs of business -structures and acceleration of cash flow.

Globalization has become an effective factor in the development of civilization, economics and education. In a globalized environment, innovation and the development of the competitiveness of the economy can only be sustained if there is a high quality education system and a high quality of human capital. The overcoming of artificial obstacles and the destruction of autarkic systems in the information society is just a matter of time. Higher education can no longer be limited to the training of specialists for a local or national labor market. In fact, for the students, the whole world is open, and therefore the need to ensure their competitiveness is becoming a strategic task for all universities.

The current state of national higher education allows us to recognize the fact that the existing system of financing higher education institutions does not ensure its development. The effectiveness of the system of higher education is closely linked with the harmonization of relations between all its stakeholders, which in turn can ensure its effective financing. Reorienting on a high-tech path for further progress, the state should focus exclusively on human capital, rather than on natural, infrastructural or industrial resources, to include competitive science and advanced

education among the main engines of its economy.

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