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## **ECONOMICS**

### **FORMATION OF THE SYSTEM OF ECONOMIC SECURITY MANAGEMENT OF SMALL INDUSTRIAL ENTERPRISES IN UKRAINE**

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**Annotation.** *In the article, based on the analysis of literary sources, the main factors of the formation of the economic security system of small industrial enterprises are determined, and on the basis of this developed the system of economic security management for domestic small industrial enterprises.*

**Key words:** *small industrial enterprises, economic security, economic security system, economic development.*

**Problem definition and its relevance.** Small industrial enterprises are a necessary component of economic development of the country, they are an effective tool of support and an active form of development of modern economic relations in the state. Thus, they are a necessary part of the market and contribute further development of economic market relations in the country. However, under these circumstances, which have recently occurred in the market and in the state as a whole, to conduct its activity became very complicated thing for small industrial enterprises, thus forcing them to seek new approaches and methods for improving the provision and management of their own economic security.

**Analysis of research and publications.** Theoretical and methodological aspects of the development of small enterprises, including industrial ones, and the study of the level of their economic security are comprehensively covered in the writings of leading Ukrainian scientists: Z. S. Varnalia, M.P. Voronkova, L.I. Vorotina, T.O. Govorushko, L. S. Golovkova, I. S. Grozny, IS Gutsala, SM Illyashenko, G. V. Kozachenko, and others. Their works are devoted to the study of specific features in the development of small companies and considered the complex ways of activating their potential.

**Presentation of the main research material.** Modern conditions of economic activity reduce the practical possibilities of accumulation of own capital by domestic small industrial enterprises due to rolling up of small business activity, which today is connected with numerous factors of influence of external and internal business environments. The necessity of formation of the process of management of economic security for small industrial enterprises is caused by the constant interaction of such enterprises with the factors of the unstable environment as the main source of threats,

which has a negative impact on the economic activity of small industrial enterprises. Thus, the system of management of economic security is the basic and the main aspect of optimizing stable economic development and ensuring a high level of economic security for business enterprises in the modern market.

The concept of "economic security of an enterprise" can be defined by the author as the safe condition of all enterprise' resources (such as capital, staff, information, technology of production, technics and rights) and the ability to effectively and timely prevent or quickly react to all internal and external threats that directly or indirectly, have had a negative impact on the company. Threats can also be defined as — certain negative events or circumstances that directly or indirectly influenced the subject of security by internal or external business environments.

The system of management of economic security according to the authors definition — is a certain set of interrelated elements that ensure the economic security of the subject of economic activity and provide achieving of the main goals of business in a market environment. The constituent elements of such a management system are: object, subject and security, security mechanism and security policy, which includes goals, objectives, functions, principles and security strategy.

Thus, the main objective of the economic security management system for small industrial enterprises is the on time and effective detection, prevention and minimization of the influence of negative factors on the activity of the enterprise. According to the authors opinion—there are such main tasks of the system of economic security management of small industrial enterprises: the collection, analysis and processing of the necessary information on external and internal business environments, a comprehensive study of the activities of all competitors of the company, as well as business partners, active and on time detection of the warning and termination unlawful actions of employees, competitors, suppliers and consumers.

In the opinion of the author there should be such basic principles of the system of management of economic safety of small industrial enterprises:

- the principle of development - management of the system of economic security must be capable of self-development and self-improvement.
- the principle of unity - all actions of the entities providing and managing economic security must be fully coordinated and not contradictory;
- the principle of competence - economic safety management should be conducted by competent persons with practical experience and practical skills in managing economic security at such enterprises;
- the principle of economic reasonability - the total expenses on management of economic security should be reasonable and economically effective
- the principle of efficiency - involves a fast response of the management system to changes in the external, or internal business environment;
- the principle of complexity - guarantees complex detection, prevention and neutralization of external and internal threats to the economic security of the enterprise;



- the principle of legality(lawfulness) - management of the system of economic security should not violate current norms and laws of Ukraine;
- the principle of continuity – the management of the system of economic security of the enterprise should be a continuous process.

The subjects of the management system are persons who are responsible for economic security. On small industrial enterprises, they are usually few persons, not the whole department as on big and medium enterprises. The small enterprises don't have opportunity to create its own security service because of small sizes and limited financial support, as a result they use the services of local law enforcement authorities and special guard organizations. Objects of protection are staff, products, finances, information and all tangible and intangible assets of the enterprise.

In the author's opinion there are such main resources of the management of economic security: financial and economic methods that must ensure the financial and economic security of all tangible and intangible resources of the enterprise; normatively-legal – usage of normatively-legal documents in all the spheres of enterprises' activity; power - involvement of law enforcement agencies or other external organizations in the protection of all values of the enterprise; technical and technological — aimed at protecting technical resources and technology of production at the enterprise; innovative - use of innovative technologies to ensure all aspects of the enterprise and increase its overall economic development and informational - use of information resources to management of economic security in all areas of activity of enterprise.

According to this, the author has developed an appropriate system of economic security management for small industrial enterprises in Ukraine, see. Fig. 1

This system of management of economic security is provided for small industrial enterprises, taking into account the inherent components of economic security and is provided by the responsible persons (providers of security), which are responsible for providing and managing economic security at the enterprise. Such persons can be: deputy director of a small industrial enterprise (manager), accountant, chief technologist, programmer, lawyer and other specialists of the enterprise.

Thus, the main criteria for the effectiveness of the developed system of economic security management for small industrial enterprises are:

- Maintenance a stable economic development of the enterprise and raising the overall level of competitiveness by identifying the prevention and neutralization of threats from the external and internal business environments;
- Timely prevention of a crisis situation and ensuring a high level of economic security;
- Increase of material goods and values of the enterprise and their effective and rational practical use.

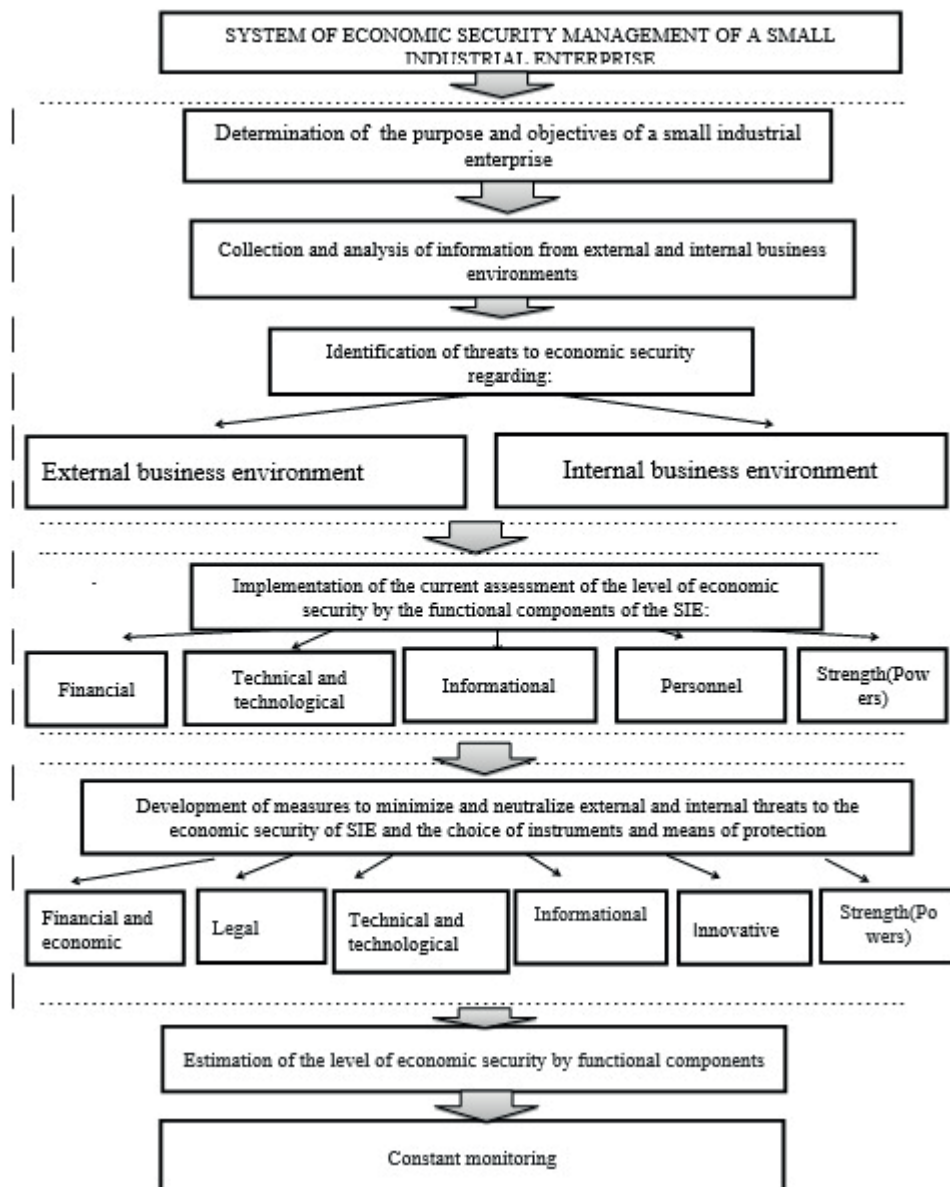


Fig. 1. SIE Economic Security Management System [Developed by author]

**Conclusions.** Thus, the economic security management system is a complex and multifunctional management process, where the level of security of the whole enterprise depends on the quality of management of economic security from the threats of the external and internal business environments. Therefore, the proposed system of management of small industrial enterprises is intended to support stable economic development and

accordingly identify and prevent all external and internal threats to the economic security of these enterprises in the current conditions on the market environment.

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## TRANSACTION COSTS MANAGEMENT

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**Annotation.** *The article covers the problems of accounting and management of transaction costs. This will allow the enterprise to reduce or avoid risks arising from transacting; to maintain or improve the competitive position in the market; improve efficiency of the market transactions.*

**Key words:** *transaction costs, subordination to law cost.*

**Setting of a problem.** Recently, due to the accelerated exchange of information, development of transport infrastructure and elimination of the language barriers between business partners, the speed of acts of exchange of goods, services and other economic benefits and property rights has increased rapidly. As a result, all economic processes accelerated too, which began to bring additional benefits to their participants. The financial managers are increasingly focused not on the costs associated with the core activities of the enterprises, but rather on the expenses which are collateral, supporting, such as associated with organizing meetings with business partners, the cost of bureaucratic public services, etc. In Ukraine, too, there arose a problem of spending on penal sanctions imposed by the state authorities and the costs of semi-legal and illegal circumvention of some legislative norms, as well as taxes and fees. All these costs, on which the financial managers are currently trying to focus, are called transaction costs in modern economic science. Their effective management would allow companies to reach a higher level of profitability and financial stability. Taking into account the polysemy of approaches to their definition and study, it is relevant to study not only the problems of managing transaction costs, but also the problems associated with the unification of their very concept in order to better understand the object of management.

**Presentation of the basic material of the study.** Accounting is one of the most important components of the management process of any object. In addition, cost accounting is one of the most problematic and, therefore, the most labor-intensive processes in almost any enterprise, since the amount of the taxable profits depend on its results, as well as other objects of taxation. Finally, due to the uncertainty in the concept of transaction costs, there is no single standard for their classification, which means that tax authorities can not determine whether to attribute them to such costs that reduce taxable profits or not, and companies are forced to spend time and money elaborating the individual schemes of how to manage the transaction costs accounting. Hence, the problems of the transaction costs accounting arise, the most important of which is the development of a single standard for their classification.

The multiplicity of approaches to the definition and classification of transaction costs still constitutes a major scientific problem. In the years since Ronald Coase, who

introduced this concept into economic science, many foreign and domestic scholars have paid attention to it, but still even among representatives of institutionalism which is a "native" direction of economic thought to the transaction costs, there is no conformity when it comes to their definition and classification. Therefore, we will analyze approaches to the essence of the transaction costs first, their main forms, classifications and types.

The term "transactional costs" is being used more frequently in the modern economic vocabulary, but there are still a lot of contradictions and discrepancies when it comes to scientific explanation, historically predetermined by the existence of two approaches to the interpretation of the essence of the transaction costs phenomenon. These two approaches: the property rights approach and the neoclassical approach exist irrespective of each other.

The property rights approach has its beginning directly from the works of Ronald Coase and emphasizes the role of the transaction costs in defining the allocation of the property rights, namely laws, rules, social customs and organisations which induce certain behavior. The concept of transaction costs was introduced to the economic theory by R. Coase in his article "The Nature of the Firm" (1937) [1] 'as the costs of using the price mechanism'

A great contribution to the property rights approach in terms of the transaction costs was made by Stephen Cheung, but the most important one was summarizing the Coase's arguments. It is remarkable that Cheung was the first to give a contract example of the Coase's theorem showing that the choice of the contract depends on the transaction costs of different contracts. These transaction costs are intrinsic but not the market values. The link between the transaction costs and the property rights is summarized in the Coase's theorem: "in the absence of transaction costs the allocation of the resources depends on the allocation of the property rights" [2]. The apologists of the property rights approach rarely gave the definition of transaction costs. In 1991, Douglas Allen called them expenses aimed at "establishment and maintenance of the property rights". Similar but less precise and formal definitions were given by S. Cheung, J. McManus, M. Jensen, W. Meckling, W. Barzel, A. Alchian, S. Woodward.

Transaction costs comprise both any direct costs and corresponding inefficiency of the production or the incorrect allocation as a result of inefficiency. Property rights approach does not envisage any difference between the companies, markets, households and other structures. A statement that transaction costs equal to zero automatically means that property rights are absolute by definition.

According to the neoclassical approach transaction costs exist all over the place in the market and can emerge at the point of transfer of any rights because the participants of the exchange should know each other, communicate and exchange, that is to say transaction costs are costs associated with the assignment of property. It is considered that the coercive expenses inside the company are not transaction costs. The latter consist of those which emerge between the companies and individuals as a result of the market interchange.

By evaluating, for example, the capacity of transaction costs on the USA market

(associated with the banking transactions, wholesale and retail or expert services, such as lawyers', accountants', etc.) W. Wallis and D. North have found that transactions account for more than 45 % of the national income. Moreover, this percent has increased in comparison with 25 % during last century. So the economic resources spent on transactions have reached a significant level and are continuously growing. According to the expert estimation these indices reach almost 75 to 80 % in Ukraine. The quoted dynamics shows that the problem is crucial and prompts the profound scientific research of the phenomenon of transaction costs and designing the effective mechanisms of reducing them on all levels of social and economic relations. ..Regarding the notion of "transaction costs" there are several definitions in the economic literature. According to A. Alchiiian transaction costs emerge because of the difficulties of the communicative and informational juxtaposition, undefined conditions of the contract, ambiguity of the title or right which can be traded [3]. There are examples associated with transaction costs given in the literature, but you can barely find a definition. According to O. Williamson, 'there are too many levels of freedom (in terms of transaction costs) and the concept needs a definition [4].

D. Allen in his article "What transaction costs are" gives the following definition: "Transaction costs are resources which are used to create and maintain the property rights, they comprise the resources which are used for protection and expansion (in the meaning of seizure)" of the property rights and all total expenditures coming from the real potential or the real protection and seizure" [5].

Pursuant to the most general definition "transaction costs are equivalent to the friction in the mechanical systems." Apart from the analogy with the physics, all the expenses associated with the coordination and interaction of the economic agents can be attributed to transaction costs.

W. Barsel defines transaction costs as resources which are used to create and maintain the property rights, including the resources aimed at protection and seizure [6]. In this regard S. Malakhov points out that "these are not only the agency fees, bribes and black cash, but expressing the price paid by every economic system for the imperfection of its own markets" [7]. In our opinion the most accurate designation of transaction costs was made by A. Olieynik: "Transaction costs are expenses related to the exchange and protection of the eligibility (property)" [8].

Although all of these definitions are not united by one approach as regards the essence of transaction costs, they assess these costs as negative. M. Olson criticising this opinion denotes that a lot of the economists unite all the downsides of the market under one umbrella of transaction costs [9].

By denying the negative estimates of the transaction costs, S. Arkhiierieiev gives an example of the voluntary maintenance of the standards in poultry production, which is marked by a collective trademark. The transaction costs associated with it are increasing the social welfare. As a result, the benefit from the consumed goods increases, because the transaction costs of the second party, the Buyer, are decreased. That is to say the totally negative evaluation of transaction costs role is conspicuously incorrect. Apart from that



the other types of transaction costs cause the decrease of the other expenses, that is why it is necessary to consider two constituents parts of these costs, namely transaction losses and transactions expenses [10]. Such split allows to study the components of transaction costs in a more thorough manner, while paying attention to their positive impact as well.

By generalizing the theoretical studies in regard with designating the essence of transaction costs it should be noted that apparently the neoclassical approach supplements the property rights approach. Thus, the following definition may be suggested: transaction costs are the costs associated with the establishment, protection and exchange of the property rights. This explains the multifaceted nature of transaction costs. There are several approaches within the institutional theory which explain the emergence and existence of these costs: transaction costs theory, public choice theory, agreements theory, contractual theory of the firm and two-factor model of transaction costs.

Unlike the classifications by O. Williamson and S. Arkhiieriev, H. De Soto suggests to split transaction costs into two components: subordination to law cost and cost of illegality. In our opinion this very approach not only allows to define the influence of transaction costs on the effective operation of the enterprise, but to explain the existence of the corruption and grey economy which is relevant to Ukraine.

Classification by H. De Soto. As the existence of transaction costs is related to the establishment and operation of the firms, it is logical that a question about their influence to the efficiency of the operation of the firms arise. In order to answer that question it is necessary to define the transaction burden. “Subordination to law cost” [11] introduced by H. de Soto can be used as this burden. In his classification he united the agreement expenses, specification and protection of the property rights and also the expenses associated with the protection from the third parties in one group and designated them by using the term “subordination to law cost”. So subordination to law cost consists of the following factors:

1) Access to law costs, to where registration costs belong, costs associated with obtaining a license, opening a bank account, obtaining a registered address and other formalities.

2) Expenses related to the continuation of operating within the limits of the applicable law associated with the necessity to pay taxes and complying with the applicable law in terms of the labour relations (duration of the working day, minimum salary, social security), payment of the litigation expenses arising from resolving the disputes within the limits of the legal judicial system.

In our opinion, the costs related to compliance with the applicable law as regards the relations with the suppliers of the tangible resources and services should be added to the costs associated with the continuation of operating within the legal boundaries. It should be noted that subordination to law cost comprises not only the direct price expenses, but also time expenditure in order to perform certain procedures which in turn can also be evaluated in the cash equivalent as a product of time expenditures by alternative cost.

Costs associated with the continuation of operating within the limits of the applicable law. Government bodies provide for law enforcement and implementation of the

regulations due to conducting inspections. One of the most important indicators which characterize entrepreneur environment is the scope of inspections and their frequency and duration, and also the volume of expenses paid by the entrepreneurs in the form of the penal sanctions.

The level of expenses on continuation of operating within the boundaries of the applicable law is much higher than the level of expenses associated with the access to the law in Ukraine. This primarily regards taxes. According to the research, compliance with the fiscal legislation is a significant component of subordination to law cost in Ukraine. This explains the low level of application of legal norms for the provision of the operational routine of the enterprise. The findings of the Ukrainian businessmen survey conducted by the International financial corporation devoted to the topic of concealing the revenues from taxation have stated that the 14 % of the respondents conceal 10 % of the income, 17% of the respondents conceal 11 to 30, 44 % conceal 31 to 50, 16 % – 51 to 70, whereas 10% conceal 71 to 90 %. Therefore, 70 % of the respondents conceal more than 30 % of their income. Excess tax burden leads predominantly to different forms of tax evasion. It should be mentioned that the imperfection of Ukraine's fiscal system entails an increase of the tax burden imposed on the law-abiding taxpayers or those who cannot evade taxes.

According to the experts, the regulatory measures in the field of taxation and accounting reporting is one of the biggest obstacles to the development of the business activity. It is clear that the imperfect taxation system significantly stimulates tax evasion by the commercial entities.

When the state in process of the initial specification of property rights is incapable of granting them to potentially most effective owners and the exchange of the property eligibility is impossible because of very high transaction costs, the transition of the economic entity to the underground economy takes place, in other words "its refusal to use the norms of the written law in the process of operating and referral to the non-enacted law, namely legal norms which are fixed in the customs and traditions beyond the limits of the right (boundaries)".

The more often the legal norms are being ignored, the more intensively the economics moves to the underground direction. However, the execution of the agreement beyond the legal sector is also connected with "illegality cost".

Decision about choosing the institutional environment by the entity for its business operation: either legal or beyond the legal limits is defined by the correlation of transaction costs which arise from the implementation of the contracts. The individual complies with the regulations not under the impact of "all is good what is legal", but rather anticipating to receive some benefit in return for adherence to the law. An individual only has stimuli to voluntarily be subordinated to the law when the state is able to contribute to to implementation of his/her interests by decreasing transaction costs within the legal sector of economy.

In the institutional climate of Ukraine taxes are the most important component of the subordination to law cost. As it was mentioned before, if they become excessive, the



company does everything to evade taxation or shifts to operating beyond the legal limits of economy.

The primary objective of transaction costs management is their optimization or, to be more precise, minimization, as they constitute a significant share in the expenditure structure of any enterprise. However, in order to elaborate optimization methods, first and foremost, the knowledge about transaction costs should be expanded and improved. Transaction costs should be thoroughly studied first.

The company's transaction costs studying methods are the main concern in the "Company's expenditure management" monograph by G. Kozachenko, Y. Pohorelov, L. Khlapionov and H. Makukhin [12].

The authors suggest that six main and one provisional procedure should be attributed to transaction costs of the enterprise studying. The main are as follows: procedure of studying the resources of creating information on the company's transaction costs, procedure of collecting information for their objective and real analysis, procedure of analysing information received about transaction costs, procedure of estimating transaction costs of the company, as well as their prognosis, developing and taking decision about conducting transactions. The provisional role pertains to the procedure of keeping the information about the transaction costs of the enterprise.

In our opinion, this system of procedures should be applied to any potential transaction of the enterprise existing at the time of application of these procedures. Transaction costs optimisation, apparently, implies not only simply reducing the cost of implementation of any transaction, but also making the right choice of what transactions should or should not be performed out of the entire accumulation of the potential transactions, meaning that the latter studying procedure is extremely important. It is clear that to conduct such study in an isolated manner, so that each potential transaction is being studied and decided on separately, is less effective than cumulative studying of all potential transactions, because the synergy effect may take place in any case.

In order to successfully optimise transaction costs we should yield more insight into the concept. It is expedient to discern the place of transaction costs in the general system of company's transaction costs management. A. Chukhno, P. Leonenko and P. Yukhimenko express the following opinion in relation to it.

Within the limits of the modern market economy company's expenses are divided into three groups:

- 1) transformational costs;
- 2) organisational costs;
- 3) transaction costs.

Transformational costs are costs associated with transformation of the physical qualities of the products in the process of using production factors. If transaction costs are perceived as the result of the interaction between people who participate in different processes of manufacturing certain goods, the transformation costs are prevalently arising from interaction between people and nature.

Organisational costs are costs with reference to provision of control and allocation

of resources within one organisation, and also costs of minimising the opportunistic behaviour within the organisation.

The concept of transaction costs allows a better understanding of the connection between the institutions and production efficiency. These costs are related more to the induced costs rather than the production itself.

Transaction and organisational costs are interdependent notions: the increase of the first entails the decrease of the latter and vice versa.

In view of defining the essence of transaction costs, activity can be considered transactional when its main function lies in performing transactions, such as property rights exchange, or if its assistive activity which is directly used for the purpose of implementation of this function. Resulting from this approach among all of the types of activities the transactional are those comprising material and technical supply and sale, preparation, wholesale and retail (excluding maintenance services, which primarily have transformational character) and financial intermediance (funding, crediting, and insurance, retirement benefits inclusive).

Thus, transaction costs depend on the “strength” of the institutes. On the one hand, transaction costs will be high if the institutes are weak (in other words, the legislative body performing transactions is too rigid and, perhaps, envisages payment to the state for facilitation of accomplishment of the transaction). This means that the minimum of the functions of transaction costs from the institutions actually lies between these two extremities, that is to say, this function can be described as a parabola with the curve ends turned upwards.

As it has already been mentioned, the main objective when selecting the institutes is to minimise transaction costs. Voluntarily exchange will be based on the trust if the government minimizes transaction costs by creating and designating property rights. The government systems regulate the contracts, take part in their signing and fulfillment and are being chosen by the partners within the contract. Given such approach (in terms of transaction costs) the hierarchical systems are being viewed upon in the comparative aspect. It is also defined which of the institutes are most effective in minimizing expenses. The question is under what circumstances the company organizes the exchange within and between its units or with the help of the market chooses the institutional forms minimizing transaction costs. This problem is crucial to both public and private sector. Two institutional instruments have peculiar meaning to the social sector:

- 1) allocation of community resources through the state bureaucracy;
- 2) social regulation.

The effectiveness of the coordination methods are defined not from the point of view of the standardised evaluation (good or bad), but in relation to economising transaction costs. More research on the effectiveness of coordination methods is reflected in the so-called Coase’s theorem in his article “The Problem of Social Cost” (1960).

Y. Bozhko asserts that the procedure of optimising transaction costs should be performed in two dimensions: on macroeconomic level and on the level of separate economic entities. The principal idea emanating from the results of transaction costs in

the process of enhancing integrative links is that the ultimate effect of it should be the decrease in transaction costs level per one monetary unit on both micro and macro level. As the development of the market relations leads to the increase of the share of transaction types of the economic activity, it can be stated that a certain share of transaction costs is transferred from certain economic agents to the state and interstate institutes as well as to organizations which create respective infrastructure for the purpose of the exchange processes (in other words, to the transaction sector enterprises – author). Strengthening the integrative processes should result in decreasing the share of transaction costs of the enterprise of the transformation sector of the economy with the adequate increase of the macro level transaction costs share.

By further developing this idea we can make a conclusion that liberazation of the international economic relations should lead to a similar effect, whereas the transaction sector is going to merge together with the interstate sector. Globalization process is feeding into it, as it is basically the integration of all states of the world into one “global state” which is to constitute single institute. Therefore, in the global state uniting the states-agents of the international economic relations under its umbrella, as well as within the company, uniting the agents of the domestic market, there will be significant nominal economy of transaction costs of certain countries at the expense of the formal transferal of their burden to the transaction sector of the world economy which will consist of the interstate institutes. In practice, the transaction sector will be funded at the expense of transformational sector enterprises, as they will remunerate the transactions, whereas the economy itself will imply the absence of interstate tariff or non-tariff barriers to the agents of the transaction.

Therefore, from the microeconomic perspective, transaction costs can be optimised at the expense of the right choice of the transactions being accomplished, from the macroeconomic perspective, at the expense of the right quantity and quality choice of the institutions. However, the aforementioned optimisation methods are only part of the process of transaction costs management as they do not provide for their minimum level in a sustainable manner. In addition, the formulation of these methods lack some more detail. That is why it is important to have a general thoroughly designed model of transaction costs management, which could be based on the general management theory.

The general theory of transaction costs management is considered in the candidate's research paper by L. Bazaliieva “Management of transaction costs of the enterprise” [13].

L. Bazaliieva delineates transaction costs management as professional activity aimed at enhancement of the contractual efficiency of the enterprise under market conditions by rational usage of tangible, information and labour resources. She attributes the decrease of the risk level of the market transactions of the enterprise and improvement of competitive positions on the market to the general objectives of the enterprise's transaction costs management.

L. Bazaliieva proves that a significant amount of the factors of the external and internal environment influence the definition of the enterprise's transaction costs, as

well as their management. However, the most influential amongst them are discrepancy of the economic resources of the counterparts, the indeterminacy and risk. It should be noted that the academic community also acknowledges the other factors influencing transaction costs. In particular Z. Yushchak points out that the magnitude of transaction costs varies depending on the field of activity, strategy of the enterprise and also the input data of the administrative barriers [8]. A. Chukhno, P. Leonenko and P. Yukhimenko stress the importance of taking into account the fact that transaction costs are under the impact of some other factors, such as technology of evaluation and monitoring, physical characteristics of the assets and nature of the exchange [15]. Whereas A. Oleynik indicates that in general all factors influencing formation of transaction costs can be united into six groups: 1) economic 2) legal 3) organisational 4) psychological 5) technologic 6) social. By economic factors he means: contractual nature of the enterprise (all relations appearing between the companies as economic agents take the shape of contractual relations), competition (under conditions of transformation of the economy competition is being dramatically aggravated and reflected in different forms), competitiveness of the products which is defined by the market demands, type of the competitive market, strategy of promoting the goods, elasticity of the product demand, stage of the product lifespan etc.

Transaction costs tracking, as it was defined above, is one of the components of their management, namely control function. As the management process is cyclic, the information received with the help of calculation is substantially influencing decision-making related to transaction costs planning and organizing, and consequently on the choice of the optimal selection of transactions. Nevertheless, transaction costs accounting still has serious methodical problems since the applicable legislation and the international accounting standards do not directly mention “transaction costs” category. There are also certain gaps in the understanding of what should be attributed to it. Z. Yushchak regards that one of such gaps are the costs associated with the enterprise’s entering the market.

Multiple research of the prominent foreign and domestic scholars indicate that transaction costs are important and at the same time complicated and multi-faceted category. Irrespective of the perennial search there is still no single understanding of these costs, thus, their classification is also missing. Under these conditions there is no point in looking forward to having a clear nomenclature of transaction costs from the accounting science in the recent future. And moreover, there is no point in anticipating their clear estimation as well. And at the same time it is obvious that to neglect the information about transaction costs means not to take into consideration the effect of the economic laws of the market economy and not having the possibility to take pondered managerial decisions.

According to H. Kireitsev and V. Lytvynenko building the system of managerial accounting of transaction costs, which will function according to the following algorithm: defining the informational demands of the management of a certain enterprise, defining the subjects of the accounting, defining the articles of the accounting of transaction costs may serve a compromising solution of this problem.

Accounting items may be as follows: type of production, product or service, suppliers or customers. Transaction cost items will include the information accessible for the identification at this very enterprise. For example, when the customers are the accounting items (channels of distribution), the costs may be associated with processing the orders, expenses related to visiting the customers, transportation costs, communication costs, expediting costs, settling accounts, etc.

Certainly, such an accounting option will not find its own reflection in the bookkeeping accounts, and the information should be accumulated in the additional registers, which will increase the complexity of accounting procedures. However, the active development of automated forms of accounting can greatly simplify the obtaining of such data, and additional information will allow to make the right managerial decisions, which will have a positive impact on the effectiveness of business operation [16].

**Scientific novelty and practical significance.** Scientific novelty and practical significance. The scientific novelty and practical significance of the results obtained is the theoretical synthesis of approaches to the essence of transaction costs and the substantiation of practical directions of application of the theory of transaction costs at an enterprise level.

**Conclusions.** The analysis of the studies in respect of transaction management proves that a system for their accounting needs to be developed to fully manage transaction costs. However, since it is quite difficult to distinguish them from the total set of costs (primarily administrative ones), when it comes to the bookkeeping, there will not be an account for their bookkeeping any time soon. Nevertheless, it is proposed to introduce their management accounting, which does not have to complicate the work of accountants by automating the process, although it needs their qualifications to be upgraded.

The conducted studies allowed to draw the following conclusions:

1. Management of transaction costs of the enterprise is a process aimed at minimizing these costs, while maximizing the effectiveness of their implementation. Effectiveness refers to the amount of transaction profit which is the difference between actual or potential income from the transaction and transaction costs associated with its implementation.

2. Before managing transaction costs, it is necessary to conduct their research, which includes 6 main and 1 provisional procedure: studying the sources of information on transaction costs, collecting information for their analysis, analyzing the information received, assessing transaction costs of the enterprise, forecasting, developing and taking decisions on the implementation of transactions, as well as maintaining information about transaction costs of the enterprise. Such a study will launch the management cycle of transaction costs of the enterprise. At the same time, the greatest attention should be paid to the study of sources of information on transaction costs of an enterprise, since this information must meet certain requirements, the non-compliance of which leads ultimately to poor-quality management decisions.

3. In general, the company has three main types of costs, namely transformational

(mainly production), organizational (mainly administrative) and transaction. Organizational and transaction costs are interconnected - an increase in ones leads to a decrease in others and vice versa. In connection with this division of costs in the economy as a whole, it is possible to allocate two large sectors - transformational and transaction, the boundary between which is not clear enough. In this case, the transaction sector of the economy ranges from 50 to 70%, and its size is steadily increasing, while in the transformational sector, the share of transaction costs in total costs equals to 1.5 to 15%, and they can be much higher in transition economies. This proves the significant impact of transaction costs on the present-day economy.

4. The company as a public institution creates almost 50% savings on transaction costs, which shows that the lack of institutions also has a negative impact on the economy, as well as their surplus. Therefore, the macroeconomic task of the state and society as a whole is to select such a set of institutions that would minimize transaction costs on other equal terms.

5. Likewise the macroeconomic task of society, the microeconomic task of an enterprise is to choose such a set of potential transactions, which in case of implementation maximize transactional profit. But it is necessary to take into account the level of risk of these transactions, as well as the change in the competitive position of the company in the market in the event of their implementation.

6. The most influential factors in the formation of transaction costs are the discrepancy between the economic interests of counterparties, uncertainty and risk. These factors require constant monitoring and maximum prevention of their negative impact.

7. In order to make decisions on the implementation of transactions, it is proposed to apply the transaction cost optimization model developed by L. Bazalieva. Also, to determine the strategy of managing transaction costs, it is recommended to use their division into actual and planned ones.

8. Accounting for transaction costs is one of the most important parts of their management, namely control function. Therefore, considering that the process of their bookkeeping is not envisaged by the legislation, it is recommended to introduce appropriate accounts of management bookkeeping, while taking into account the practical management needs as regards their classification for the allocation of sub-accounts.

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## LOGISTIC SUPPORT OF CARGO AIR CARRIER'S ACTIVITY FOR MULTIMODAL DELIVERY OF OVERSIZED CARGO

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**Annotation.** *In modern conditions performing production-logistical activity of the air carrier of oversized cargoes is impossible without defining the order of carrying out logistical support of its activity in multimodal transportation taking into account features of work at target markets in conditions of competitive rival.*

**Key words:** *logistic support, cargo air carrier, delivery, cargo.*

**Problem setting.** Current global aviation market is highly varied and is distinguished by a significant number of niches with specific types of carriers that are characterized by peculiar operating features. Herein, the same carrier can simultaneously perform its operating activity on several markets. In particular, the majority of the so-called 'network carriers' conduct their business activity on markets of regular air transportation through provision of cargo delivery by way of either carrying out additional loading on partial-cargo flights or purely cargo flights according to a fixed schedule.

At the same time, these carriers can perform cargo transportation on charter flights which are similarly classified into partial-cargo flights or purely cargo flights. There are other types of air carriers, including charter carriers that perform delivery of oversized cargo.

It is worth saying that air cargo transportation is the key factor for growth of global economy. On the one hand, air cargo transportation occupies a relatively small niche among other transport modes based on the total cargo traffic. On the other hand, it should be noted that air transportation is the most costly type of transportation.

As a rule, air transportation incurs substantial added value. Key factors to development of air cargo transportation include: active re-orientation of production on the countries with cheap work force and imminence of productions to main distribution regions; significant globalization of production and, as a result, the necessity to quickly deliver the ancillary components over long distance; reduction of the real service time of the majority of housing appliances, as a result, significant increase in the share of the research-consuming goods in the structure of transportation, when their delivery by other transport modes is constrained or impossible due to a variety of restrictions; dramatic increase in the demand for transporting perishable goods from distant regions and, thus, a forced inclusion of air transport segment into the logistics chain.

As for the oversized air transportation market, it began to develop in the late 80s of the 20th century, with entering of unique ramp airplanes of An-124 type on international markets. In the following years, the successful development of the market was due to



the creation of a unique transport modification of An-124-100 airplane in the shortest time, which could perform cargo transportation without hindrance all over the world. With the advent of this unique aircraft in the world market, the market for the delivery of oversized cargoes gradually began to form. The world's leading concerns have obtained the opportunity to carry out non-disassembling delivery of oversized cargoes by air in the shortest time. At the end of the 20th century aviation transport has become an integral part of a significant number of transportations of such goods.

However, it should be remembered that air transport ensures the delivery of cargo from airport to airport, whereas manufacturers are faced with the task of ensuring the door-to-door delivery of such goods, i.e. using at least one more type of transport – automobile. Herein, the need to organize the logistics management of the oversized cargo delivery in a multimodal connection arose.

**Analysis of recent research and publications.** Scientific researches of W. Galor and A. Galor are devoted to the problems in delivery of oversized cargo transported by various transport modes, a special international program for their transportation in the Baltic region was characterized, transportation of a number of oversized cargo by road and sea was described [1; 2].

Thesis of D. Fabrichkin [3] was focused on the organization of the delivery of oversized cargo by different modes of transport. The main objective of his thesis was the determination of the most optimal delivery route in accordance with specified needs of a customer.

Scientific researches of T. Gabrielova and I. Vasylenko [4] are devoted to the formation of organizational foundations for the use of innovations in technical and technological processes of cargo servicing at airports. The classification of cargo traffic served by the airline, the classification features and their characteristics was offered by V. Voitshovskiy [5]. It was determined that cargo traffic suitable for servicing is an ordered set of cargo units and cargo parties, ready for transportation, in particular taking into account the requirements of air transport and commercial interaction between carriers and logistic chain participants.

The study of A. Matovnikov [6] is devoted to ensuring the correlation of dimensionally mass characteristics of unique cargoes and technical capabilities of the An-124 transport airplane.

It is obvious that the processes of logistical support of the cargo air carrier's activity have not been studied enough in the direction of multimodal delivery of oversized cargoes. The study is devoted to the solution of this particular problem.

The aim of the article development of tools for the realization of logistical support of the cargo air carrier's activity in multimodal delivery of oversized cargoes taking into account peculiarities of operation at target markets in the conditions of competitive rival.

**Methodology.** In implementing the scientific research methods of system and statistical analysis, expert assessments and market analysis were used.

**Introduction.** Logistic support of the cargo air carrier in multimodal delivery of oversized cargoes is an extremely important problem requiring solution.

It should be noted that in its production activities, any air carrier receives the greatest profit, as a rule, from the transportation of special categories of cargoes, since exactly these goods require special conditions of transportation and, as a result, higher tariffs for their transportation are set. As is known, in the world market, revenue rates for the transportation of cargoes are the highest for specialized carriers, particularly express carriers such as “FedEx”, as well as charter specialized carriers, namely “Lynden Air Cargo” (performance of unique charter programs in regions with complex climate), also airlines “Volga-Dnepr” and “Antonov Airlines”, which are the main operators of unique An-124-100 airplanes carrying out delivery of oversized cargo by air.

At the same time, the use of services of third-party organizations deprives air carriers of oversized cargo, on the one hand, of obtaining the maximum financial impact from the transportation, and, on the other hand, leads to the concentration only on transportation functions, which, in our opinion, is fundamentally erroneous.

On the basis of the organizational and economic scheme of the use of loading and unloading equipment in air transportation of oversized cargoes developed by the author in [7] and economic principles developed by the author in [8] an economic-technological scheme-algorithm for the logistic support of the cargo air carrier’s activity in multimodal delivery of oversized cargoes was created, Fig. 1.

Everything begins with the receipt of the order for the transportation of oversized cargo from the cargo client by the airline with a description of the desired terms, parameters and conditions of delivery, after which the principal possibility of its delivery by air transport is analyzed. In case of a positive decision, price negotiations and signing of the contract for air transportation are further agreed upon. Further, the requirements for loading and transportation, the list of equipment and necessary devices taking into account practical experience of the carrier and the customer, outsourcing or insourcing of functions related to the development of additional equipment and technical solutions are prepared, a scheme for loading of cargo is modeled.

The organization of logistic support of the cargo air carrier’s activity within the transportation of oversized cargoes involves the implementation of financial-economic and technological aspects. The first ones include estimating transportation costs by solving the multicriteria task and assessing the profit, the second ones include preparing the aircraft for transportation, supplying it to the loading place, loading the aircraft in accordance with previously defined parameters, performing air transportation, unloading the aircraft taking into account these parameters.

The necessity to develop a complex of means, tools and models that will allow to optimize the activity of a cargo air carrier in multimodal delivery of oversized cargoes on the basis of using the criteria of optimality – income and profit was determined. Also, organizational and economic schemes and algorithms, which are required for logistic support of cargo delivery in multimodal connection, should be used.

When implementing any instruments to optimize the logistic support of a cargo air carrier in multimodal delivery of oversized cargoes, it should be remembered that the greatest problems often arise at the junctions of transport modes. These problems

increase many times in multimodal transportation of oversized cargoes.

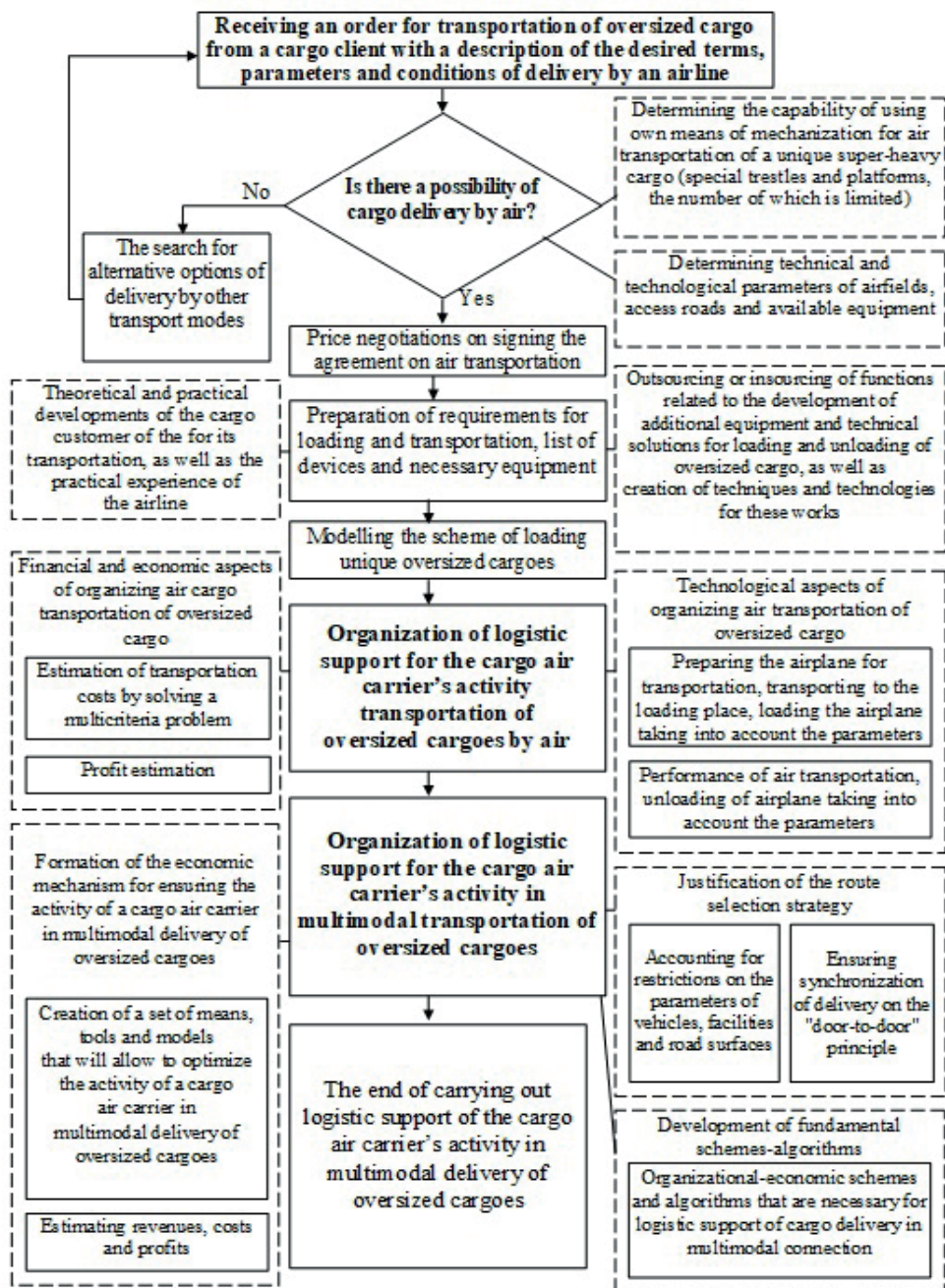


Fig. 1. Economic-technological scheme-algorithm of logistic support of the cargo air carrier's activity in multimodal delivery of oversized cargoes

As a rule, the complexities of organizational-technological and financial-economic nature emerge when reloading from special means for transportation of oversized cargoes from motor transport to an airplane and when unloading from it. It should be noted that the oversized cargo, generally, is not stored at the airport, this cargo is often indivisible, expensive and insured.

It should be specified that the key optimality criterion of the logistic support of the cargo air carrier's activity in the case of multimodal delivery of oversized cargoes must be both in speed and cost of delivery, however, the use of air transport in multimodal delivery, usually, highlights the need for delivery in a short time, therefore, speed is a dominant criterion. But, it should be remembered that the delivery by air can occur both within several hours and during several days or even weeks.

Generally, extremely short deadlines for the delivery of oversized cargoes are due to extraordinary circumstances and occur in cases of cataclysms, disasters, accidents, disruptions in delivery time that lead to significant financial and other losses.

An overall assessment of efficiency of logistics support of the cargo air carrier's activity in multimodal delivery of oversized cargoes should be carried out at the end. After all, the production and logistic activity of the air carrier as a whole depends on how efficiently specific delivery has been organized in terms of logistics.

**Conclusions.** The conducted scientific research made it possible to conclude that the inclusion of air transport in transportation and transport-technological schemes for the delivery of oversized cargoes allowed to solve a number of important tasks for the development of the world economy as a whole and air transport in particular. Since the delivery of oversized cargoes by air cannot be performed without involving other transport modes, which is expedient to implement, as it was determined by the efforts of the carrier – 3PL-logistics provider, a need arose to provide logistic support of its activity in multimodal delivery of oversized cargo.

It was revealed that the processes of logistic support of the cargo air carrier's activity in the case of multimodal delivery of oversized cargoes have not been studied enough and for this purpose the appropriate economic and technological scheme-algorithm has been proposed by the author.

Its peculiarity is the allocation of air and other transport components for the delivery of oversized cargo, as well as the element-by-element characteristic of delivery stages, and emphasis on financial-economic and technological aspects of transportation.

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## FORECASTING OF DEVELOPMENT OF AGRICULTURAL SECTOR IN BIOECONOMY: THE CASE OF THE EU

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**Annotation.** *The article is devoted to identify current trends and prospects of the development of the agricultural sector in the EU bioeconomy on the basis of constructing of the equations of trend lines and showing a short-term forecasting of the turnover and the number of workers employed in the agricultural sector in bioeconomy for the period 2014-2021. The study is based on the analysis of optimistic, most likely and pessimistic scenarios of the development of the agricultural sector in the EU bioeconomy.*

**Key words:** *equations of trend lines, agriculture, bioeconomy, biotechnology, the European Union, innovation policy, sustainable development.*

**Introduction.** The emergence of new business models and the expansion of opportunities in an innovative environment provide incentives for finding new ways to promote the sustainable growth for local entrepreneurship, employment and social development in countries around the world. The desire to increase productivity and efficiency in the agricultural sector and agribusiness field is related to the global needs of the world's population: firstly, the growth of the world population, that will reach 9,15 billion people in 2050 and 9,41 billion people in 2080, then it will decline to 9,2 billion in 2100 [1, p. 20]; secondly, the access to food in low-income countries is a crucial issue. The world tends to cross-sectoral interaction on the basis of the principles of sustainable growth and increasing the efficiency of all sectors of the economy against the backdrop of the depletion of natural resources and the growth role of environmental problems.

**Formulation of the problem.** The immediate problem, to which this article is devoted, is a general analysis of the volume of the turnover and the number of workers employed in the agricultural sector in the EU bioeconomy. However, the share of the agricultural sector in the bioeconomy of the EU is about 17% as of today's date [2]. The contribution of biotechnology to the agriculture is essential for the sustainability of life and food security, which is implemented with using of the biological resources. We consider it is important to submit a short-term forecast for 2014-2021 using the statistical data of the European Commission's data portal of agro-economic modeling (DataM) [2]. As bioeconomy is the newest research area, statistical information reflects its current description for the period of 2008-2014.

The main aim of the article is to determine the latest trends and perspectives for further development of the agriculture sector in bioeconomy on the case of the EU and to construct a forecast for changes in the turnover and number of workers employed in agriculture in the EU bioeconomy using equations of trend lines for the period 2014-2021.

**Analysis of recent research.** The role of the development of bioeconomy and applied aspects of using biotechnology in the agro-industry are the subjects of investigation conducted by foreign researchers, such as: N. Baltes and D. Voytas [3], G. Barrows, S. Sexton and D. Zilberman [4], D. Francis, J. Finer and E. Grotewold [5], C. Wang, R. Li, S. Quan, P. Shen, D. Zhang, J. Shi and L. Yang [6] and others.

**Research results.** The development of the forecast is an intermediate stage between the analysis of the current state of the agricultural sector in the EU bioeconomy and the elaboration of conceptual directions for its further evolvement. The dynamics of changes in the turnover generated in the EU bioeconomy was made using the graphical method with the subsequent drawing of the trend lines. The selection of the empirical function was made on the basis of linear, polynomial, logarithmic, power and exponential functions. Then, calculations having applied five trendlines were carried out for forecasting of the turnover on the basis of dynamics series. The validity coefficient of approximation  $R^2$  was used for the most optimal equation of trendline, which was very important for further calculations. If this coefficient approaches 1, then the trend equation may be a predictive model. Therefore, the results of the forecast of the change in the agricultural sector in the EU bioeconomy according to the coefficients of validity are shown in the table 1. However, it is expedient to perform calculations if  $R^2$  is greater than 0,5.

Table 1

**Results of forecast calculations of the change in the turnover generated in the agricultural sector in the EU bioeconomy using the trend lines**

No.	Trendline Name	Equation of Trend Line	The Validity Coefficient of Approximation ( $R^2$ )
1	Exponential	$y = 324,0e^{0,027x}$	$R^2 = 0,568$
2	Linear	$y = 9,75x + 323,29$	$R^2 = 0,587$
3	Polynomial	$y = 0,70x^2 + 4,13x + 331,71$	$R^2 = 0,596$
4	Logarithmic	$y = 26,47\ln(x) + 330$	$R^2 = 0,435$
5	Power	$y = 330,31x^{0,07}$	$R^2 = 0,418$

Taking into the account the table 1, the highest validity of approximation showed the polynomial function and its  $R^2$  is equal to 0,596 (a quadratic polynomial). In general, the validity coefficient of the approximation of all functions is disappointing. However, when we conducted calculations for a third-order polynomial equation, we obtained the value of the determination coefficient  $R^2 = 0,92$ , then for a fourth-order polynomials equation -  $R^2 = 0,99$ , so that we gained the highest value of validity approximation. As a general rule, the results based on high order polynomials, while comparing with real data, should be discarded, because they give inaccurate results.

Consequently, the forecast values of the agricultural sector in the bioeconomy of the EU for 7 years (2014-2021) are calculated with the help of the above obtained equations. The pessimistic forecast reflects the lower limit of the possible value of the indicator

(the dominance of negative factors of influence), the optimistic forecast indicates the upper limit of the possible value (the dominance of positive factors), and the most likely forecast reflects the most optimal scenario of development. Using the data from table 1, we picked up the highest  $R^2 = 0,596$  (the polynomial function) for optimistic forecasting, after we chose  $R^2 = 0,587$  (the linear function) for the most likely forecasting, and then  $R^2 = 0,418$  was selected for the pessimistic calculations (the power function).

It can be argued that the turnover generated in the agricultural sector in the EU bioeconomy in 2021 will be at least 397 and not more than 527 billion euros (Table 2). Besides, the forecasting the change in 2021 compared to 2008 showed that according to the most likely forecast, the volume of turnover will increase by 38%. Thus, according to the optimistic forecast, the turnover will increase by 57% to 2021 compared to 2008.

Table 2

**Optimistic, most likely and pessimistic scenarios of the change in the turnover generated in the agricultural sector in the EU bioeconomy (in billion euro), 2008-2021**

Year	Conditional Time, t	Baseline Data	Optimistic Scenario	Most likely Scenario	Pessimistic Scenario
2008	1	357	337	333	330
2009	2	315	343	343	347
2010	3	338	350	353	357
2011	4	371	359	362	364
2012	5	381	370	372	370
2013	6	391	382	382	374
2014	7	383	395	392	379
2015	8	-	410	401	382
2016	9	-	426	411	385
2017	10	-	443	421	388
2018	11	-	462	431	391
2019	12	-	482	440	393
2020	13	-	504	450	395
2021	14	-	527	460	397
Change in 2021 compared to 2008			57%	38%	20%

*\*Calculated by the author*

The results of the forecast of the change in the number of workers employed in the agricultural sector in the EU bioeconomy are shown in the table 3 and they also demonstrate optimistic results. Moreover, the validity of approximation of these functions is high and the criteria of  $R^2$  are high-precision.



Table 3

**Results of forecast calculations of the change in the number of workers employed in the agricultural sector in the EU bioeconomy using the trend lines**

No.	Trendline Name	Equation of Trend Line	The Validity Coefficient of Approximation ( $R^2$ )
1	Exponential	$y = 11,070,283.6754e^{-0.0214x}$	$R^2 = 0,9792$
2	Linear	$y = -217,275x + 11,040,942.85714$	$R^2 = 0,9798$
3	Polynomial	$y = -2,098.8095x^2 - 200,484.5238x + 11,015,757.1429$	$R^2 = 0,9801$
4	Logarithmic	$y = -651,861.5507\ln(x) + 10,965,732.1292$	$R^2 = 0,8863$
5	Power	$y = 10,985,217.5703x^{-0.0639}$	$R^2 = 0,8788$

The next forecast was made for the indicator "The number of workers employed in the agricultural sector of the EU bioeconomy" in a similar manner to the previous indicator. In order to conduct the forecast, we choose the function, which the most likely approximates the dynamics of the indicator, among several functions. Using the data from table 3, we picked up the highest  $R^2 = 0,9801$  (the polynomial function) for optimistic forecasting, after we chose  $R^2 = 0,9798$  (the linear function) for the most likely forecasting, and then  $R^2 = 0,8788$  was selected for the pessimistic calculations (the power function).

It can be argued that the number of workers in the agricultural sector of the EU bioeconomy will decrease annually and will amount to about 7,8 million people in 2021 (Table 4). Thus, the prediction of the change in 2021 compared to 2008 showed that the number of employees will reduce by 26% according to the most likely forecast.

The development of a realistic scenario for the EU underlines the need for countries to increase their focus on the use of biotechnology in the agricultural sector. The sustainable development of bioeconomy in rural areas will undoubtedly be a major factor for overcoming depopulation by creating jobs and business opportunities based on modern digital technologies and innovative business practices. Moreover, bioeconomy can also make a significant contribution to a more circular and resource-efficient economy by making better use of waste streams, including the recovery of nutrients. The agriculture is the main sector, because it produces the largest portion of biomass that is used as raw material for bioeconomy. Therefore, bioeconomy not only contributes to sustainable agriculture but becomes an important source of diversified incomes for farmers, as well as it is valuable factor in creating highly skilled jobs, competitiveness and growth in rural territories [7, c. 3]. However, the most important subjects of agricultural primary production (farmers and foresters) are currently not sufficiently integrated into creating the value chain of bioeconomy, thereby it plays a greater role for biomass suppliers than producers of biogoods.

Table 4

**Optimistic, most likely and pessimistic scenarios of the change in the  
number of workers employed in the agricultural sector  
in the EU bioeconomy, 2008-2021**

Year	Conditional Time, t	Baseline Data	Optimistic Scenario	Most likely Scenario	Pessimistic Scenario
2008	1	10 774 000	10 813 174	10 823 668	10 985 218
2009	2	10 625 500	10 606 393	10 606 393	10 509 277
2010	3	10 498 600	10 395 414	10 389 118	10 240 487
2011	4	10 099 300	10 180 238	10 171 843	10 053 957
2012	5	9 981 100	9 960 864	9 954 568	9 911 616
2013	6	9 666 400	9 737 293	9 737 293	9 796 813
2014	7	9 558 000	9 509 524	9 520 018	9 700 785
2015	8	-	9 277 557	9 302 743	9 618 364
2016	9	-	9 041 393	9 085 468	9 546 245
2017	10	-	8 801 031	8 868 193	9 482 190
2018	11	-	8 556 471	8 650 918	9 424 616
2019	12	-	8 307 714	8 433 643	9 372 360
2020	13	-	8 054 760	8 216 368	9 324 546
2021	14	-	7 797 607	7 999 093	9 280 494
Change in 2021 compared to 2008			-28%	-26%	-16%

*\*Calculated by the author*

In 2017, the European Commission published the explanatory note “New techniques in Agricultural Biotechnology”, which describes the modern advances in biotechnology and techniques, which are available to select and introduce desirable traits in animals, plants, and microorganisms used for food and feed production. The latest trends in the use of biotechnology in agriculture are: conventional breeding techniques (CBT), established techniques of genetic modification (ETGM) and a growing number of what are commonly called new breeding techniques (NBT) [8].

It should be noted that the agri-food activities offer many options to create additional value by promoting innovation, which could lead to production and introducing new products to the market, and the adoption of modern and more efficient methods of production.

The EU's strategic approach to agricultural research is oriented towards primary production and distinguishes between five perspectives for research and innovation, which are defined in two directions [9]:

a) Increasing capitalization from a land use, namely the sustainable primary production: priority 1: resource management (in particular, soil, water and biodiversity); priority 2: healthy plants and animals; priority 3: integrated environmental approaches

from the farm to the landscape area.

b) Raising rural innovation, namely the modernizing rural areas and policies: priority 4: supporting new discoveries for rural development; priority 5: increasing human and social capitals in rural areas.

**Conclusions.** The quadratic polynomial function was chosen as it showed the most accurate results in the process of constructing forecast scenarios for the development of the agricultural sector in the EU bioeconomy. According to the forecast of the optimistic scenario for the EU, the growth of the turnover generated in agricultural sector in the bioeconomy will increase by 57% and the number of employed will decrease by 28%. The onset of the pessimistic forecast for the agricultural sector's turnover generated in bioeconomy is 20%, which is unlikely, and the number of employees decreases by 16% for EU countries. The most likely scenario is the forecast with the growth in the agricultural sector's turnover in bioeconomy at the level of 38% and the level of employees declines by 26% at the corresponding sector. Thus, there is a further growth in the turnover generated in the agricultural sector in the EU bioeconomy, which confirms the increasing role of biotechnology in the future in the context of innovative development of countries according to all the forecasted scenarios of its development. It can be concluded that the use of biotechnology is a necessary activator that influences the formation and the expansion of agribusiness, and also provides changes in the structure of the agricultural complex based on quantitative and qualitative methods.

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## THEORETICAL FOUNDATIONS OF DECENTRALIZATION: ITS ESSENCE, FORMS AND CONSEQUENCES

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**Annotation.** *The article deals with the systematization of approaches to the interpretation of the notion of decentralization in the world scientific thought. The classification of decentralization for a number of features is carried out. The essence, causes, preconditions and ways of introduction of budget system decentralization are discussed and positive consequences of such a reform for the local budgets and the state as a whole are highlighted.*

**Key words.** *Decentralization, budget system, local government, revenues and expenditures of local budgets.*

**Theoretical and practical problems.** The overwhelming majority of countries in the world that are at a high level of economic and social development have undergone a decentralization reform in one form or another. In many of those countries the decentralization began in the 1970-s of the XX century. Ukraine has initiated the course of decentralization since 2015 and thus, makes its first steps towards democratization of social processes on a European scale. The concept of decentralization is relatively new in Ukrainian scientific area. However, it should be noted that the successful implementation of the reform in practice is impossible without in-depth understanding of the theoretical foundations of decentralization, its essence, preconditions and consequences both for the budget system and for the state in general.

**Analysis of recent research and publications.** The issue of decentralization in its various aspects is being actively discussed in both Ukrainian and worldwide scientific literature. However, taking into consideration that the very definition of decentralization appears to be applicable to many disciplines, there is a growing need for a clear structuring of approaches to defining the essence of decentralization, its forms and methods of implementation.

The objective of the article is the systematization of approaches to defining the essence of decentralization, outlining the preconditions and the need for budget decentralization, as well as identification and justification of the positive effects of such a reform for the country.

**Findings.** At the semantic level, the term decentralization (from Latin *de* – negation, *centrum* – medium, center) is defined as distancing from the center, a process opposing centralization. Consequently, if centralization is treated as a reorganization of a hierarchically constructed system, in which some processes are transferred into a higher (closer to the center or central) level, then it is logical to assume that within decentralization the movement of such processes occurs in the opposite to the center direction.

The clarification of the term. It is worth noting that in the scientific theory and practical research the notion of “decentralization” appears to be complex, multidimensional and does not have a single, consistent interpretation. Moreover, this term is interdisciplinary and is used in the field of research of a number of social sciences.

Thus, in management, for instance, “decentralization” in the management system of the organization is manifested as a form of delegating responsibilities and certain powers and tasks to subordinates by the head. The process presupposes empowering employees with more rights and, consequently, greater responsibility [1].

Political area considers decentralization as a managerial political system aimed at practical realization of meaningful decisions that are organizationally or spatially outside the direct influence of the central government.

In the field of public administration, decentralization is defined as a focused process aimed at improving public administration, implemented in the transfer of competences from higher to lower levels of government [2].

From juridical perspective, decentralization implies the idea of transferring the right to make decisions to bodies elected by interested citizens.

Olena Boryslavska [3] in her studies concludes that decentralization is a way of defining and demarcating the tasks and functions of the authorities, in which most of them are transferred from the level of central bodies to a lower level and become the tasks and powers of the lower level bodies.

In works devoted to issues of public administration, Bernard Hurne defines decentralization as a method of territorial organization of power, in which the state transfers the right to make decisions on certain issues or in a specific area of the structures of the local or regional level, which are not part of the system of executive power, and is relatively independent of it [4].

The multidimensional approach of decentralization is traced by Professor Anatolii Kolodiy who distinguishes the following legal aspects of decentralization issues:

- in the process of decentralization, the voluntary delegation of competence and authority from one authority to another takes place;
- decentralization is a subject notion that involves the existence of at least two aspects of relations: one acts as a state in the person of the central government, on the other, there are local authorities;
- the ultimate goal of reform is a full guarantee that the rights and needs of the people are exercised and satisfied [5].

Summarizing these interpretations, we come to the conclusion that decentralization can be defined as a concept of an action or a process (transfer, turn, distribution, reception) or as a phenomenon (system, concept, way of organizing power).

Based on this, we believe that in order to better understand and systematize the views of scholars on the essence of decentralization it is expedient to consider this concept in accordance with two approaches – systemic and procedural.

According to the first approach, decentralization means a holistic system of organization of power, in which central and local elements are closely interconnected

in the framework of general purpose and endowed with a certain set of powers of a certain degree, characterized by a significant level of competence and responsibility of the grassroots units.

From the point of view of the procedural approach, decentralization should be considered as the actual process of delegation of powers (rights, functions and resources) from the central to the local authority level within a holistic system (political, administrative, financial, etc.).

Types and forms. In the process of studying theoretical foundations of decentralization, one cannot ignore the typology of this phenomenon according to types and forms.

Since decentralization as a process involves the existence of such elements as the subject of action, the object (sphere) of influence, special attention should be paid to the typology of decentralization in accordance with two defining features. Taras Vos and Yurii Stelmakh follow this principle of division and distinguish the following types:

- territorial decentralization involves the formation of independent bodies of power, separated and hierarchically subordinated to the central executive power – local self-government bodies;

- functional decentralization is the recognition of specialized organizations (trade unions, unities) by the authorities of power, authorities with the delegation of certain powers of a public character in the defined legislative areas in accordance with the established procedure;

- subject decentralization is a system of managerial relations between representatives of a particular profession and the provision of certain elements of public authority in their respective professional sphere by their representative body [6].

Despite the interdisciplinarity and the multidimensionality of the term, the most general, simplified, and universal for any sphere of its interpretation term can be derived and it is presented spatially. In a broader meaning, decentralization is seen as any process of delegating authority from the center to the periphery within the system.

In accordance with the spatial interpretation of decentralization, there is a distinction between competence and specification of powers in the following forms:

- vertical decentralization is based on the delegation of authority within the hierarchical system of government, i.e. from central to local, with a clear definition of sphere and scope of powers of such bodies, as well as the limits of their responsibility;

- horizontal decentralization is a division of rights and tasks between grass-root links;

- selective decentralization presupposes the delineation of the right to take different types of decisions between different links of the system.

With reference to the criterion of belonging objects of delegation to the hierarchical vertical, here is a division into:

- bureaucratic decentralization, i.e. giving the right to the relative autonomy of local administrative bodies that are formed, appointed and subordinated to the central government and belong to its direct hierarchical vertical (in fact, the governorate);

- democratic decentralization known as the formation of an extensive system of



independent local authorities on an electoral basis.

The classification of decentralization in terms of purpose and scope is widely used in domestic and foreign policy. According to this criterion, political, economic, administrative and budgetary decentralization are distinguished.

Political decentralization is realized through the delegation of political power to partially autonomous local governmental bodies that are accountable to the local electorate, as a result of which citizens, through their own elected representatives, have a greater influence on the development and implementation of public policy in various areas of social activity, which contributes to a more comprehensive, in-depth consideration of immediate interests of local communities.

Economic decentralization manifests itself through privatization of businesses, the delegation of responsibility for certain functions of the state, the provision of certain public services to private structures.

Administrative decentralization is realized in the transfer of management functions by central authorities to local self-government bodies that are subordinate to them within the limits defined by the legislation, but are not completely dependent on the central level. This kind of decentralization extends the powers and competence of local authorities, promotes their organizational and financial autonomy.

Financial decentralization (fiscal, budget) is a process of allocating functions, financial resources and responsibility for their use between central and local levels of management.

In their scientific research Sviatoslav Herchakivsky and Orest Kabash come to the conclusion that the ability of local self-government to independently and efficiently provide public services to the population should be considered as financial decentralization, ensuring coordination of expenditures of local authorities with the needs and preferences of citizens [7].

Volodymyr Andrushchenko [8] defines budget decentralization as a specific way of organizing a budget system and building relationships between budgets of different levels, based on the transfer of authority and relevant financial resources from the center to the regional and local levels.

According to Ostap Vasylyk, budget decentralization means, first of all, the legally established right of local governments for certain incomes, on the basis of which, and in accordance with the functions assigned to them, they will independently determine the amount and usage of budget funds.

Iryna Hruzina [9] states that budget decentralization is aimed at reforming the budget system towards creation of autonomous and financially-capable layers of the local level for the effective implementation of the budget powers assigned to them.

For foreign countries (obviously due to differences in translation) the term “fiscal decentralization” is more applicable.

Nina Boshman believes that fiscal decentralization in general is based on the delegation of powers in the field of taxation and implementation of expenditures from central state authorities to state authorities at subnational levels. The scholar emphasizes

that in a budget system with a high degree of decentralization, local authorities have significant powers in mobilizing resources, mainly through a solid tax base. In the majority of countries, on the way to fiscal decentralization, a powerful set of legal reforms has been implemented, in particular in the area of budget, taxation, treasury services [10].

Kenneth Davey [11] notes that fiscal decentralization is expressed through the division of spending powers, revenue sources and responsibilities between levels of government (national, regional, local).

In the result of a scientific search in the direction of decentralization, it has been found out that economists widely apply three variants of the concept: financial, budget and fiscal decentralization.

We believe that it is inappropriate to identify and use these definitions as interchangeable concepts. Financial decentralization is based on the notions of finance and local finance, which, by definition, are treated as a system of economic relations between a wide range of entities (state is represented by central authorities, local authorities, legal and natural persons, other states, international institutions) regarding the distribution and redistribution of gross domestic product and national income in the process of accumulation from certain sources and the use of financial resources for specified purposes.

From this perspective, financial decentralization should be interpreted as strengthening the position of local authorities in implementing fiscal policy, increasing the influence in stimulating the production and market activity of the regions, activating the principles of autonomy of financial and credit operations of commercial direction within the national and international financial markets.

The essence of budget decentralization is steadily derived from the notions of “budget”, “local budgets” and “budget system”. Since the budget category is an integral part of the financial system, budget decentralization is more restrictive concept than a financial one. Within fiscal decentralization, we can highlight such a specific feature as increasing the competence of local authorities in optimizing the formation of local budgets, strengthening relative independence in the management of revenue sources and expanding delegating powers, by means of which legislative rights and needs of citizens are exercised and satisfied.

In our opinion, fiscal decentralization is determined by the tax mechanism and serves to ensure an effective raise of local budgets by tax payments, the growing importance of the local taxation institute, and an increase in the ability of local authorities to manage tax instruments according to their own priorities and law.

Despite the wide range of forms of decentralization, they are rarely embodied in their pure form and can be combined in a variety of relationships, levels and amounts.

Stages. The process of decentralization, as a general approach, takes place in three interrelated stages:

1. definition of the spatial basis of administrative-territorial units;
2. delegation of powers to them;

3. provision of the necessary resources.

The first stage falls under the concept of territorial-spatial decentralization and in practice is implemented through the administrative-territorial reform. Each state, which is on the way of decentralization, goes through changes in the administrative-territorial system.

The second stage can be considered from the point of view of the theory of administrative decentralization as the delegation of managerial authority from the central to the local authorities. However, at this stage already, budget decentralization begins to unfold, as powers are delegated to the places alongside the power functions.

The third stage is realized in the formation of the resource base of the territories for the fulfillment of the powers provided by the legislation and in practice it manifests itself in the existence of the institute of local budgets which, according to budgetary decentralization, should be filled with sources sufficient for the execution of both their own self-governing and delegated powers of local authorities.

One of the important preconditions for the country's decision to implement decentralization is the existence of differences within a particular country. Scholars agree that the feasibility of introducing budget decentralization is conditioned by heterogeneity in the development of regions, significant differences in historical, natural conditions of different territories, political factors, economic and social dominant. In view of this, there is an objective need for organizing production and provision of public services in such a way that they are as close as possible to the preferences of the population in different regions of one state within the framework of national strategic goals.

Outcomes. In spite of the multivariate interpretation of the essence of decentralization, as well as different visions of its purpose, forms and objective, one cannot deny the existence of a wide range of positive effects brought by the introduction of decentralization in virtually all spheres of public life of the state. Summarizing the study of foreign experience in the implementation of decentralization, there can be distinguished the following positive effects:

- allocative effectiveness of providing public goods. There is a reduction in the cost of their production process by reducing the costs associated with researching the needs and interests of consumers, as they are in close proximity to the process of such production;
- there is a simplification of the system and procedure of decision-making and it minimizes the procedure of information reception from the subject of decision-making to its executive and vice versa in temporal and spatial dimensions;
- the process of formation and implementation of economic, social and fiscal policies at the local level is more flexible in adapting to external and internal changes;
- autonomy of local authorities, which arises in the process of decentralization, promotes rational spending of limited budget resources, interest in finding reserves for increasing local budgets and building up its own budget capacity;
- transparency in the decision-making process and its accessibility to the public contributes to improving the efficiency of administrative activities, prompt detection of

mistakes and gaps in implemented policies;

- the level of consciousness and personal responsibility of officials for the decisions made regarding their own territorial unit is significantly increased;

- the interaction between the authorities and the population at the local level takes place on the basis of partnership, which generates a sense of unity and minimizes manifestations of bureaucracy;

- in a decentralized budget system, citizens tend to understand more clearly the relationship between their tax payments paid and the quality of public services that they receive in return. This contributes to raising the level of fiscal responsibility among the population;

- increase in initiative and motivation of personnel resources of local authorities, which perform their functions in favor of the territory of their families, friends, close environment;

- decentralization is an important instrument of democratization of society and expanding the freedom of expression of the citizens, because it enhances the ability of the population, belonging to different groups according to needs and interests, to influence decision-making processes of local authorities and, therefore, promotes a sense of significance and belonging to the management of local affairs;

- the maximum consumer proximity to the public service provider takes place, which improves the quality of the service and creates conditions for potential flexibility to improve them.

**Conclusions.** In our opinion, the goal of fiscal decentralization is the formation of capable, self-sufficient and initiative territorial communities with an adequate and stable financial base that can ensure the qualitative fulfillment of their legally mandated functions, promote the creation of conditions for economic and social development of the respective territories in order to increase the general welfare of citizens, development, strengthening and prosperity of the state as a whole. The decentralization reform is systematic and involves structural changes in many areas of public life. Its effective implementation should be based on the co-ordination of many sectoral policies and meet the following conditions:

- understanding the essence of decentralization by all its participants;
- ensuring the management of an effective human resources reserve;
- balance of financial potential and powers implemented at the expense of local budgets;
- improving the quality and accessibility of public services for the population.

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## SECURITY OF THE BANK CREDIT ACTIVITY: ANALYSIS OF CONCEPTUAL CATEGORIAL APPARATUS AND SELECTION OF PRINCIPLES

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**Annotation.** *In the article, as a result of the research, the concept of «security of the bank», «security of banking activity» and «security of the bank credit activity» are examined. The proposed banking activity security is viewed not only from the point of view of the bank security as an organization, the security of banking personnel and the security of banking operations, but also as the security of the bank shareholders, the security of the bank competitors and the security of its partners. The principles of safety of credit activity of the bank are singled out.*

**Key words:** *security of the bank, security of banking activity, financial and economic security of the bank, security of the bank credit activity, principles of security of the bank credit activity.*

To succeed in managing security, it should be guided by the principles that regard it as a science that needs to be explored and developed; as an art to be understood; as a culture that needs to be brought up by a businessman. In the most general sense, the concept of "security" characterizes the state and degree of protection of any subject and his ability to withstand changes in the conditions of functioning. The formation of the security of credit activity should be considered as the security of the process of formation of credit resources and the security of the allocation of free funds.

A significant number of scientific works, in particular fundamental research by leading Ukrainian scientists such as O. Baranovskyi, S. Bukin, M. Zubok, V. Kovalenko, O. Khytrin are devoted to the issues of bank security and banking. However, questions about the formation of the security of credit activity in the bank remain practically unexplored. The purpose of the article is to study the approaches to the interpretation of the concept of "security of credit activity" and the allocation of its principles. Regarding the goal, the following tasks should be carried out: to analyze the approaches of scientists to the study of the concepts of "bank security", "security of banking activity" and "security of the bank credit activity"; to single out the principles of security of credit activity of the bank.

The security of banking institutions determines the financial security of the state, as the banking system is the most important component of the financial and credit sector of the state. The Encyclopedia of Banking interprets the security of banks as a system of measures that provides protection of the bank owners, customers and employees and leaders' interests from external and internal threats [1, p. 91].

Three groups of measures of the formation of bank activity security can be determined:

1. Preventive measures;

2. Precautionary measures against unlawful actions of specific subjects of bank activity;

3. Precautionary measures on illegal actions by the subjects of threats and localization of negative consequences of these actions.

The safety of a commercial bank and the safety of the banking system are closely interconnected and interdependent. Problems that arise in a separate banking institution as a structural element of the banking system can lead to serious violations and problems in the banking system as a whole. Since banks work mainly with borrowed funds, public trust is important to them, as any violations in this direction can lead to an outflow of deposits from the banking system. In turn, from the side of the National Bank of Ukraine (NBU) - trust is an important factor in crediting commercial banks, because in this way the NBU puts capital into the banking system and must be sure of the creditworthiness of each banking institution. Art. 67 of the Law of Ukraine "On Banks and Banking" states that the purpose of banking supervision is the stability of the banking system and the protection of the interests of bank depositors and lenders regarding the safety of keeping customers' funds in bank accounts. In conducting banking supervision, the NBU has the right to require from banks and their managers to eliminate violations of banking legislation, the implementation of regulatory acts of the National Bank to avoid or overcome unwanted consequences that may endanger the safety of funds entrusted to such banks or harm the proper conduct of banking activities. Art. 72. of the same law stipulates that the NBU has the right to carry out inspections of non-bank institutions or persons in order to verify compliance with banking legislation. It is stated that non-bank institutions or persons who may be the subject of a review by the NBU, may include a substantial participant in a bank if the NBU considers that he does not meet the requirements established by this law for substantial participation or adversely affects financial security and stability of the bank [2].

According to Hytrin O. I., the security of the bank can be defined as a dynamic state in which it: is legally and technically capable of performing and realizing the functions inherent to it; provides a steady protection of vital socio-economic interests of citizens, business entities, society and the state from the negative impact of internal and external threats; has the potential for both quantitative and qualitative growth and has mechanisms for the realization of this potential [3, p. 122].

The author also points out that the main objective of the bank security is to eliminate the possibilities of harming the bank or overstating its benefits, ensuring its steady and most efficient functioning at the present time and accumulation of sufficient potential for development and growth in the future, qualitative realization of transactions and agreements.

Another interpretation is given by the well-known security researcher Baranovskyi O.I. In his opinion, the security of the bank is a set of conditions under which the actions or circumstances potentially dangerous for the financial position of a banking institution are eliminated or reduced to such a level that they can not cause losses when functioning of the bank, preservation and restoration of its property, infrastructure, as



well as preventing the bank from achieving its statutory goals; the state of protection of the financial interests of the commercial bank, its financial stability, as well as the environment in which it operates [4, p. 12].

Summing up, it can be argued that the security of banking institutions is an important component of national security, characterized by balance and resistance to external and internal threats, its ability to achieve its goals and generate sufficient financial resources to ensure sustainable development.

Bukin S. [5] believes that the security of the bank is taken care by the owners of the bank, its shareholders, for whom the development of their business is important and they take material, moral and social responsibility for it. These issues are also relevant for bank partners and for bank staff. The author suggests considering the security of banking activities as:

- security of the bank as an organization (emphasis should be placed on its external and internal environment. Focusing on clients, state institutions and citizens, as well as on criminal environment - in the external environment; in the internal environment - on the work of the bank staff, informal groups, and also on the administration of the bank);
- security of banking personnel (the focus is on the internal environment, namely, the personal security of the bank staff. In practice, it can be expressed because of reluctance of banking personnel to participate in criminal or fraudulent operations and the requirement of additional payment for banking staff for overtime work in a bank institution);
- security of banking operations (attention is focused on the technology of professional violations due to insufficient staff skills and the use of the current order and rules, deficiencies and violations in the bank in the personal interests of banking personnel).

We will not agree with the author on the allocation of only three components when considering the security of bank activity and we suggest to consider this type of security, adding separately the safety of shareholders of the bank, competitors of the banking institution and its partners.

The security of the bank shareholders must include the protection of the rights of depositors of shares in the charter capital of the bank from fraudulent actions on the part of other shareholders, misuse of their vote for their own commercial purposes, loss of profit or raider attacks.

The safety of competitors of the bank focuses on protection against unlawful competition in the market of banking services, false data about the activity of the banking institution, the reason for which is the incompetence of individual managers and specialists of the bank, their intentional actions and the desire of individual employees to personally be enriched at the expense of the bank capabilities, in that including through conspiracy with clients or a criminal offense, as well as with potential competitors.

The security of the bank partners involves the elimination of unlawful actions by competitors, clients and those interested in distorting the information about the bank, regarding the service at the bank, the existing connections of the banking institution with

the intermediaries in the market, the number of contracts and business characteristics.

According to a survey conducted by one of KPMG largest consulting companies, Ukraine today ranks 6th in the world in terms of the number of robberies and fraudulent operations carried out by its employees. Annual losses in companies due to theft, abuse or other fraudulent schemes of personnel can reach up to 7% of revenue. Almost 80% of losses of Ukrainian companies is a matter of deliberate actions or a negligent attitude of their own personnel. At the same time, in the course of the survey, 56% of the polled companies indicated that they lacked a well-functioning anti-fraud system, 37% had a formal scheme [6].

Let's dwell on the issues of financial security of commercial banks, as the undermining of trust in credit institutions affects the financial security of the entire country. Financial security of banks is a national and international issue. To help combat fraud, security chiefs representing the world's largest banks and banking groups have joined forces under the auspices of the International Banking Security Association, whose mission is to facilitate the exchange of information between its members and the provision of mutual assistance in preventing and finding actions against banks.

According to Baranovskyi O.I., financial security of a commercial bank is: a set of conditions in which the action or circumstances potentially dangerous for the financial condition of a commercial bank are prevented or reduced to such a level when they are not capable of causing harm to the established order of the bank functioning, preservation and rebuilding its property and infrastructure and preventing the Bank from achieving statutory goals; the state of protection of the financial interests of the commercial bank, its financial stability, as well as the environment in which it operates [4, p. 12-13].

It is believed that at the present stage of development of the banking system and the inefficient use of financial resources, the distinction between economic and financial security is particularly relevant for banking institutions, and their consideration as separate, complex and integrated systems, which have their components, are unique for each bank, since they depend on the direction of activity of the banking institution, presenting the consumers with relevant banking products and services.

In our opinion, the system of financial and economic security of the bank should combine subsystems that are related to the main banking operations of the bank: credit, currency, investment and payment.

The priority place in the security system of banks, non-bank financial and credit institutions (credit unions, pawnshops, leasing companies, etc.) and NBU takes credit safety or safety of credit activity. Zubok M.I. notes that in conducting their lending activities, banks carry particularly large losses, which can lead to bankruptcy and liquidation of the banking institution at the final stage. The highest share of revenues (70% of all transactions) in banking activities is precisely on lending, so developing the right protection of credit activity is a priority task for every commercial bank.

The formation of the security of banking operations, as a rule, is complex and depends on the effective use of their technologies, as well as the formation and active use of protection measures. These operations are subject to the most serious protection

hence income from credit operations is greater than their half in the total bank profits.

The most difficult stage in protecting a credit transaction, as a component of credit activity, is the repayment of funds in case of non-fulfillment by borrowers of their obligations under loan agreements. Experience shows that banks in such situations should restructure their loan debts and prolong the term for their return, negotiate with debtors, during which they can find mutually acceptable solutions, conduct litigation and take part in an enforcement proceeding, open on their debts, to capitalize their debts to corporate rights, to initiate bankruptcy of debtors, to inform other banks about the unfair relation of debtors to the fulfillment of their obligations, together with law enforcement bodies to detect signs of criminal use of credit funds and initiate criminal proceedings against debtors, as well as use other methods.

However, domestic banks have not yet developed a single system of security measures for credit operations. When forming the security of credit activity, special attention should be paid to the cooperation of the bank departments involved in the credit process. In our opinion, as the practical experience shows, domestic banks include the following most important departments: credit, bank risks, legal, marketing and security. But coordination of interests and combination of efforts on credit operations in the internal banking system will be an inadequate measure; it is necessary to establish cooperation between banks and non-bank financial institutions (for example, insurance companies), which will be able to guarantee the security of banks in providing credit services.

Based on these considerations, we can argue that the security of bank credit activity is a complex of measures taken by the banking institution, borrowers and the state to prevent negative effects that may have internal and external threats to the lending process in order to maintain profitability, liquidity of the bank.

When forming the security of credit activity of financial institutions, it is necessary to determine the principles that should be guided by the implementation of credit activities. It should be emphasized that practically no author has allocated the principles of safety of credit activity. Taking into account the given data, the principles, which should be used when forming a security system of credit activity of the bank, should include:

The principle of systematic - it is advisable to build protection of credit activity of banks on the systematic approach with certain measures and means. The analysis of bank credit activity shows that domestic banks lack such a system, since often there is a mismatch between the bank departments in the process of lending, the actions of employees within the bank lending department regarding the provision of specific types of credit and the bank relations with their clients, which adversely affect the formation of the security of lending activities of the bank.

The principle of economic feasibility - the formation of the security of bank credit activity should not lead to deterioration of the conditions and the status of the creditor and the borrower, impede the realization of their interests, and, first of all, assess possible losses and security costs.

Principle of complexity - it is necessary to take into account the external and internal

threats which affect the security of credit activity of the bank; formation of security of credit activity and protection against possible threats by lawful methods.

The principle of consistency - is the observance of a compromise between the degree of credit risk and the expected results. It is impossible to predict the variants of the development of events and the possibility of their occurrence may lead to the adoption of a wrong decision on the issuance of a loan.

The principle of opportuneness - provides for the precautionary nature of measures for the formation of security. Timely taken decisions in the credit process lead to correct actions in the formation of integrated security in the early stages of developing the security system of lending activity on the basis of analysis and forecasting of the circumstances, security threats, and the development of effective prevention measures.

The principle of purposefulness - maintaining the security of credit activity is carried out in strict accordance with the purpose specified in a loan agreement between the creditor and the borrower, which he has no right to violate during his action. The principle of purposefulness is included in the comprehensive bank security program approved by its management.

Principle of return of funds received on a loan - the borrower must return the lender the full amount of the value of the loan received. The principle of term of the loan when concluding a loan agreement does not guarantee the repayment of the amount of the loan within the term specified in the contract.

The principle of payment - indicates the repayment by the borrower to the lender, in addition to the principal amount of the debt, and interest for use. The establishment of the principle of payment is preceded by a significant economic basis, namely double losses of the creditor in the transfer of its free funds to the borrower: part of the income which is in a form of withdrawn from the circulation funds, that becomes the source of credit, the benefits and conveniences inherent in the retention of funds released in circulation in liquid form.

The principle of security - acceptance by the creditor of additional measures to guarantee the repayment of the amount of credit and interest for its use. The principle of security plays an important role in protecting against credit risks and is the last obstacle to the stated risk.

Principle of timeliness - the free funds of the creditor are transferred to the borrower for a clearly defined term, which parties must agree upon the entry into credit relations. The timeliness follows from the purpose of the loan and serves as a prerequisite for further deployment of credit relations.

The principle of fair lending - banks must make decisions on lending in accordance with legal standards and principles, ethical norms and fair treatment of the borrower, which may be a natural or legal person, in the case of lending to a commercial bank or a non-bank financial institution, or a commercial bank, in case of lending to the National Bank of Ukraine.

The principle of efficiency - the formation of the security of credit activity of the bank should be carried out on a permanent basis, which allows timely response to the

appearance of external and internal threats. Provides rapid response to the manifestation of threats and risks, timely bringing to the attention of the management of available data for making sound management decisions.

The principle of confidentiality - internal information of the bank on the possibility of crisis processes in the credit process and the reduction of financial stability should be a commercial secret of the bank, since its disclosure can cause panic among its clients.

**Conclusions.** Thus, the security of credit activity should be understood as the complex of measures of a banking institution, borrowers and the state in order to prevent a negative impact that may endanger the internal and external nature of the lending process in order to maintain profitability and liquidity of the bank. The formation of the security of bank credit activity is a complex and labor-intensive process that should be conducted on a continuous basis purposefully and persistently, with the necessary degree of activity throughout the entire credit process.

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## ISSUES AND PROSPECTS OF IMPLEMENTATION OF PUBLIC DEBT MANAGEMENT POLICY IN UKRAINE

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**Annotation.** *Issues connected with the formation of public debt management policy in the country are discussed in this article. The dynamics and tendencies of public debt formation in Ukraine are given and tendencies of public debt management policy implementation in EU countries are analyzed. It is emphasized that in order to minimize debt risks and improve public debt management, the country needs to take into consideration changes and trends in the financial market. Relevant indicators can be developed in close partnership with both Ukrainian and European market participants. The development of such indicators requires taking into account Ukraine's public debt structure: a large part of it is denominated in foreign currency, which may cause a serious budget crisis in case of national currency devaluation.*

**Key words:** *Ukraine, public debt, internal debt, financial resources, government borrowing, debt policy, European Union.*

Difficulties on the way to financial stabilization and economic growth of Ukraine are largely due to the shortage of financial resources. One of the instruments for solving financial problems and reviving economic situation in the country is public loan [1]. Public loan leads to public debt formation and provides for the existence of policy instruments that can ensure the formation of effective public debt management.

The assessment of tendencies in Ukraine's debt policy in 2014-2017 shows that in order to improve it, a complex of actions is necessary, which can have a positive impact on the country's social and economic development as well as financial stability. Such actions should be taken considering the state of the Ukrainian economy and effect of various factors associated with the impact of global economic crisis. A significant increase in repayment amounts and those of servicing public and government-backed debt in the short and mid-term causes extra debt pressure on the state budget and reduces state funding of important investment projects.

One of the instruments of restricting government borrowing is public debt-to-GDP ratio. This indicator varies significantly from country to country, depending on conditions of functioning for the budget, currency and money-and-credit systems in these countries. For instance, in Estonia, according to 2016 data, the public debt-to-GDP ratio does not exceed 10% of GDP, and in Japan it is 238% of GDP [2]. Figure 1 shows the dynamics of external public debt, gross external debt and GDP of Ukraine during 2008-2016. The figures of Ukraine's GDP in USD show its decrease at the time of crisis aggravation. It is also noticeable that public external debt is constantly growing.

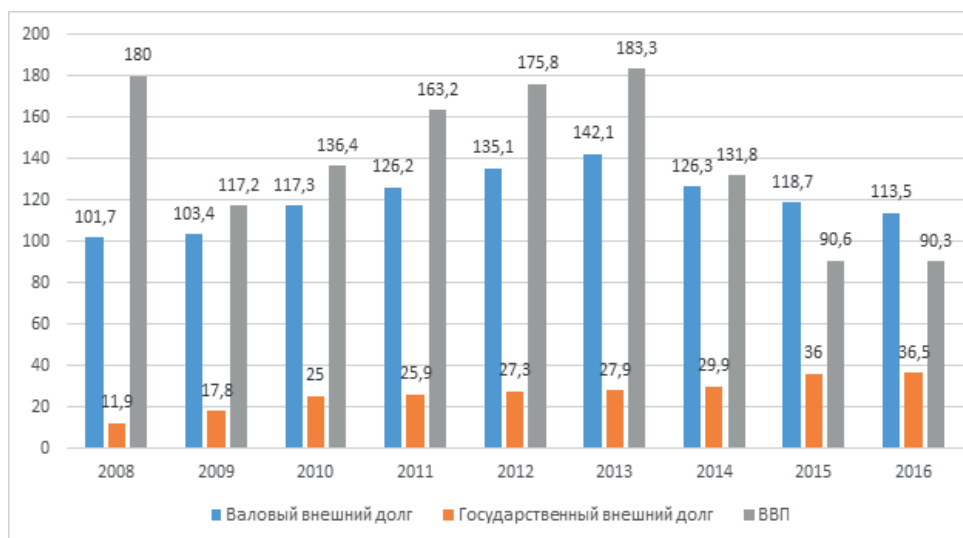


Fig. 1. Dynamics of external public debt, gross external debt and GDP of Ukraine in 2008 – 2016, bn USD

Source: Ministry of Finance of Ukraine, National Bank of Ukraine

Therefore, in 2008 the external public debt was 11.9 bn USD, but at the beginning of 2017 it already amounted to 36.5 bn USD. It is worth noting that the dynamics of gross external debt of Ukraine differed from external public debt figures. Within the aforesaid period, gross external debt grew from 101.7 bn USD to 113.5 bn USD.

During the global financial crisis, in many European countries debt obligations of various commercial banks were passed along to EU governments. Financial support was provided by the European Central Bank (ECB), which took such measures to prevent a deeper crisis aggravation. Starting from 2010 and on, ECB bought out state securities of Greece, Portugal, Spain and Ireland and also provided credit support to various European banks.

In conditions of international market volatility and foreign currency indebtedness domination in the structure of the public debt of Ukraine, it becomes objectively necessary to redirect the country's debt policy towards the use of internal sources and reserves. In this context, the promotion of government borrowing in hryvnias and thus the increase of the hryvnia part in the structure of Ukraine's public debt to over 50% become paramount [3].

The practice of recent years shows that local debt in the domain of general state management creates the risk of non-repayment in Ukraine. In particular, in 2015 the Kyiv City Council was unable to make planned payments on its external debt, therefore it was transferred to government debt by a government resolution and in this way the government debt was made even bigger [4].

In order to make the debt policy of the Ukrainian government more effective, it is



worth paying attention to experience and regulatory norms of EU member countries. There is a valid association agreement between our country and the EU which went into effect in September 2017. This Agreement is intended to ensure a whole new and more profound format of relations between Ukraine and the EU, including in the field of finance.

Non-fulfillment of income mobilization tasks and deficit growth to 78.1 bn lead to increased government borrowing. At that, the volume and structure of this borrowing differs from the volume and structure of debt repayment. Thus, whereas external debt repayment made 52.8 bn, external borrowing made 90.6 bn UAH, repayment on internal debt obligations made 68.0 bn and borrowing made 209.6 bn UAH. It should be noted that the total amount of borrowing in 2014 was 1.97 times bigger than the planned amount at the time of state budget preparation in January.

A significant deficit of state budget requires spending optimization. Whereas during 2013-2014 the deficit amount increased, capital outlays from the state budget decreased. Whereas in 2013 the deficit was 64.7 bn, or 4.5 % of GDP, and capital outlays were 247.9 bn (17% of GDP), in 2014 the deficit made up 78.1 bn UAH (5% of GDP) and capital outlays made 204.1 bn (13.0% of GDP) [5].

Besides repayment and financing of deficit, a great part of public borrowing was spent on capitalization of NJSC “Naftogas”, namely 96.6 bn UAH. The total sum of deficit of the state management sector and the deficit of NJSC “Naftogas” is 10.3% of GDP, which is far beyond the requirements established by Maastricht Treaty, therefore reforming the financial scheme of operation of this state-owned company is a top-priority issue in the medium term [6].

During 2008-2014 the volume of capitalization of state-owned companies at the expense of issuing domestic government loan bonds is 161.2 bn UAH, and of banks – 70.1 bn. During this period besides NJSC “Naftogas” the following companies were capitalized: JSC “Ukrainian Danube Shipping Company”, PJSC “Agrarian Fund”, PJSC “Ukrhydroenerho”. Also, at the expense of domestic government loan bonds financial resources were directed to JSC “Eximbank Ukraine”, OJSC “Sberbank”, “Rodovid”, JSCB “Kyiv” and PJSC “Ukrasbank”.

According to the estimates of the Accounting Chamber of Ukraine, the main factors of increased debt burden on the economy of Ukraine during 2014-2016 were: low budget discipline, substantial financing of the defense and security domain, public debt servicing, economy shrinking, national currency devaluation, decline in exports because of trade sanctions of the Russian Federation.

The measures taken by the government concerning the procedure of restructuration of public and government-backed debt as well as its remission allowed saving on public debt repayment and servicing expenses in 2015. According to the estimates of the Accounting Chamber of Ukraine, almost 100 bn UAH were saved in this way.

The actions of the Ukrainian government in the course of formation of 2016 state budget parameters are examples of the importance of macroeconomic forecasts for the budget and debt policy. Therefore, the results of Ukraine’s economy functioning in the

last months of 2015 were followed up. In particular, the export of goods and services estimated according to 2015 results, considered in forecast settlements export growth in 2016, turned out to be by 2400.0 m USD (5.1%) higher than the actual one, whereas the import of goods and services – by 2100.0 m USD (4.3 %).

It should also be pointed out that under the EU Association Agreement, Ukraine is to take into consideration EU norms related to budget and public debt. Thus Article 104 of the EU Association Agreement stipulates that EU member countries shall avoid excessive budget deficit. At that, the European Commission is responsible for monitoring the budget parameters of EU member countries. Control values of these indicators are given in Article 1 of the Protocol on Excessive Deficit Procedure that is an integral part of the Agreement [7].

Therefore, 3% of a country's GDP in market prices is the marginal value of estimated or actual deficit. At that, the ratio of public sector debt in GDP should not exceed 60% [7].

In order to prepare and implement tasks related to European partnership, the government of Ukraine adopted a Plan of Measures for Association Agreement Implementation. [8] This Plan establishes tasks for the Ministry of Finance to develop laws and regulations on public debt management during 2017-2019.

In turn, the Ministry of Finance is to consider EU experience in implementing excessive budget deficit control algorithms in the Ukrainian environment in the aspect of public debt formation, which is an urgent problem. In EU, if a country fails to meet the requirements related to excessive deficit liquidation, the European Commission prepares a report, in which the level of deficit excess is determined and causes of excessive deficit are explained.

After that, recommendations are sent to the respective country to correct this situation within a certain period of time. Importantly, these recommendations will not be published during the time provided for the correction of budget violations. If excessive deficit is not liquidated within this period, the recommendations of the Council of Europe are subject to publication. If the member country still does not implement the Council's recommendations, this country is sent a notification of application of corresponding sanctions.

From among the European Commission's leverage the following should be mentioned: requirements concerning the publication by member countries of additional information, as established by the Council, before issuing bonds and other securities; application to European Investment Bank for reviewing lending policy regarding the EU member country in question; a requirement on the payment of a certain interest-free deposit by the member country until excessive deficit is deemed relieved by the European Council; imposing fine sanctions [7].

The accumulated experience of the European Union in preventing problems with excessive deficits and ensuring debt sustainability is very important for Ukraine. Therefore, the task of the Ukrainian government is to ensure open discussion and wide coverage of the process of formation of the basic elements of debt policy. Otherwise, the

financial system of Ukraine will function with a significant and permanent deficit under the pressure of debt obligations. Under this scenario, credit ratings of our country will remain low, which will complicate access to external financial markets.

Debt policy plays a particularly important role in the event of financial and economic crisis. As a rule, the governments of various countries compensate the lack of tax revenues by increasing government borrowing. This, in turn, causes the growth of debt burden on the public finance system.

In order to control deficit, an important financial and legal instrument is used in EU countries. According to the provisions of Article 101 of the EU Agreement, loans cannot be provided to cover deficits. It is forbidden for ECB or central banks of EU member states to give loans to EU institutions or bodies, central governments, regional, local and other public bodies or bodies regulated by public law as well as to public enterprises of the member states. The ECB and national central banks cannot buy debt obligations directly from them. This influences spending policy in a positive way and prevents significant levels of state and local budget deficit in EU countries.

Within the framework of tasks faced by Ukraine on its way to Europe in the debt domain, it is necessary to improve the structure of the public debt. Ukrainian and foreign investors are interested in obtaining financial resources that have a long-term appeal. The presence of long-term debt instruments can significantly stabilize the system of public debt management and the country's financial system in general.

The improvement of a country's financial system immediately leads to stabilization of the public sector and ensures the growth of economy as a whole. Debt instruments perform various functions and operate successfully in the financial market if they are properly developed, transparently valued and liquid. Otherwise, market participants will look for alternatives to invest in.

Monitoring as an element of debt policy, is designed to trace the level of efficiency of public debt management and the use of certain debt instruments. At that, each goal requires the formulation of various indicators, and it is by evaluating each of them that the degree of its achievement can be measured. Therefore, the choice of objectives is crucial in effective construction of monitoring mechanisms. Monitoring can also cover budget income implementation, since failure to mobilize budget resources as planned necessitates extra borrowing. Such an element of monitoring can help in assessing the validity of tax plans in a given period. [9]

In order to reduce debt risks and improve public debt management, it is necessary to take into account changes and trends in the financial market. Relevant indicators can be developed in close cooperation with both Ukrainian and European market participants. At the development of such indicators, the structure of Ukraine's public debt should be taken into consideration, namely: a significant portion of Ukraine's public debt is denominated in foreign currency, and in case of national currency devaluation, there is a risk of a serious budget crisis.

The development of globalization and integration processes in the Eastern European region causes constant transformation of Ukrainian government's approaches to the

improvement of public debt management policy and mechanisms. The orientation of the national development strategy towards the European civilizational model means carrying out serious changes in various domains, and the domain of public finance is no exception. Therefore, the experience of EU member states can help Ukraine make its debt policy more efficient and its economy more competitive.

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## ASYMMETRIC INFORMATION AS A RISK IN LENDING TO SMES

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**Annotation.** Funding as a problem has ranked much lower on the list of SMEs' most daunting challenges since 2011, according to ECB's SAFE survey. The accommodative monetary policy of the central banks in advanced markets coupled with the low interest rate environment has contributed to the fact that financing conditions have been considerably relaxed at global level since 2010. One problem with the SME lending is the presence of asymmetric information which describes the situation where different information is available to the borrower and the lender, which may lead to adverse selection and moral hazard. Dividing the risk between the state, the bank and the capital market could be beneficial on access to external resources by SMEs.

**Key words:** the SME lending, funding, ECB's SAFE survey, financing conditions, capital market, risks.

**Introduction in the world of SMEs.** According to the rules of the European Commission, small and medium-sized enterprises can be categorised as follows:

Table 1

EU definition SMEs

Size	Employees	Turnover	Balance Sheet total
Micro	< 10	< €2 million	< €2 million
Small	< 50	< €10 million	< €10 million
Medium	< 250	< €50 million	< €43 million

Source: European Commission

All companies with a headcount below 250 employees and an annual turnover below EUR 50 million fall into the category of small and medium-sized enterprises (SMEs). In the European Union, these firms are dominant in the industry, construction and commerce segments, which are the most capital-intensive sectors. Thus maintaining funding to these businesses is a priority not only from the perspective of their own growth and operation, but also for the whole economy. SMEs play a central role in the EU as they account for 60% of the continent's GDP, and employ around 90–100 million people, approximately 70% of the workforce. Currently, 22 million small and medium-sized enterprises operate in the EU.

The capital structure of the SMEs varies between the European regions, but it is common, that 80–85% of SME borrowing is realized through bank loans. This is exactly the opposite to practice in the United States (US), where similar companies obtain 80–85% of their funds from the capital markets (WSBI-ESBG 2015). The main forms of this include corporate bonds, private equity, venture capital, crowdfunding or hybrid

solutions (Firoozmand et al. 2015).

**Lending to SMEs.** Due to central banks' near-zero interest rate policy and other measures, SME access to finance has been adequate (Figure 1) since the 2008 crisis, and now it is not among the most pressing issues in the sector (ECB 2017). This has not always been the case: in 2008 and 2011, financing issues proved to be the third (or, when disregarding the "Other" category, the second) gravest concern in the life of European SMEs, but since then it has been overtaken by the cost of labour, the lack of unskilled labour and the compliance with and the complexity of, industry regulations.

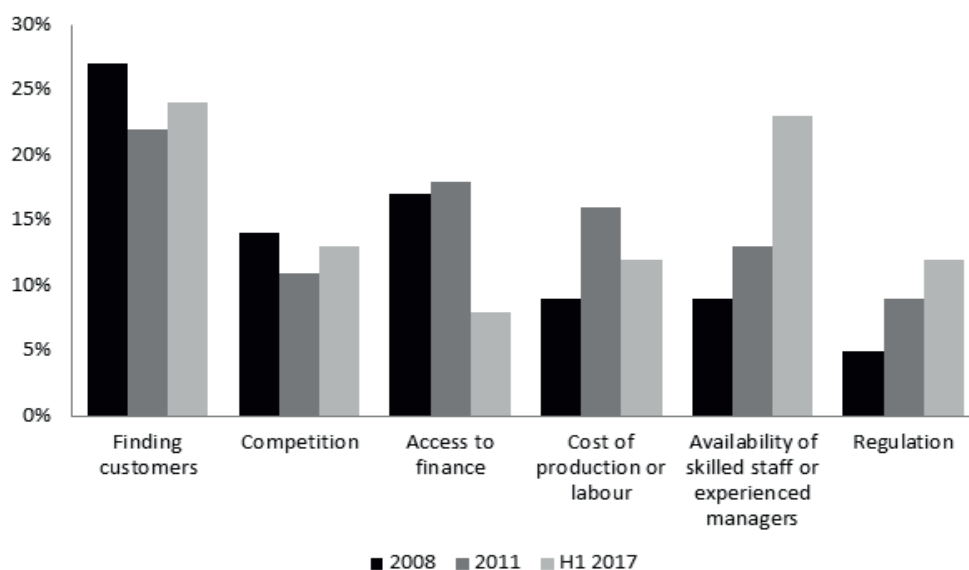


Fig. 1: Most typical problems of the SMEs between 2008 and 2016  
 Source: ECB - Survey on the access to finance of enterprises (2017)

The SAFE analysis by the European Central Bank (ECB 2017) identifies eight factors that significantly influence credit supply and demand. All of these have improved significantly during the recent years. However, economic conditions and prospects only became favourable in the first half of 2017, according to the SMEs surveyed. The availability of credit guarantees is still perceived negatively, which has not changed much since 2015. Substantial improvement can be seen in individual, firm-specific prospects, as well as in the willingness of banks, trading partners and external investors to lend.

**The asymmetric information.** The fact that SMEs are starting to have a disadvantage in obtaining bank financing is not a recent problem. In 1931 the Macmillan Report drew attention to the 'financing gap', because it was harder for small firms to get bank credit. The financing of SMEs can be conducted via several channels like bank products (bank loans, overdrafts, credit lines, trade credit, leasing, factoring, etc.), capital markets (stocks, corporate bonds, private equity, venture capital, crowdfunding, hybrid products)

or internal financing (use of retained earnings or sale of assets).

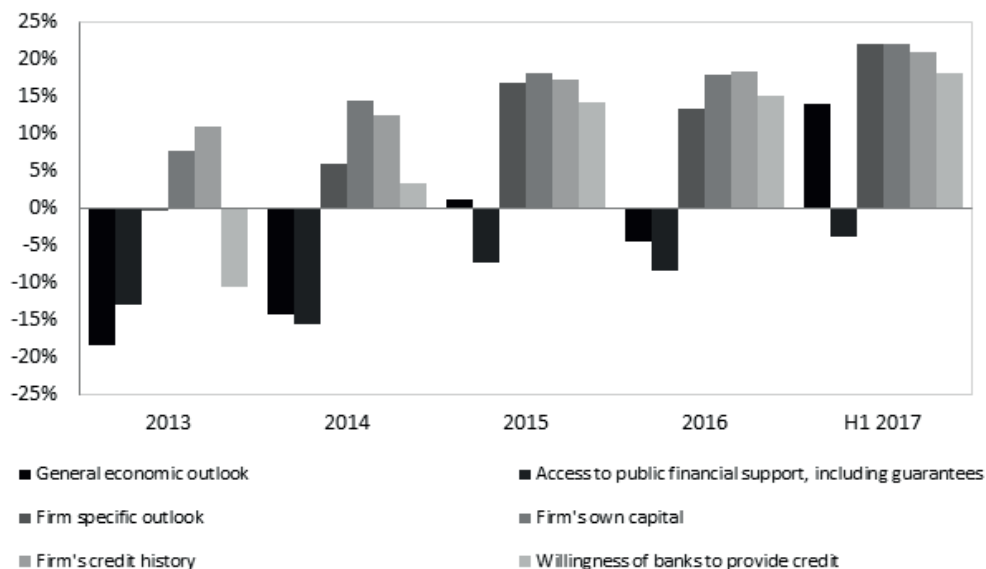


Fig. 2: Changes in factors affecting lending among European SMEs between 2013 and first half of 2017

Source: ECB - Survey on the access to finance of enterprises in the euro area (2017)

Banks are less active in the field of financing SMEs both in developed and developing markets, which can also be attributed to the fact that getting right information about the credit history, the history of the firm, the financial statement is a costly and difficult process.

According to several studies – which focus on the SMEs' financing gap –, the phenomenon of asymmetric information plays a major role in the SMEs' lack of credit. In efficient markets the information is costless and perfect. Most financial models are based on this assumption. But the real world doesn't function in this way.

Getting accurate information is difficult and in some carries high costs. Moreover, there is a lot of soft information (alternative data), which are difficult to quantify, like social media activity, mobile phone usage habits, consumer reviews to name a few. What the borrower knows can remain hidden from the lender many times; hence, the information flow could be asymmetric between the borrower and the lender. The bank doesn't have accurate information of the SMEs' credit history, about the project to be implemented or about the management and soft data, which can lead to adverse selection (Stiglitz et.al., 1981). In this situation the borrower has additional information, so we are talking about ex-ante asymmetric information (Huang et.al. 2014).

According to Altman (1968), the asymmetric information is named 'Type I.' when



the lender accepts a poor or bad project and we can talk about the ‘Type II.’ asymmetric information when the lender rejects a good one. We think the ‘Type II.’ asymmetric information is more relevant in the case of the SMEs’ financing gap.

From the bank’s perspective it is costly to monitor the implementation of the projects and investments, which leads to moral hazard, where the firm’s management takes extra risks because someone else bears the cost of these risks. (Farhi - Tirole 2011; Holmstrom – Tirole 1997; Kuniyoshi – Tsuruta 2014; Lean – Tucker 2001). This is the case when the loan has already been granted. The moral hazard is a negative factor for the bank because it increases the non-performing loans (NPL), if the project fails and the loan can’t be repaid (Huang et.al. 2014).

The large, universal banks have smaller footprints among the SMEs, moreover they have centralized lending decisions. In the advent of the AI (artificial intelligence) lot of banks use sophisticated algorithms to make lending decisions faster, easier and more accurate. It is worth noting that complex algorithms (like neural nets, deep learning) can be refined, so they can be parameterized to take into consideration the alternative, soft information; not only historical data. The lending standards are also restrictive, because a lot of projects of the SMEs are not standardized. The high concentration of the banking sector (when a large portion of the market is controlled by only a few banks) leads to SMEs being crowded out from lending. In light of the European banking consolidation in recent years, this may be a real problem for smaller companies.

The moral hazard and adverse selection lead to credit rationing, in which banks tend to consciously decrease lending activity to SMEs. Credit rationing affects much more the SME sector, because large companies are more transparent and bear lower risk. In case of adverse selection banks are able to raise lending interest rates to reduce the potential risk from credit losses due to the information disadvantage. However, higher lending rates lead to blue-chip companies turning back on bank lending, because they don’t want to pay the excess risk premium driven by weaker companies. This process lowers the banks’ earnings so the financial institutions choose lower interest rates and refuse part of the demand for loans by SMEs. In the case of moral hazard banks offset the SMEs’ loan demand in partially, because banks can’t completely know and control what the borrowers use loans for and whether they would pay the money back or not (Huang et.al. 2014).

Asymmetric information exists due to several reasons. In most cases the company’s management doesn’t have high, complex finance knowledge so it is difficult for them to describe the new project or investment. Start-ups have no adequate track record. SMEs form a heterogeneous pool, so there is no such thing as a typical SME. So for banks it is more difficult to assess the proper risks. In the case of smaller firms, there is a question of the existence of assets and financial reserves that can be covered as collateral. A primary motive for starting a small business is to exert greater control over the work environment and to internalize the benefits of personal effort and risk-taking. A lot of owner doesn’t want to give up their share of ownership; hence, in most cases the capital increase from private equity or venture capital is out of question (Lean – Tucker, 2001).

In solving the phenomenon of asymmetric information it would be obvious if banks would allocate more resources to get adequate information about the project of the SMEs and to monitor the implementations of the investments, projects. Obviously this process would raise the cost of lending. The collateral for the loan may reduce the bank's risk arising from the information asymmetry, but the collateral is usually worth more to the company than the bank, which is also a problem. However, providing collateral also increases the cost of the loan, as it entails additional legal and administrative expenses. One major source of collateral is real estate owned by SME owners. During a recession, property prices tend to fall, so borrowers are less likely to obtain new collateral, which may lead to the liquidation of the collateral (Chen, 2005, Ryan et.al., 2014). The facts show that the asymmetric information raises the cost of the lending process. Collecting and analyzing the data is a costly process. Another issue is economies of scale, since it is by no means negligible whether a bank invests energy in the loan application process of a small company or the financing of a large enterprise, i.e. unit costs are crucial.

The information asymmetry can partly be resolved by regional banks. Local banks have stronger ties with local SMEs, therefore the necessary information can be obtained more swiftly and cheaply. According to an EIB finding based on an Italian example, local banks know the given region better, and the link between the bank and the borrower is also stronger (Lang et al. 2016).

Other solution includes centralized databases that allow lenders to request financial and soft information about the companies. Of course this requires a kind of data management directive, so development and implementation would not necessarily be easy.

**Risks in SME lending.** The causes of the weak SME lending figures are difficult to puzzle out. According to EIB, it is not measurable to what extent current weaknesses in bank lending to SMEs are driven by demand or by supply-side factors. There is a risk that even in countries where weak bank lending is driven by the demand side it is uncertain whether banks are able to provide the necessary lending once the demand picks up (Lang et al. 2016).

The process of lending to the SMEs is a costly and risky business. But market participants could be capable to diversify risk. According to the capital assets pricing model (CAPM) risk can be divided into two pieces. There is systematic risk, also known as market risk. Systematic risks are interest rates and exchange rates developments, economic cycles, to name a few. This risk can't be diversified, because it arises from the whole economy. Another type of risk is the unsystematic or specific risk, which can be diversified. Specific risk arises from a specific company or sector. Unsystematic risks include the work of the management, labour strikes and competition.

There are tools for diversification; hence, it is the lender's responsibility to diversify its loan portfolio. Attention should be paid by banks to construct loan portfolios from projects and SMEs that have low or negative correlation with each other. The state or the regulator may impose regulations and directives on how banks should construct their loan portfolios. At first sight to solving the unsystematic risk is easier task than the systematic

risk which is undiversified, but could be transferred between parties. SME loans can be diversified by geography, size or sector, the opportunities are almost limitless.

Choosing investments which have low or negative correlation with each other, the unsystematic (specific) risk can be reduced. In contrast, the systematic (market) risk can never be eliminated. The classic break-up of the risk can be applied in the case of SMEs. The systematic risk can't be diversified, but it can be shared between three market participants: the state, the banks and the capital markets. It is worth noting that every participant has a limited capability to bear risk.

**The State.** The role of the state can be fulfilled under the credit guarantee scheme. Within the framework of a credit guarantee agreement, the guarantor institution offers a demand guarantee to the financial institution with respect to the loan granted to the given company. In such a scenario the bank runs a lower risk, since in the event of a default by the client the guarantor institution honours a predetermined portion of the outstanding amount towards the bank. The credit guarantee fund is an independent third party between the bank and the borrower, when the latter does not meet all the conditions that are necessary for the bank. Thus the guarantee fund provides some sort of security to the bank, and indirectly enables the firm to obtain a loan. Guarantee institutions are usually established with state involvement, both in developed and developing markets. They are usually non-profit institutions, but they have some obligation to be self-sufficient. Figure 3 shows the ownership of the Garantiqa Hitelgarancia Ltd. in Hungary. 77% of the ownership belongs to the Hungarian state through the State and the Hungarian Development Bank (MFB).

The administrative burden associated with guarantee schemes has diminished considerably in recent years and the process has been expedited in several places, therefore these schemes can still be considered the primary tools in the hands of the state for facilitating access to credit for SMEs. This is the case even though the spectre of moral hazard is still present. However, it can be avoided or mitigated through the exact definition of loss sharing and the coverage ratio. Loss sharing can be *pari passu*, where losses are fixed irrespective of the amount. The collected debt is allocated based on the predetermined distribution between the lender and the guarantor. In the case of subordinated debt, the lender's claim is satisfied first, ahead of the guarantor. At the portfolio level, under a 'first-loss' scheme, the full burden of the default is borne up to the predetermined amount of the loss, while under a 'second-loss' guarantee, the guarantor only covers the second part of the loss. Moreover, if the coverage ratio is high, the lender may feel encouraged to neglect the debtor's monitoring and the assessment of its risks. It is clear that credit guarantees can help transferring the default risk, but it can also lead to industrial or geographical diversification. Risk analysis may also be strengthened, since the credit guarantor takes part in the process, too.

Few studies are available in the EU about the impact exerted by credit guarantees on the economy and SME lending. The study from Asdrubali and Signore (2015), which covered 10 Eastern-European countries from 2005 to 2012, shows that the SMEs that participated in the programme increased their headcount by 17.3% in the first five years,

and their revenue grew by 19.6% as compared to the control group. Strengthening the SMEs would greatly improve Europe's economic situation and prospects. The increased activity of credit guarantee institutions in a recession could reduce volatility in the SME sector's profits and operations. In addition, this would also affect labour market situation and thus also consumption indirectly, which is a cornerstone of economic growth. In addition, investments would become more balanced and predictable, which is also a decisive factor in GDP growth.

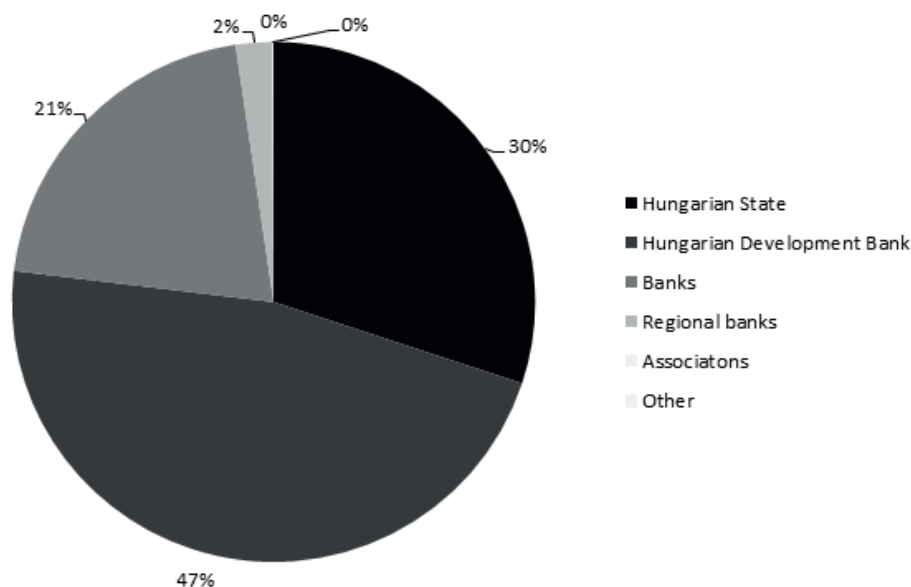


Fig. 3: Ownership structure of the Garantiqa Hitelgarancia Ltd.

Source: Garantiqa Hitelgarancia Ltd.

In certain cases, banks can use credit guarantees to mitigate their RWA exposure. Within the framework of Basel III and the CRR/CRD regulation, banks can reduce the capital requirement on loans secured by a credit guarantee. This is determined by the CRR/CRD or by EBA standards. All this became truly interesting for banks after the crisis, since financial institutions faced considerable capital write-offs. During the past 10 years, both regulation and capital requirements have become more stringent, thus the operation of banks has become more secure, but also more complicated and costly.

The banks. The role of banks is harder to clarify, because the regulation of the financial institutions and the procedures to save them has changed substantially since the global financial crisis (GFC) in 2008. Between 2008 and 2012, the EU spent EUR 568 billion on saving banks close to bankruptcy, and the bill was footed by taxpayers. The bailout is a process in which a state gives financial support to a financial institution.

The bailout has changed to bail-in since the Cypriot financial crisis in 2012/2013. Under the bail-in procedure, the financial institution is recapitalised by shareholders, bondholders and ultimately even the largest depositors (higher than EUR 100,000). The bail-in application has been on the agenda since 2010. Policy makers changed the rescue process of the financial institutions to fight off the issue of moral hazard (the bank does not start risky operation just because the state rescues him with taxpayer's money.)

One aspect of the above-mentioned problems, i.e. the risk-sharing, can partly be resolved by regional/cooperative banks. Local banks have stronger ties with local SMEs, therefore the necessary information can be obtained more swiftly and cheaply. According to an EIB finding based on an Italian example, local banks know the given region better, and the link between the bank and the borrower is also stronger. They are more aware of the soft information which is difficult to quantify. Due to their operation regional banks are risk averse because the recapitalization is dependent on the retained earnings and the members' contributions.

The risk aversion is better understandable considering that they operate in a specific region so the possibility of the diversification is limited. They scrutinize the borrowers more accurately, so the debt rating is stricter. The regional/cooperative banks' market share of the SMEs' loans is between 16-17%, but there is a lot of difference between various countries. Regional/cooperative banks' market share in the SME business is more than 50% in France, but just 3.9% in Portugal (Lang et al. 2016).

According to a study from the BIS (2017), moral hazard is limited to credit exposures characterized by a weak relationship between the borrower and the lender, indicating that a tight credit relation is a credible commitment to monitoring after securitization. The authors rejected the assumption that the transfer of risk (e.g. through securitization) leads to lax credit standards.

Since the rules of 'bail in' have been implemented, banks have been more cautious about lending. But excessive risk aversion is harmful for the whole economy, because it is difficult for SMEs to get credit to implement their investments and projects. This process can raise unemployment, lower consumption and raise the possibility of recession.

**The capital markets.** The third participant is the capital market. An advanced and efficient capital market is needed to take place this form of risk transfer. Two parts of the capital markets should be considered: the corporate bonds and the securitization (stock issuance as a form of external financing is more costly and needs blue-chip companies to become efficient), where there is a need of an effective secondary market where the volumes are significant and there are market makers, institutional and retail investors. The process of securitization must be fluent, but nowadays this type of fundraising is unpopular. Since the GFC (2008) the restart of the securitization markets has been being sluggish. A suitable financial intermediary system (banks, stock exchanges, rating agencies, investment firms, mutual funds, pension funds, retail investors etc.) is also important.

The capital markets (the corporate bond markets) are the best place to transfer risks. But to make it happen, more bond issuance is needed. In the United States (US), SMEs

obtain 80–85% of their funds from the capital markets, while in the EU the opposite is true, SMEs get 80–85% of their funding from banking products (WSBI-ESBG 2015). According to the European Commission, the corporate bond market represents one tenth of the region's GDP (10%), while in the US it accounts for 31% of the GDP. In order to have an efficient corporate bond market in the EU the further factors are necessary: easier issuance rules for companies, increasing access and options for investors, ensuring the efficiency of intermediation and trading activities, fostering the development of new forms of trading and improving the post-trade environment, ensuring an appropriate level of information and transparency, and improving the supervisory and policy framework (European Commission, 2017). This is in line with the goals of the Capital Market Union.

But there is a big difference between the corporate debt market of the US and the EU. In the US there have been corporate debt issuances between USD 1300 and 1600 billion during the recent years. In the EU the corporate debt market is one fifth of the US, it amounts to ca. EUR 300 billion.

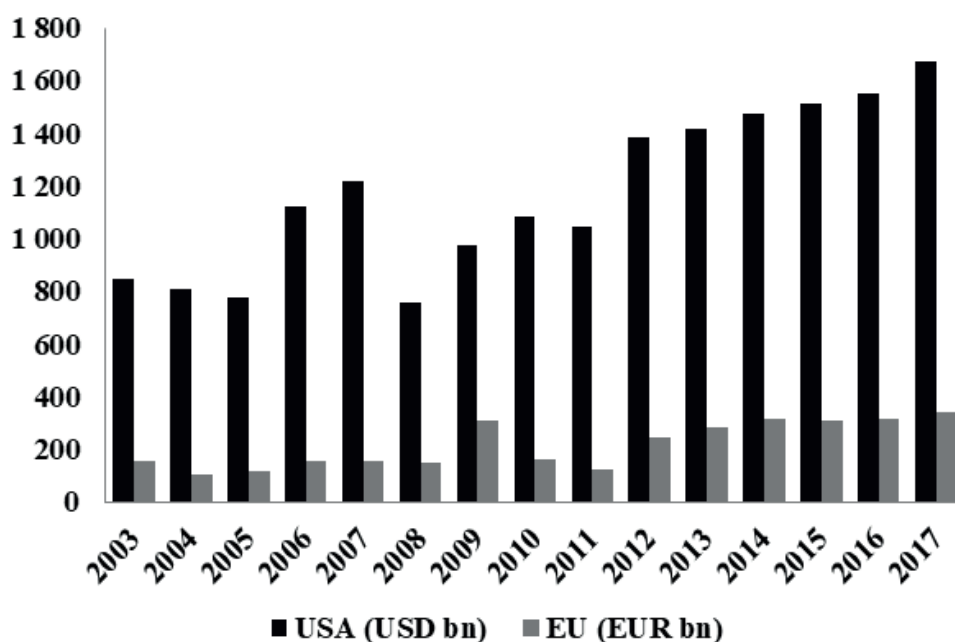


Fig. 4: Corporate debt issuance in the US and EU

Source: ECB, Sifma

Through the corporate bond market the adaptation to the monetary policy is much faster. During interest rates cuts or quantitative easing, adjusting to the new interest rate regime is faster in the corporate bond market than in the banking products. But issuing bonds is a costly process, while the issuer has to do other activities like investor relations, road shows, publishing financial reports to name a few.



In the EU corporate bonds represent a tiny fraction of the SMEs' capital structure. Figure 5 shows that in 11 European countries the privately owned large companies finance only 3-4% of their assets from bond markets. In the case of small and medium sized companies this ratio is even lower.

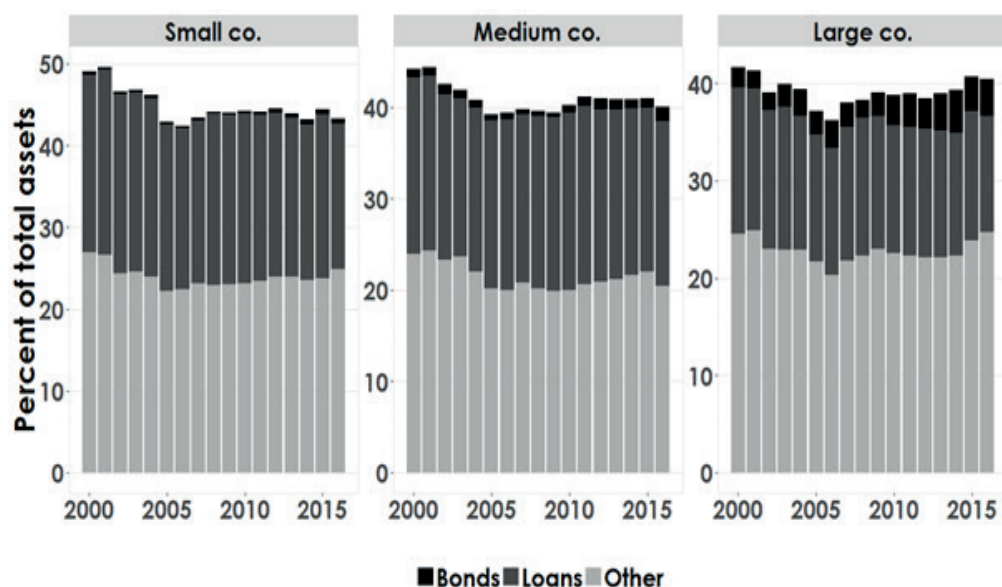


Fig. 5: Breakdown of external financing of small, medium and large companies relative to total assets

Source: Banque de France, own calculation

Another aspect of the capital market in which the risk can be transferred is the securitization. This form of capital raising eases the credit outflow. The securitization market can transform illiquid loans to SMEs into an asset class with adequate market liquidity and can as such provide an indirect access to capital markets for SMEs. In the process of securitization the banks are pooling the loans and selling their related cash flows to third parties. There is no consensus whether or not the banks are pooling the most risky loans and selling them through the securitization. According to several studies the loans that are securitized are riskier and there is a higher probability to become non-performing. At the same time an econometric study from the BIS (2017) claims that the securitized loans have a lower default probability (Ugo et.al. 2017, Kraemer-Eis 2017).

The securitization is in line with the goal of the Capital Market Union. The SMEs could diversify their external sources, investors would be enriched with new investment tools and banks could transfer the risk to originate more loans. Empirical studies show that banks through securitization can free up space on their balance sheets in order to allow further SME financing. Moreover, companies can raise capital with better conditions through securitization. However, the presence of institutional investors (mutual funds,



pension funds, etc.) is a crucial element, because the vast majority of the securitized loans are in their portfolio (Altunbas et.al., 2007).

The securitization market remained very small comparing to the pre-2008 era. In 2014 the stock of securitized SME loans in Germany, France, Italy and Spain was EUR 57 billion, while the outstanding SME loans was EUR 849 billion (BIS, 2017). Before the GFC (2008) there were a notable run up in the European securitization issuance. In 2009 banks issued EUR 800 billion securitized loans. Nowadays the size of the European securitization market is about EUR 200-300 billion, which is 15-20% of the US issuance.

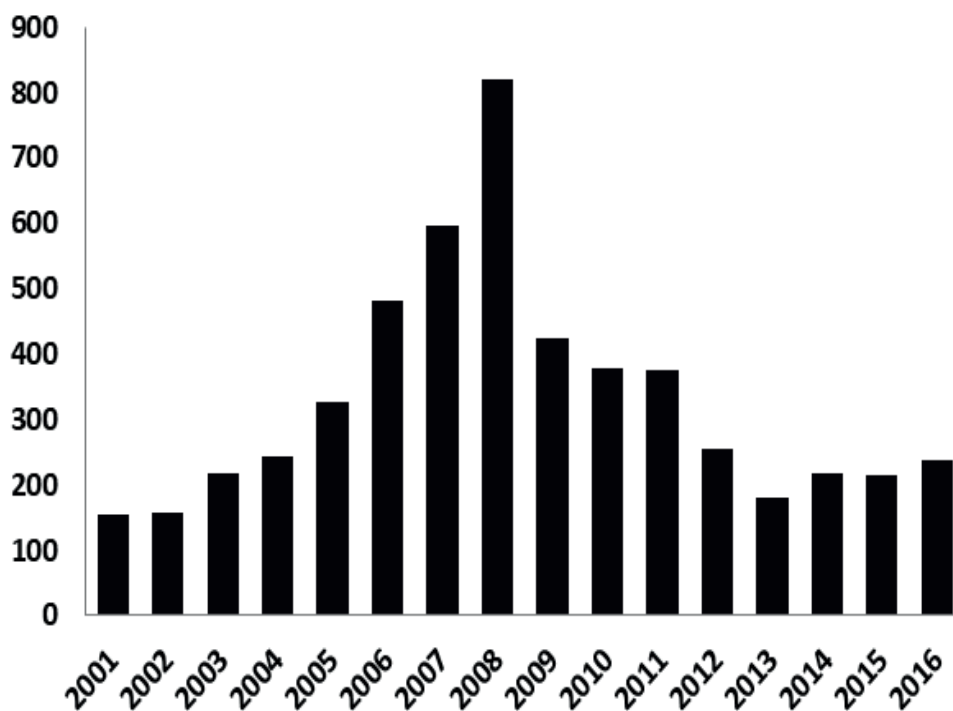


Fig. 6: European securitization issuance (EUR billion)

Source: Sifma

According to several studies the securitization doesn't solve the problem of moral hazard. That is, because banks could lose the incentive to monitor the SMEs or the projects after the loans are removed from the balance sheets. Although the work of the BIS (2017) contradicts the above, this issue may remain the subject to further discussion.

**Conclusions.** In my work I described the information asymmetry and its consequences like adverse selection and moral hazard. Lending to SMEs is a difficult and costly process, which arises from the information asymmetry, where different information is available to the borrower and the lender. This situation poses extra risk, so banks are reluctant to lending to SMEs.

Sharing the risk between the state, the banks and the capital markets would improve the process of lending to SMEs. Bolstering the SME sector would have several positive effects. Since these businesses employ around 70 % of the economically active population in the EU and generate around 60 % of the continent's GDP, strengthening them would greatly improve Europe's economic situation and prospects. To achieve this there is a need for a better working capital market with relative high trading volume and more market participants, strengthened regional/cooperative banks and more active credit guarantee schemes.

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## **PHILOSOPHY AND THEOLOGY**

### **ТИПОЛОГИЯ БОГОСЛОВСКОГО ОБРАЗОВАНИЯ**

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***Khromets V. Typology of theological education.***

***Annotation.*** In the FSU countries the problem of existence of theological education in the secular state is almost solved. But there is still an ongoing discussion about what it could be and what it should be in religious and secular universities. That is why it is crucial to work out the typology of theological education, it assists understanding and differentiating what type of theological education we deal with in every specific case.

***Key words:*** theological education: paidetic, missiological, dogmatic and academic education, historical periods.

Понятие «Богословское образование» включает в себя достаточно большой круг феноменов: не существует единого определения того, чем является богословское образование, нет единого или наиболее распространенного стандарта подготовки богослова. Поскольку богословское образование предоставляется в светских и конфессиональных вузах, следует говорить о типологической специфике богословского образования, соответственно, в светских и конфессиональных вузах. Если богословское образование в конфессиональных высших учебных заведениях ориентировано на подготовку, в первую очередь, профессионалов для нужд конфессии, то в светских – следует говорить о подготовке специалистов более широкого общественного применения. Но выделять богословское образование по типам высших учебных заведений не всегда уместно, потому что часто получаем гибридные типы: при условии, например, когда в конфессиональном вузе реализуется светский подход к обучению на некоторых специальностях и наоборот – когда в светском вузе осуществляется конфессиональное клерикальное образование. Несмотря на то, что богословское образование в Украине развивается и в светских и в конфессиональных вузах, до сих пор четко звучит со стороны религиозных кругов убеждение, что богословское образование может и должно развиваться исключительно в конфессиональных вузах. Они ссылаются на историю, согласно которой богословское образование, кроме некоторых исключений, обеспечивалось конфессиональными вузами, а ссылки на современное состояние богословских факультетов иностранных вузов толкуются как кризис богословского образования в светском вузе. Действительно, на территории Европы, и в том числе на территории Украины, образование было тесно связано с конфессиями: следует вспомнить братские школы, Острожский коллегиум, далее, Киево-Могилянский коллегиум, а с 1819 года – уже Киевскую духовную академию.

Окончательное разграничение светской и конфессиональной систем образования, было осуществлено в образовательной реформе царя Александра I. В 1808 году первая система была представлена императорскими университетами, вторая – духовными академиями, одна из которых находилась в Киеве. Следует отметить, что в императорских университетах не было богословских факультетов. Однако в истории богословского образования в Украине можно найти одно исключение, речь идет о случае длительного существования богословского образования в светском вузе: в 1875 году был создан богословский факультет при Черновицком университете, который просуществовал вплоть до его закрытия в период советской власти. Также советская власть ликвидировала конфессиональные учебные заведения. После Второй мировой войны были восстановлены некоторые конфессиональные учебные заведения, но до момента либерального отношения государства к церкви во времена Горбачева М., на территории Украины действовало только одно конфессиональное учебное заведение – Одесская духовная семинария. С 1988 года начинается восстановление богословского образования в конфессиональных вузах, а с 1997 года в перечень направлений и специальностей, по которым осуществляется подготовка ОКР «Бакалавр», «Специалист» и «Магистр» [2], вносится «Богословие» и с этого момента становится возможным предоставление богословского образования в светских вузах (ряд светских вузов уже воспользовались этой возможностью). Мы уже отмечали, что богословское образование сегодня развивается в светских и в конфессиональных вузах, причем регулируется различными законодательными документами.

*Эмпирическая (фактологическая) часть проведенного исследовани.* Мы имеем разный исторический опыт в сфере обеспечения богословского образования: на той части территории Украины, которая входила в состав Российской империи богословское образование существовало исключительно в конфессиональных вузах; на той части Украины, которая входила в Австро-Венгерскую империю, богословское образование предоставлялось в светском вузе – в Черновицком университете. В современной Украине мы прослеживаем два модуса развития богословского образования и в конфессиональных, и в светских вузах. Мы считаем, что не имеет смысла выяснять, какой тип вузов должен быть первичным для развития богословского образования. Исторический аргумент не срабатывает, потому что мы имеем различные опыты предоставления богословского образования. Аргумент, что последнее может развиваться только под прямым конфессиональным наблюдением, также не может быть единственно правильным, потому что отношения конфессий с факультетами конфессионального богословия в светских вузах также разные. Учитывая исторические модели развития богословского образования в Украине и Европе, следует выделить различные типы богословского образования и выяснить, для какого типа учебного заведения (конфессионального или светского) тип богословского образования более характерен.

В поиске более четкого выделения типов богословского образования следует обратиться к трудам профессора Йельской духовной школы Дэвида Келси

«Между Афинами и Берлином: дебаты о теологическом образовании» [14] и австралийского исследователя, декана Института христианских исследований Маккуори в г. Сиднее Роберта Бэнкса «Пересматривая богословское образование: исследуя миссионерские альтернативы к существующим моделям» [11], в которых осуществляется обобщение исторических форм богословского образования и выделяются его отдельные модели. Д. Келси предлагает выделять две модели богословского образования: афинскую и берлинскую. Афинская модель, по его мнению, основывается на принципе Пайдеа (греч. Παιδεία), который понимается как воспитание души. Эта линия была воспринята от Платона через Филона Александрийского Климентом Александрийским. Такая модель, по мнению Д. Келси, была основной в XIX веке. Говорится о том, что сначала нужно пережить истины христианства, а потом их высказывать. Иными словами, речь идет о воспитании души. Берлинскую модель богословского образования можно назвать университетской моделью. Она направлена на формирование профессионала в области богословия. В ней преобладают рациональное постижение и изложение богословского знания. Если говорить о подготовке богослова по берлинской модели, то по своим принципам она ничем не отличается от университетской подготовки философа, историка и т. д., то есть в данном контексте речь идет о богослове как об ученом.

К вышеупомянутым моделям Р. Бэнкс добавляет еще две другие иерусалимскую и женевскую. Иерусалимская модель ориентирована на подготовку миссионеров, когда подготовка богословов нацелена на активную проповедь. Богослов, в этом смысле, должен уметь четко и доступно отстаивать истины своей веры в публичных дискуссиях; такой богослов ориентирован, в первую очередь, на распространение своей религии. Женевская модель богословского образования направлена на подготовку священнослужителей. Такое образование исключительно конфессионально ориентированно. Ее можно назвать профессиональным богословским образованием. В подавляющем большинстве случаев учебные заведения, в которых готовят богословов такого типа, называют семинариями. Брайан Эдгар, профессор теологии Есбурзкой богословской семинарии, предлагает краткое обобщение этих моделей:

Афины – академия – трансформация индивида – классическое образование – теология;

Иерусалим – общество – изменение мира – миссионерское образование – миссиология;

Женева – семинария – познание Бога – конфессиональное образование – доксология;

Берлин – университет – усиление Церкви – профессиональное образование – наука [12].

Следует сразу отметить, что означает такое разграничение – это своеобразные идеальные типы, в реалиях которых мы имеем «богословские образования», где доминирует одна из моделей, включая элементы других моделей.

Трудно в современных условиях представить учебное заведение, которое бы могло воплотить афинскую модель богословского образования – богословскую академию. Но данная модель может реализовать основное целеполагание богословского образования, ведь для того, чтобы говорить о Боге, нужно утвердить существование такого опыта, в котором знание Бога становится возможным. Поэтому афинское образование может выступать ядром других моделей. Если мы слово «образование» возьмем в кавычки, то можно его сравнить с институтом старчества в православной традиции, когда человек, который идет по пути святости, учит и показывает своим примером путь к Богу. В этом смысле богословской академией будет монастырь, «богословское образование» в котором организуется вокруг старца.

Иерусалимская модель реализуется для подготовки лидеров. Такое образование должно сформировать осведомленность о других религиозных традициях, конфессиональных различиях, народных верованиях, свободомыслящих теориях. Подготовка в подобных учебных заведениях должна быть направлена на умение отстаивать истины своей религии в открытых спорах с людьми мало знакомыми с религиозной традицией, которую представляет богослов. Конечной целью миссионерского учебного заведения не является подготовка священника (хотя это не исключается) и знатока богословских тонкостей, а человека, который может стать харизматичным лидером.

Женевская модель теологического образования ориентирована на подготовку священнослужителя – человека, который возглавит общину верующих. Он должен в конечном итоге передать четкие вероучительные принципы (догматы и каноны) членам своей общины и провести богослужение. Его богословие будет литургическим. Кроме того, ему нужно уметь вести хозяйство своей общины так, чтобы это было продолжением обучения и воспитания членов общины.

Наконец, берлинская модель ориентируется на подготовку научного работника, который знает и может четко разграничить тонкости вероучения своей религии. Образование богослова такого типа основывается на глубоком знании Священного писания и богословской традиции своей, а также других конфессий. Это богословие можно в полной мере привлекать к списку наук. И именно такое богословское образование ориентировано на подготовку специалиста в богословской сфере, и именно эта модель богословского образования наиболее приспособлена для светского учебного заведения, где могут присваиваться образовательные уровни, научные степени, могут писаться монографии, учебники с министерскими грифами. Но такое богословие менее всего востребовано официальными церковными структурами.

**Научная новизна полученных результатов.** Состоит в детализации и конкретизации типов богословского образования. Избавляясь от метафоричности в названиях образовательных моделей, но используя теоретико-методологические наработки Д. Кейси и Р. Бэнкса, за целями, которые стоят перед богословским образованием, можно разграничить четыре типа богословского образования: 1



- ) пайдетический;
- 2) мисиологический;
- 3) доксологический;
- 4) академический.

Выделенные типы являются своеобразными идеальными типами, которые, с одной стороны соответствуют историческим формам богословского образования, а с другой – в конкретной исторической форме богословского образования преследуют ту или иную цель, что позволяет этой модели соотноситься с выделенными выше типами, хотя могут присутствовать и элементы других типов. Также следует еще раз подчеркнуть, что богословское образование в основном присуще монотеистическим религиям: иудаизму, христианству, исламу.

Первый тип богословского образования – пайдетический является исторически первой формой богословского образования. Пайдетический тип богословского образования ориентирован, в первую очередь, на воспитание через системное обучение. Прототипом становится афинская платоновская философская академия и другие философские школы. Пайдетический тип богословского образования, с одной стороны, является нормативным типом, а с другой – нормативным источником для богословия и богословского образования: для иудаизма – это времена возвращения из вавилонского плена (время создания канона Торы) для христианства – времена проповеди Иисуса Христа и апостолов; для ислама – времена жизни Мухаммада и праведных халифов. Этим временам присуще сочетание теории и практики, то есть следует жить согласно учению и поэтому тут ярко предстает фигура учителя, который является идеалом воплощения принципа сочетания теории и практики. Украинская исследовательница иудейского богословского образования Анна Мария Басаури Зюзина в своей диссертации отмечает: «Если еврей изучает Тору, но не служит ученому Торе, его называют невеждой (Талмуд, Сота, 22а), то есть еврей должен «жить с ученым» и впитывать идеи, которые тот не рассказывает на занятиях, а показывает своим примером. В этом заключается основная идея еврейского воспитания и обучения. Это непрерывный процесс, который сочетает в себе теоретические знания, практическое их применение и наглядный пример учителя» [1] Учитель Торы должен стать живой Торой, личным примером сочетания теории и практики. В иудаизме пайдетический тип богословского образования начинает институализироваться вокруг религиозного долга изучения Торы (Талмуд Тора). Священнослужители (Когены) и их помощники (левиты), стали теми, кто учил и толковал Тору; позже эти функции брали на себя мудрецы (Хахам), которые разрабатывали так называемую «Устную Тору», которая впоследствии была положена в основу письменного Талмуда. «В Талмуде Талмуд Тора провозглашается прочной заповедью (объяснение в скобках мое – В.Х.), равной по важности всем 613 мицвот, поскольку только Тора является источником истинного знания». [1] По мнению А.М. Басаури Зюзиной, именно с завершением формирования Талмуда завершается около V века формирование религиозного образования иудаизма. С этого времени начинают появляться образовательные институты, и они уже

соответствуют другому типу богословского образования. Известный американский православный богослов Павел Гаврилюк, анализируя раннехристианскую практику катехизации, указывает: «Катехизация для Христа была в первую очередь интимнейшей встречей, диалогом, в котором Учитель отвечал на вопросы учеников, и только во вторую очередь – монологом проповедника» [5]. Важно подчеркнуть, что Учитель реагирует на запросы и потребности того, кто его готов слушать, его учеников. Здесь важна диалогическая составляющая. В современной педагогике и философии образования данное взаимодействие между учителем и учеником называется субъект-субъектным типом отношений. Очевидным преимуществом такой модели является индивидуальный подход к ученику, а недостатком – то, что в таком подходе один учитель может охватить небольшое количество учеников. Несмотря на то, что учителем в христианстве называли воплощенного Бога, этот идеал становился мало достижимым, даже апостолы и дальше продолжали называть себя учениками Иисуса Христа. Но, так или иначе, как в иудаизме, так и в христианстве учитель должен быть воплощением теории и практики. В исламе: «...форма и методика обучения опиралась на сунну пророка Мухаммада, который первоначально передавал религиозные знания узкому кругу близких людей» [2], – считает украинский исследователь исламского образования Денис Брилев. В исламе, как в иудаизме и христианстве, наиболее эффективной формой образования было обучение небольшого круга единомышленников. Хотя каждая из религий знает массовые, для большого количества людей, практики обучения, все равно, само обучение малого круга единомышленников считается наиболее эффективным, а значит и нормативным. Богословское образование, которое реализуется в перечисленных четырех типах, толкует этот подход как таковой, к которому нужно стремиться, но учитывая дополнительные задачи, которые стоят перед богословским образованием, этот идеал взаимодействия часто отходил на второй план. В апостольский период сами апостолы углублялись в изучение Священного писания. Апостол Павел возвращался в церкви, которые создал, чтобы их утверждать в вере, делая это путем разного рода поучения. Послания апостолов, помещенные в канон Нового Завета, являются таким наставлением и разъяснением. «Мы также узнаем из Деяний, что Павел по прибытию в Эфес учил три месяца в синагоге. Будучи же изгнан из синагоги, он переместился в школу некоего Тиранна, в которой он учил в течение двух лет (Деян.19: 8-10). Надо полагать, что это обучение было доступно всем и носило регулярный характер» [7]. Очевидно, что тут еще не идет речь о институциональных формах образования, но все же есть понимание ступенчатого подхода этого образования. «У ап. Павла находим фигуральное различие между двумя степенями зрелости в вере, которое впоследствии стало традиционным: «Я не мог говорить с вами, братия, как с духовными, но как с плотскими, как с младенцами во Христе. Я питал вас молоком, а не твердою пищей, ибо вы были еще не в силах, да и теперь не в силах, потому что вы еще плотские. Ибо если между вами зависть, споры и разногласия, то не плотские ли вы?» (1Кор.3:1–3) [13]. Обучение, является установкой на том

уровне, на котором находится человек, но полученное знание должно привести к изменению человека и перехода от чувственного к духовному сословию, на котором могут восприниматься знания уже как для духовных. В раннем христианстве пайдетический тип богословского образования вращался вокруг харизматических лидеров: апостолов, пророков, наставников и т.п., которые стремились воплотить идеал жизни во Христе и засвидетельствовав учение, призывали подражать Христу. В последующих периодах, после апостольского, начинают формироваться образовательные институты, которые были призваны к более тщательному, а главное последовательному и систематическому образованию. Так начинают формироваться новые типы богословского образования в христианской традиции. Исламский автор Тимур Шарафиев указывает: «Всевышний Аллах наделил человека разумом для того, чтоб он смог отличить истину от лжи, что является для него благом, а что нет. Благодаря нашему разуму мы достигаем небывалых высот в различных науках. Ислам всегда побуждал к приобретению знаний» [10]. Стремление к знанию есть обязательства каждого мусульманина и мусульманки, поэтому одним из инструментов распространения ислама становится передача знания. «По мнению Ахмад Фаузи Абдуль Хамида: «Методы, применяемые Пророком для распространения его учения включали лекции (куллийа), запоминание, дискуссии (мухадата), диалоги, дебаты (муджадала), познание опытным путем, путешествия в поисках знаний (рыхля) и обучение в кружке (Халака)» [13]. В исламской традиции формируется способ передачи знания через цепь от учителя к ученику и от ученика, который становится учителем, своему ученику (Иджаз). Авторитетной признавалась лишь та цепь передачи знания, которая вела к самому пророку Мухаммаду. Подобно тому, как вокруг Пророка формировался круг его последователей, которым он передавал знания, так и вокруг исламских ученых формируются кружки их учеников. В стремлении к знанию идеалом подражания выступает пророк Мухаммад. Быстрое распространение ислама и большое количество людей, которые стремились получить исламское знание, приводит к возникновению исламских образовательных институтов и перехода от доминирующего, во времена Мухаммада и праведных халифов, типа богословского образования в другие типы.

Мисиологический тип богословского образования ориентированный на удовлетворение потребностей общества, которое с одной стороны растет количественно, а следовательно растет спрос, в первую очередь во внутренней миссии, на систематическое изучение истин веры. Иудаизм, христианство и ислам имеют развитые и достаточно сложные вероучения, а из них формируется представление, что знание о том, во что адепт верит, является важным для того, чтобы соответствовать идеалам истинного верующего. В иудаизме такими образовательными институтами стали школа при синагоге и ешива. В христианстве – катехистические школы. В исламе – куттаб или мактаб. На время талмудического периода развития иудаизма приходится формирование мисиологического типа богословского образования. «В этот период можно говорить о трех этапах обучения:

изучение Библии; изучение Мишны; изучение комментариев к Мишне.» [6] Следует указать, что образование было ориентировано на мальчиков и имело массовый характер. Это было связано с тем, что после разрушения Второго Храма ритуал жертвоприношения был заменен изучением Танаха, Мишны и Гемары. Кроме того, именно это позволяло сохранять религиозную и этническую идентичность, такая задача выполнялась путем религиозного образования всех мальчиков. Формирование образовательного института миссиологического типа богословского образования в христианстве связано с катехистическими школами, выполняло две функции, с одной стороны – это трансляция христианской традиции, а с другой – подготовка к крещению катехуменов (кандидатов на крещение). В основном в это время крещение совершалось над взрослыми и важным было сознательное его принятие на основе истинного апостольского учения. Поэтому большинство христиан II-III ст. проходили через катехистические школы. Миссиологический тип богословского образования в исламе начинает формироваться в период праведных халифов. Р. Шарипова указывает: «После смерти Мухаммада при мечетях возникают коранические школы – куттаб или мактаб, – Которые со временем из-за увеличения числа учащихся открываются и при домах учителей и при дворце халифов и их визиря.» [10] Миссиологический тип богословского образования в исламе больше касается не тех, кто готовится стать адептом ислама, а уже тех, кто им стал и стремится углубиться и расширить свои знания.

Доксологический тип богословского образования возникает в период, когда в пределах религиозной традиции начинают формироваться отдельные направления и конфессии: в иудаизме – ортодоксальный, консервативный, реформистский и реконструктивистский; в христианстве – православие, католицизм, протестантизм с большим количеством конфессий; в исламе – суннизм, шиизм, хариджизм и ряд меньших направлений. Образовательные институты доксологического типа богословского образования были призваны формировать, в первую очередь, священнослужителей (духовенство), которые должны были транслировать основы религиозной традиции. Инициатива по созданию таких институтов всегда инспирирована светским или религиозным руководством для того, чтобы определить ведущую модель интерпретации религиозного вероучения и культа. Доксологический тип образования часто реализуется как средне-специальное образование, которому предшествует начальное религиозное образование (иногда это трансформированные образовательные учреждения пайдетиического и миссиологического типа). В христианстве классическим образовательным учреждением, в котором реализуется доксологический тип богословского образования, является семинария; в иудаизме – ешива после галахического периода в ортодоксальном иудаизме и богословская семинария в реформистском, консервативном и реконструктивистском иудаизме; в исламе – это, как правило, Мидрасе. В иудаизме доксологический тип богословского образования стал востребован как раз в то время, когда после Гаскалы возникают четыре направления, которые имели принципиальные различия в понимании вероучения

и культа, и поэтому возникает потребность подготовки раввинов, которые будут транслировать именно ту традицию, которую понимали как единственно правильную в рамках направления. В христианстве потребность в доксологическом образовании возникла в период после Реформации: сначала в протестантской, а затем в католической, еще позже и в православной среде. Это было связано с обострением межконфессиональных споров в пределах христианства, а потому важно подготовить священнослужителя, который бы мог отстаивать истины своей конфессии и эффективно полемизировать с представителями других конфессий. О процессах в исламской среде Д. Брилев отмечает: «институализации высшего исламского образования в виде медресе происходит немного позднее – в период правления Сельджукидов (1055-1194 гг.), когда визирем Низам аль-Мульк была основана первая сеть высших исламских учебных заведений – Низамийя – самым известным из которых было медресе в Багдаде (ОСН. В 1065 г.), в котором преподавал Абу Хамид Мухаммад ал-Газали [2]. Причины, которые приводят к необходимости доксологического типа богословского образования достаточно похожи, но время и место появления доксологических учебных заведений обусловлено исторической ситуацией каждой из религиозных традиций.

Академический тип богословского образования оформляется в Германии в период просвещения и связан с университетской реформой. В 1694 в Галле был создан новый университет, где провозглашен и последовательно утвержден принцип свободы научного исследования (*libertas philosophandi*): (Даже на богословский факультет проникает принцип научного исследования, в форме историко-критического изучения Св. Писания) [9]. По образцу богословского факультета университета Галле были созданы новые и реорганизованы ряд старых богословских факультетов евангелического (лютеранского) и католического богословия в Германии. Окончательно принцип свободы научного исследования и историко-критический подход был утвержден в Берлинском университете, основанном в 1808 году. Начало академического типа богословского образования в иудаизме следует связывать с созданием в 1778 году школы в Берлине [1]. Учебное заведение, которое уже полностью соответствует академическому типу богословского образования (после того как не воплотилась мечта еврейских интеллектуалов открыть в европейском университете факультет иудейского богословия) создано в 1854 в Бреслау (сейчас Вроцлав, Польша). Это Еврейская теологическая семинария, которая посвятила свою деятельность подготовке кадров, которые бы смогли, в свою очередь, критически изучать иудаизм во всех его проявлениях [1]. Надежды на создание исламских образовательных учреждений с академическим типом богословского образования появляются и сейчас в немецкоязычной среде и в бывших странах СССР с доминирующим исламским населением. Так, в 2012 году открылся факультет исламского богословия в Тюбингенском университете (Германия) [3] и в том же году с одноименным названием открываются факультет в Венском университете [4]. В Российской Федерации исламских богословов готовят в Казанском федеральном университете,

в Казахстане – в Казахском национальном университете имени аль-Фараби и в ряде университетов других стран бывшего СССР. Академический тип богословского образования разрабатывает свою методологию с учетом общенаучных методов и воспринимая достижения других наук. Говоря метафорически, академический тип богословского образования является университетским типом богословия.

Итак, богословское образование мы предлагаем типологизировать следующим образом: пайдетическое, мисиологическое, доксологическое и академическое.

Для первого, пайдетического типа, характерна – ориентация на воспитательный идеал, который воплощается в лице того, кто говорит, и что говорит. Данный тип богословского образования является элитарным и охватывает незначительный круг приближенных людей. Но данный тип является нормативным и своеобразным идеалом, который желательно полностью или частично воплощать в других типах.

Второй тип – мисиологический, ориентированный на удовлетворение потребности в богословском образовании среди религиозных общин, которые имеют стремительный численный прирост своих последователей. Этот тип образования имеет целью организовать изучение часто сложного вероучения в пределах религиозной традиции. Так мисиологический тип богословского образования был призван: в иудаизме – формировать религиозную и этническую обособленность; в христианстве – давать знания для новообращенных перед принятием крещения, а в исламе – углубить религиозные знания неофитов.

В третьем типе, доксологическом, уже реализуется образование, которое умеет лапидарно транслировать одну из конфессиональных традиций (православие, католицизм, суннизм, шиизм и т.д.). Этот тип образования ориентирован, в первую очередь, на подготовку священнослужителей. Для этого типа характерно то, что он инспирируется религиозным или государственным руководством.

Четвертый тип, академический, возникает с формированием историко-критического подхода в исследовании, в первую очередь, религиозных вероучительных источников в университетской среде, где исповедуется принцип свободы научного исследования. В данном типе является важным использование общенаучных методов и учет достижений других наук.

**Выводы.** Следует также указать, что выделение данных типов является идеализацией. Типы богословского образования, используя терминологию М. Вебера, являются идеальными типами. Если анализировать конкретную образовательную институцию, в которой реализуется богословское образование, то можно выделить признаки сразу нескольких различных типов богословского образования, но, несмотря на это, в основном один из типов оказывается доминирующим.

Важной эвристической ценностью разграничения типов богословского образования является то, что в условиях, когда в нашей стране восстанавливается богословское образование в конфессиональных и светских учебных заведениях после атеистического периода, важно выяснить, какой тип богословского образования в том или ином вузе мы стараемся реализовать. От этого понимания



будет зависеть четкость осознания того, на какой контингент студентов ориентирована образовательная программа конкретного вуза.

Разграничение типов богословского образования позволяет нам определить различные функции, которые образование может выполнять в тот или иной период развития, а также разграничить различные образовательные учреждения, в которых оно может развиваться. Понимая, что богословское образование разное, а значит имеет различные функции, то при его рассмотрении и анализе в целом или какого-либо из его аспектов следует различать, о каком типе образования мы говорим.

Сведения о апробации. Результаты исследований изложенные в данной статье были апробированы и озвучены на ряде конференций, таких как: 27-28 апреля 2018 в Киеве на первой Международной научно-богословской конференции «Методологии богословских исследований: проблемы и перспективы».

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## RECOGNITION AS A REASON FOR THE ACTIVATION OF CULTURAL IDENTITY IN THE MODERN WORLD

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**Annotation.** *The article examines the process of globalization in the context of the problems of cultural identity, where the concept of «recognition» determines the causes of international conflicts, substantiates the peculiarities of human activity in the context of cultural self-identification. In addition, we consider the concept of «recognition», its new definitions and emerging conceptual approaches to its interpretation in the context of globalization and world modernization.*

**Key words:** *recognition, struggle for recognition, culture, society, identity, globalization.*

**The relevance of research.** The theme of recognition is vividly seen through the process of globalization of the 20th century in the context of cultural identity. It was during this period that mankind faced rapid changes. At the same time, their scale and forms led to a crisis of national identity. And their overcoming put this or that community not only before the choice of adequate development. It became decisive in the matter of national survival. The processes of globalization meant, above all, the formation of a universal civilization, and hence, cultural standardization. However, we must not forget that the central core of society is always that it preserves the most established, most solid views of ethno-national communities about themselves. And it is not by chance that the process of globalization has constantly encountered culture as an obstacle. And modernization processes often end in conflicts. In many respects because their outcome is always directly dependent on the strength of cultural identity, from its uncompromising nature. He also depended on how insensitive she was to the new. Or, on the contrary, from its flexibility and the ability to adapt to new conditions. And this means, in turn, that the true cause of conflicts is the constant desire to be recognized. And it is not by chance that in the process of globalization the concept of «recognition» acquires new meanings and new conceptual approaches to its interpretation arise. And the struggle for recognition in the modern world is intensified due to the fact that in the world, after the «cold war», cultures and different types of cultural identification are defined as models of cohesion and models of conflict.

**Elaboration of the problem.** The paradigm of recognition is revealed in the works of many theorists, including modern ones. The very theme of recognition was updated after the publication of Phenomenology of the Spirit by Hegel and turned the concept of recognition into a full-fledged social and philosophical concept. But the basis of this theory has existed for a long time. One way or another, this topic was touched upon in the writings of Plato, Machiavelli, Hobbes, Rousseau, Hamilton, Nietzsche and others. In the XX century, in the era of globalization, the category of recognition began

to actively appear in the works not only of philosophers, but also in the fields of political science and geopolitics. F. Fukuyama, an American philosopher and political economist, referring to the concept of Hegel, tried to prove that the end of history is where the struggle for recognition ends. And the American geopolitician Samuel Huntington, introduced into this concept the most important, in his opinion, element, which is an integral part of reality - culture. It was in his research that the topic of recognition began to be understood within the framework of the problem of the formation of new forms of an identity culture in the modern global world.

**Statement of the main material.** Before we turn to the topic of recognition and the features of its manifestation in the modern world, in which for most people, cultural identification is a very important thing, let us dwell on the fact that the phenomenon of recognition in the process of the formation of scientific thought has always acquired a different interpretation and definition. It is noteworthy that representatives of various fields of knowledge: philosophers, psychologists, political scientists and other scientists, one way or another, justified the need to comprehend human behavior, the distinguishing feature of which is the ability to assess yourself and others. This ability is directly related to self-esteem. And, consequently, with the «struggle for recognition» of this dignity by surrounding people. This is written by the French philosopher Alexander Kozhev, who played a significant role in the development of the theme of recognition in the twentieth century. «As a social being, a person craves identity, which is closely related to the assessment of others. Overpowering the instinct of self-preservation, rejecting its animal nature, a person stands up for his prestige, to establish certain relationships with someone, so that someone respects him» [3, 74]. Hegel's «dialectic of the master and slave» gave A. Kojév a reason to create his own historical doctrine, explaining the cause of the emergence of civil society. Kozhev writes that, according to the concept of recognition, a person who could not overcome the instinct of self-preservation and refused to fight under the sign of death - a slave, in fact, an animal unworthy of recognition. The slave obeyed the master, the one who was able to assert his dignity. But the gentleman himself is in a humiliating situation, since he recognizes almost an animal, deprived of a sense of dignity. The scientist argues that the emerging contradiction has created a need for a new society. And the logic of his reasoning is as follows. While the gentleman seeks recognition from worthy people, the slave labor. And labor, as is known, transforms both the world and the person himself. As a result, the slave, humanizing his nature, overcomes the fear of death, and in the name of his admission to be a person is formed as a citizen. Thus, the formation of civil society is coming. True, Kojève's final conclusions are very pessimistic: if a person is not interested in competing, he is satisfied, then the end of the person that we know is coming to an end, which is, in fact, a sign of the end of history. Referring to the concept of Hegel, F. Fukuyama also comes to similar conclusions. He also defines the end of history where the struggle for recognition ends. The peculiarity of his conception lies in the fact that he considered the whole course of the historical process through the confrontation of the two political regimes, which has been in the state of the «cold war» - totalitarian and democratic for

most of the twentieth century. The scientist argues that democracy can ensure to each person equality among other people, and thereby satisfy its natural need for recognition. The result of this is the loss of any meaning to enter into conflicts and fight further. The ideological struggle is coming to an end, because the complete victory of democracy subsequently prevents further significant events in the history of mankind. He regarded the collapse of the Soviet Union as a hollow victory of liberal democracy, recognizing it, with all the individual shortcomings, as the best form of state structure for all mankind. Thus, he writes that «If it is true that the historical process rests on two twin columns - desire and rational recognition, and that modern liberal democracy is a political system that best satisfies both needs in a balanced way, then, according to evidently, the main threat of democracy will be our lack of understanding of what is actually at stake» [4, 503]. And in spite of the fact that the theory of F. Fukuyama attracted a special attention of the scientific environment, call it a fundamental concept explaining the essence of the historical process of human development only through the interaction of political regimes or the technology of domination, is certainly impossible. This would be a rather limited view of the problem. It is worth remembering M. Weber, who called such theoretical constructions «ideal types» and noted that in the «pure form» they do not exist. That is, both democracy and totalitarianism cannot be realized in full, since they retain in themselves some remnants of traditions and mores that are characteristic of the political conditions that existed in the past.

Nevertheless, the theories of A. Kozhev and F. Fukuyama give us the opportunity to realize the importance of the phenomenon of recognition with respect to people, and consider it from the point of view of the cultural development of mankind, where the bearers of cultural values act as lords and slaves. After all, history itself testifies that a person, creatively transforming the world, strives to be seen and in every possible way achieves interrelation with the help of his own means, methods and products of culture. That is, it seeks recognition not only from the standpoint of economic and political interests and needs. This is what S. Huntington writes about in his work «The Clash of Civilizations». He is one of the first to draw attention to the fact that culture, imposing one layer of values on another, will never allow a person to stop in the struggle for his confession. According to his concept, the struggle of opposites will always be, since it is embedded in the very mechanism of human existence, in the mechanism of culture. He draws attention to the fact that if we examine the historical process from the standpoint of culture, then it is penetrated by the incredible breadth of the conglomeration of spiritual and material achievements of mankind, with its meanings, signs, laws and laws. The scientist claims that it is only necessary to turn to the consideration of the totality of values, beliefs, traditions and customs of different peoples, it immediately becomes clear how different the attitudes of these people are. And for them, cultural identity is very important: the relationship of language, religion, various institutions. And therefore, he believes, the harmonious peace expected after the end of the «cold war» is impossible. It is because people in these new historical realities are turning to the search for their cultural identity. And S. Huntington comes to the conclusion that for

people who are looking for their roots, the enemies are important. The main idea of his work is precisely to show that in «... the world after the Cold War, culture and different types of identification ... define models of cohesion, disintegration and conflict» [3, 15]. A distinctive feature of the concept of Huntington is that he actually raises the topic of recognition of cultural identity and cultural identity. And thus criticizes the orientation of many researchers to the West as an example of social development. He manages to show that the processes of modernization, Westernization and all sorts of reformism will not lead to the emergence of a global universal civilization. The reason, as his research shows, is that the subject of the dispute is not so much on the socio-economic or political plane as in the culture. The scientist believes that such concepts as origin, custom, values, language, religion and the like are at the core of the driving force that determines international relations today. Agree with such a statement or not, will help only analysis of social processes occurring in modern society. It is obvious that at this stage of global development processes of globalization and modernization are taking place, where countries that have reached the highest development in socio-economic and technological aspects have the advantage. For a long time, world history was perceived through the «prism of the West», and the history of the last centuries is the history of the expansion of Western civilization. The latter cannot be estimated unambiguously. A lot of countries in Asia and Africa have undergone excruciating tests, adapting to the challenges of the West. At the same time, this ultimately led to an improvement in the living standards of people in these territories, gave dynamism to economic and political development. Many researchers argue that the process of expansion has united Western Europe. Exit this civilization beyond the Western European and North American areas, strengthen the West as a civilizational community, stabilize its political and economic institutions.

In addition, today the Western civilization has acquired new communication opportunities in the form of mass media, various forms of audiovisuality and the Internet. And it seems that nothing can prevent it from creating a universal civilization, based on the values and norms of Western culture. But the tendency to perceive the world as a whole through the prism of the values of Western culture receives a response in the form of exacerbation of ethnic self-awareness, search for values in traditional forms, religious revival. In culturology, even the term «indigenization» arose, which means cultural isolation and the desire for civilizational independence. This process marks a struggle for its «prestige», because cultural identity is impossible without its recognition. In this context, the situation in the modern global world can be correlated with the slave in the spirit of the Hegelian concept: being under the influence of a stronger civilization, culture at some stage acquires self-consciousness and acquires identity. This occurs where tradition does not allow for innovation in accordance with the imposed culture or compromise. After all, there are institutions that determine the culture of society, and many of them cannot change in their essence. A vivid example of this process was the «Islamic revival». This term has actively entered into the everyday life of modern cultural studies. The tendency of the West to view Islam as an obstacle to progress has

produced a lot of negative consequences. Trying to find answers to the challenges of Western civilization, representatives of the scientific thought of Islamic countries put forward their social concepts in which they defended their identity and recognized the values of their culture. But all these attempts were perceived by Western scholars as religious fanaticism. One of the researchers of Muslim culture, Belokrinitsky, in his work «Muslim East in the early 21st century» writes that most Western analysts viewed this as the politicization of Islam, the introduction of religious values into the social life. In fact, the scientist believes, the revival of Islam has a deep modernizing potential, and, with moderate Islamism, such activity is aimed at reforming and adapting religion to modern trends.

But the brutal interference of the West in the internal politics of those countries that are part of the Muslim world, an attempt to impose democratic values on this world, has in fact led to chaos, war and terrorism, which has become a threat to the whole world. But these extremist movements of Islam can also be seen as a «struggle for recognition». Therefore, today it can be argued that the failures of modernization are obvious, as many non-Western peoples have not changed their culture. They even strengthened their identity in the process of assimilation of Western innovations. Moreover, the development of non-Western cultures grows as they gain political, military and economic power. An example of strong cultures in this respect, which could retain their identity and achieve world recognition, are some Asian countries. Due to their collectivistic, rather than individualistic values, the Asian countries achieved great economic growth in conditions of fierce competition with the West. At the same time, Western movements either rejected them, or were adapted to their conditions, resulting in their «asiation». In an active historical period of Western expansion, India, which did not lose its culture in the process of British colonization, can also serve as an example of a sustainable cultural identity. And China, which in a certain period adopted a Marxist ideology, but managed to adapt communism through an ethical-normative program - Confucianism. And today, in the era of globalization, these countries, without losing their identity, have managed to modernize their social and economic structures, and, defying the West, are becoming one of the leading economies of the world. And it is no coincidence that Huntington, in his theory of the clash of civilizations, noted that: «The most dangerous clashes in the future occur due to Western arrogance, intolerance of Islam and Sino self-confidence» [5, 46].

The scientist divides the world into eight civilizations, relying on, and tries to identify the so-called «fault lines» that run along these civilizations. He relies, at the same time, on his subjective perception. And this gives a reason to criticize his concept to some representatives of the scientific community. But you cannot disagree with the fact that Huntington displays a rather realistic picture of cultural conflicts. Criticizing Western expansion and colonization for «the ability to press», the American political scientist justifies the aggravation of civilizational, ethnic and national consciousness, linking these processes with the needs of recognition. But its main conclusion is that the «fault lines» indicated by them, under certain conditions, can become lines of fronts. And the validity of such a conclusion can be considered on the example of the collapse of the



Soviet totalitarian state. As is known, the Soviet Union included a number of republics whose cultural identity was marked by a significant ethnic and religious diversity. The communist ideology on which the state was based tried to moderate a «new», ideological identity, propagating the idea that a new historical community of people - the Soviet people - had been formed in the country of the Soviets. Political «self-deception» was revealed immediately, as soon as the first political indulgences took place in the country, under conditions of «perestroika». The peoples began to turn to their roots, and in the post-Soviet space, serious clashes between Christians and Muslims began, and great tension between the Russians and the Baltic nations began.

The split between the Europeanized Slavs in the West of Ukraine and the Russian-Slavic world in the East of the country did not occur immediately. For many, it has become especially painful and unexpected for many. After all, despite the fact that in different periods of the history of Ukraine was independent, yet most of its historical path, it was held jointly with the Russians. S. Huntington was able to notice the cause of the conflicts that have arisen. Studying the history of Ukraine, he concluded that Ukraine is a divided country, with two different cultures. He saw the «line of the civilization break», which is the nature of religion, which, in his opinion, separates the western part of the country from traditional Orthodoxy. And in fact, at various points in the past, western Ukraine was part of Poland, Lithuania and the Austro-Hungarian Empire. And a significant part of its population identifies itself as representatives of the Uniate Church, the distinctive feature of which is that it performs Orthodox rites, but does not recognize the authority of the Pope. Historically, Western Ukrainians spoke in Ukrainian, they were always nationalistic in their views and, often, fought for their recognition. The scientist tried, based on his conception, to predict three possible solutions to the split situation, but he could not take into account the rude interference in the internal affairs of the country of external interested forces, and therefore the reality proved to be more complex than the theoretical construction and much more tragic.

**Conclusions.** Thus, it can be concluded that if earlier the causes of conflicts were primarily sought in the economy and politics, today they should be sought in culture. Culture will never allow a person to stop in the struggle for his confession. And such processes as globalization and modernization can manifest culture as the cause of international conflicts, or vice versa. show its resilience to the changes of modernity. In addition, under the conditions of globalization, the situation of the «master and slave» once again arises, when the rights of weak states are violated by the appropriated rights of the strong, when the processes of integration and unification meet the interests of some countries but threaten national economies and their cultural identity of other countries. So the struggle for recognition continues, and its outcome can change the world.

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## **PEDAGOGY AND PSYCHOLOGY**

### **PECULIARITY AT INFORMATION TECHNOLOGY USE IN THE PROCESS OF LEGAL PREPARATION OF FUTURE ECONOMISTS**

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**Annotation.** *The article presents application of information technologies in the process of legal preparation of future economists on the basis of informatization of higher economic education. The basic approaches to ensuring the legal training of future specialists in economic specialties at a higher education institution are determined and analyzed. Based on the specifics of the content of economic education, management, informational and methodological, educational, technological, evaluation aspects, the formation of professional competence of future economists in higher education institutions is disclosed.*

**Key words:** *information technologies, legal preparation, informatization of activity, process of preparation of future economists.*

In the beginning of the XXI century humanity entered a new era of its development - informational. There was a new notion of "information society" as the historical phase of civilization, when human life and activities are primarily related to the creation, processing and use of information [6].

The Ukraine entry into the world economic space and processes of globalization, the growth of the role in information and communication technologies make significant changes at the overall development of society. Their penetration into various sectors of the economy, the modern labor market, economics and the system of higher economic education in Ukraine is rapidly adapting in the information space, possessing modern methods and technologies for processing information related to the specifics of the organization of information processes in the professional environment.

Therefore, the priority is the professional preparation of a specialist who focuses not only on the development of entrepreneurship and initiative, capable of continuous professional growth and self-improvement, social and professional mobility, and so on.

According to S. Sysoev, the information society produces a large amount of diverse information coming from a source of different degrees of reliability, and therefore search, critical assessment, structuring, work with information - is the strategic knowledge that each person must have for targeting in the information space and the creation of their own ideas about the surrounding world [10, p. 82].

V. Kremin points out that the purpose of the information society is the full development of the person, creation of conditions for its spiritual and intellectual enrichment, the growth of national human capital as the basis for the development of political, social,

economic, humanitarian, cultural and other spheres of public life in order to increase the well-being of citizens and efficiency of the economy [7, p. 6].

It is believed that three major revolutions took place in higher education. The first is the transition from oral traditions to writing, the second is the change in the division of students into small groups by the modern system of libraries and student towns, and the third was caused by information technologies [8]. Each of these revolutionary changes improved the quality of education, retained the best of old methods, while at the same time giving way to new technologies. Different companies and organizations today are looking for graduates of higher education institutions the qualities that can be shaped in the process of communication between the learner and the learner, namely: the ability to think critically and effectively communicate both verbally and in writing ; Ability to work in groups, both in their own field and in related disciplines; ability to adapt quickly to new technologies; knowledge of the global environment and cultural peculiarities necessary for work in the conditions of the worldwide division of labor.

Today, information has become a social strategic resource that provides the competitive advantage of institutions of higher education, especially of economic departments, taking into account the specifics of legal training, among which there is a competitive struggle in the market of educational services, in this connection, there are significant changes in the role of information and in the management of higher education institutions education.

The decision of these difficulties heads of institutions of higher education decide through the creation of an information system of such an institution, which contains information on the organization and monitoring of initial activities of students, methodological and scientific work of teachers. An information system that ensures quality monitoring must meet the needs of a particular institution and reflect: student achievement and performance indicators; the ability of graduates to get a job and, consequently, job placement; satisfaction of students with the educational programs they perform; the effectiveness of the teachers; character of the student's staff; available teaching resources and their cost; key indicators of the activity of this educational institution are one of the components of the Standard on the internal quality assurance in higher education institutions. A. Biloshchitsky [1] emphasizes the necessity of using the facilities and services of a computer-oriented information and communication environment for solving various problems.

Consequently, a special place in the organization of new information technology occupies a computer. A. Vernal and N. Apatov note that when considering a computer as an object that has parts that are interconnected and function according to certain rules, it can be called a system, and since the computer is used mainly as means of saving, searching and issuing information, then it can be regarded as an information system [2, p. 5-6].

Taking into account the aforementioned, it is possible to distinguish between two approaches to the definition of "information technology teaching" in the legal training of future economists. The first is characterized by the introduction into the legal training of

specialists of a combination of new tools and methods that do not contradict the current legislation of Ukraine, the second - the programmed-technical means of educational appointment with the legal training of future economists.

So for the modern students are the task of learning independently by means of information and communication technologies, namely, no-line training, which is particularly acute, but it is also complicated by the fact that young people after graduation from a higher educational establishment, entering into a new independent life, have certain difficulties in adapting to new living conditions.

The complication of the process of independent work of students of non-pedagogical specialties of higher educational institutions is primarily due to the economic conditions of life (city, rural areas) and the teaching of informational and communicative literacy, as well as the partial restriction of students from rural areas to the knowledge of work on a computer.

Starting professional training for the future work from the first year of higher education, future economists are looking for ways to independently adapt to the complex and controversial conditions for preparation for classroom work: learn to independently acquire information, knowledge, commune, to master the profession, participate in student life, organize leisure activities, adapting to the conditions of a higher educational establishment. Learning independent work affects a young person, becoming one of the conditions for her successful preparation from the first year.

R. Gurevich and T. Poyask noted that at the present stage there are two distinct approaches to the definition of information technology education. Within the framework of the first approach, it is proposed to consider ITN as a didactic process, organized using the totality of newly introduced tools and methods of teaching data (teaching methods) introduced into the system of education, consisting of the purposeful creation, transmission, storage and display of information products (data, knowledge, ideas) with the least cost and in accordance with the regularities of cognitive activity of those who study. The second approach involves the creation of a specific technical learning environment, in which the information resources used are the main place [3, p. 5; 9, p. 86].

Thus, the first approach reflects technology as a learning process, and the second one is the use of specific software and hardware in the learning process. Information technologies related to the second approach today are actively used in the educational process of a number of educational institutions of higher education in Ukraine.

Among the widely used information technologies, the following should be distinguished: Electronic Library Catalog, Electronic Textbook, Computer Aided Design, Multimedia System, Database, Database (Database), E-mail (Electronic Mail), Voice Mail, Bulletin System, Teleconference, Computer Research System, Smart Board, Desktop e-mail Crimson (Desk-Top Publishing) and others.

We must clearly understand the need for legal knowledge of future economists in the application of information technology. The positive point is that future specialists, at a lower cost of time, have the opportunity to carry out on a regular basis the legal

and regulatory documents necessary for the study of economic specialties. Knowledge of international accounting standards, international standards of audit, etc., enables the future specialist of the economy to be competitive in the labor market.

Applied information technology should be divided into two classes: stationary and network. For realization of stationary information technologies the following means are used: computer training courses, recorded on solid carriers (laser disks, memory cards), educational information, audio and video materials, electronic publications, etc. Networks form the core of distance learning, which is realized through a specialized information environment through means of exchange of educational information at a distance (computer communication, satellite television, etc.) [5, p. 85-86]. The use of network technologies in the educational process provides users with access to worldwide networks with their huge amount of information in various fields without spatial and temporal constraints, which provides the opportunity to develop new educational technologies and approaches to traditional methods. Computer networks are now the most important part of the modern information sphere. Using the Internet for educational purposes (using search engines) improves the skills of independent work of students [9, p. 89-90].

Thus, integration of the university into the system of computer communications has become an integral part of education. The key direction was the technological informatization associated with the use of the possibilities of computer science and information technology to improve the efficiency of the education system. Promising in the training of future economists in terms of legal training are both stationary and network technologies. Stationary will become more widespread in the daytime learning form. Particular attention should be paid to the development of training courses with the use of computer technologies, educational audio and video materials with knowledge of regulatory legal acts, electronic publications, electronic libraries, etc. Distance learning and distance education should be based on network technologies that facilitate the exchange of legal training information for future economists between teachers and students through computer communications, telecommunication technologies, and more. The educational process of a modern institution of higher education must be constantly improved, and this improvement can take place, in particular, through the active use of information technology.

In the 90 years of the twentieth century, a new model of distance education appeared, which, according to R. Klopov, should be regarded as a technology of physical education or tele-education [4]. In this case, teleconferencing is the main form of interaction between the teacher and the student, between the students themselves. Such a model dramatically changes the organization of education, which is manifested in the fact that on the basis of this model began to develop a new form of modern education - virtual universities. These technologies enable those who are taught to communicate with teachers and with each other, being at any distance from each other. Modern communications are complemented by computer training programs [4].

**Conclusions.** Therefore, informatization of higher economic education under the

condition of legal training is a process of creation of optimal conditions for the integrated application of information and communication technologies in the educational process, knowledge of legal norms, scientific research, administrative management, changes in the content, methods and organization of student learning forms with the aim of transitioning to learning using information and communication technologies that do not replace traditional forms and methods of training, but complements them, expands the possibilities of their implementation.

During the legal training of future economists, the main goal of informatization of higher economic education is realized, which involves: formation of informative competence of students and teachers; creation on the basis and at the expense of information and communication technologies of new and additional conditions for improving the quality of training of future economists; the introduction of distance learning or its improvement with knowledge of regulatory documents, the development of new forms of education and learning technologies based on the use of information, distance and modern information technologies.

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## CONCEPTUAL FOUNDATIONS FOR IMPROVING THE FUTURE SPECIALISTS' PROFESSIONAL TRAINING SYSTEM OF HUMAN SAFETY SPHERE IN HIGHER EDUCATIONAL INSTITUTIONS

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**Annotation.** *The article presents conceptual foundations for improving the future specialists' professional training system of human safety sphere in the field of management activity, which is based on the basic scientific provisions of pedagogy and psychology, laws and principles of the educational process in the higher educational institutions of the Civil Protection Service of Ukraine, which are determined on the methodological, theoretical and methodological levels of conceptual framework for improving the system of professional training of future specialists in various fields of human safety, development of their motivators for formation of professional and management competence, the formation of their own professional and civic stand.*

**Key words:** *content of professional training, management activity, management competence, educational process.*

Challenges of the XXI century demand a fundamentally new system of management of life safety prevention and observance issues in conditions of emergency (anthropogenic and man-made accidents, catastrophes, natural hazards) as well as the management of the subordinates during the emergencies consequences elimination in conditions of uncertainty and risk. Accordingly, the management of emergency rescue units and other services, which are to ensure safe living conditions of the population, requires a clear separation of powers and responsibilities of management at all levels.

The main figure in the organization and management of the civil protection unit, on whose competence depends the effectiveness of the service in general, is a graduate of the specialized institution of higher education. Collective responsibility increasing in emergency situations as well as the high social significance of work of emergency rescue units and other services responsible for the safety of life in the state, will increase the requirements for the managerial preparedness of their leaders. The proper level of such preparedness is expressed in the formation of specialists' in human safety field managerial competence.

We also agree with the importance of taking psychological aspects into account when defining the managerial competency structure of a manager, but we consider that its components should cover a wider range of characteristics. In particular, the effective staff management and the successful solving of the service tasks that are currently facing the State Emergency Service of Ukraine depend significantly on the leadership skills of the head of the unit, the ability to lead people, the ability to consolidate the staff to

perform specific tasks and achieve the set goal.

We are convinced that the purposeful development of leadership skills of future specialists in the field of human safety during the formation and development of their managerial competency will significantly increase the effectiveness of their professional training in the higher educational institutions of the State Emergency Service of Ukraine. In addition, in our opinion, to reflect the corrective and control-evaluation aspects of management activities and to strengthen the psychological connection between resources of managerial competence of the individual can be possible by incorporating a reflexive component into its structure.

The concept of our research is based on the basic scientific provisions of pedagogy and psychology, laws and principles of educational process in the institutions of higher education of the State Emergency Service of Ukraine which determine the conceptual foundations for improving the future specialists' professional training system in various fields of human safety in higher educational institutions, the development of their motivation, the formation of professional and managerial competence, the formation of their own professional and civic position at the methodological, theoretical and methodical levels.

The methodological concept reflects the scientific basis (philosophical, general scientific and interdisciplinary levels) of the problem of training specialists in the field of human safety for management activities, which is investigated from the standpoint of systemic, personally oriented, activity approach, polysubjective, environment, integrative, competence, innovative approaches that will promote their spiritual, moral and volitional, physical and intellectual development; provides the consideration of the educational process as a multidimensional phenomenon, which causes the integral substantiation of the methodological basis of the research, the construction of a model of specialists' training in the field of human safety for the management activities in the higher educational institutions, improving the content of the theoretical and practical training of students and cadets for management activities, methodology and technological support for the implementation of innovations in the State Emergency Service of Ukraine higher educational institutions. The professional training of future human safety specialists in management should reflect the conceptual provisions of the management theory, meet the requirements of the logic and methodology of modern science; organically take into account psychological and pedagogical aspects of the activity of an individual in emergency situations. Defining the methodological approaches to the problem of improving the system of human safety specialists' professional training we took into account the fact that they should cover:

- 1) the doctrine of the structure and functions of pedagogical knowledge;
- 2) starting, key, fundamental positions (theories, concepts, principles, hypotheses) having a general scientific and general pedagogical meaning;
- 3) the doctrine of logic and methods of pedagogical research;
- 4) provisions on how to use these new scientific ideas to improve educational practice [1, p. 55].

To improve the quality of education of future specialists in the human safety sphere in the process of studying in the higher educational institutions there are the following important methodological approaches to the staff training for the State Emergency Service of Ukraine units: historical and philosophical, systemic, structural, functional-organizational, personal-activity, problematic, prognostic, anthropological, genetic, integrative ones [2]. However, nowadays the content and methods of the specialists' professional competence forming in this field should be designed taking into account the provisions of other approaches based on the humanistic paradigm according to which education should focus not only on the development of abilities, the education of the social and professional qualities of future specialists but also to help each person regarding his/her intellectual self-development and inexhaustible spiritual growth [3, p. 182].

Theoretical concept determines the systematic analysis and research of all the components of human safety specialists' training in the higher educational institutions of the State Emergency Service of Ukraine which are internally interconnected and form the basis for formulating the initial theoretical aspects of future specialists' managerial competence forming as an open socio-pedagogical system containing the target, content, technological, diagnostic and analytical structural elements.

The theoretical foundations of the research are: the fundamental role of management as a multifunctional factor of successful activity, including educational one; humanistic and democratic direction of management activity; integrity, projectiveness and continuity of socially and professionally significant personal qualities forming process. The managers' activities in the human safety field are a certain technological scheme, the algorithm of which must be scientifically based, expedient, productive, optimal, proactive, prognostically verified. It requires from graduates production and structural and component consistency of dynamic competencies aimed at adequate implementation of management actions in emergencies. The theoretical substantiation of the specialists' training in the human safety field model for the management activities of the State Emergency Service of Ukraine higher educational institutions is based on the consideration of the cognitive, diagnostic, axiological, praxeological and reflexive components of managerial competence, better experience of specialists' training of this profile in foreign countries.

The methodical concept provides the scientific and prognostic substantiation and introduction of the proposed innovations, the development of methods and technologies for designing, implementation, expert evaluation, experimental verification, monitoring and adjustment of innovations in the information and educational environment of higher education institutions of the State Emergency Service of Ukraine, the implementation of which requires an adequate level of preparedness of scientific and pedagogical workers, updating and structuring the content of theoretical and practical future specialists' training in different areas of the human safety for management activities in accordance with modern teaching requirements and national standards of professional education, updating and optimization of the research software support and educational activities,

development of criteria and indicators of levels of cadets and students' management competence.

The future specialists' training in the field of human safety for management activities should provide high professionalism, opportunities for self-realization of personality, humanistic values reflection and formation. Improving the training of civil defense staff at the present stage requires more effective mechanisms for organizing and controlling the educational process.

Thus, the improvement of the cadets and students' training in the higher educational institutions of the State Emergency Service of Ukraine for management activity is to create an information and educational environment based on the active use of innovations and information and communication technologies and allows to achieve the necessary quality of specialists' training in the field of human safety. Innovative technologies in higher educational institutions of the State Emergency Service of Ukraine are aimed at increasing the efficiency of the educational system and its emergence to a qualitatively new level of functioning and should be based on the understanding of the essence of preparation for management activity as a system, process and result, that is the formation of socially active, highly skilled human safety specialists with advanced management competence, able to act creatively in situations of uncertainty and risk in accordance with professional tasks in the process of emergency response and their consequences in the protection of population and territories, localization zones of harmful and dangerous factors of accidents and disasters, technological surveillance of safety at potentially hazardous facilities and so on.

The main tendencies of specialists' training in the field of human safety for management activities are the following: the development of motivational-value attitude to the formation of managerial competence; deepening the relationship between theory and practical training; interdisciplinary integration, integrated use of the latest pedagogical and information and communication technologies, creation of the informational and educational environment of higher educational institutions of the State Emergency Service of Ukraine.

The high social significance of the specialists' work in the field of human safety, increasing the joint responsibility for the emergency situations prevention and elimination will raise the level of managerial preparedness of the units heads. The main responsibility for this task lies, undoubtedly, on higher educational institutions of the State Emergency Service of Ukraine, since they train specialists who directly carry out the organization and management of rescue services, and the effectiveness of the industry as a whole depends on their managerial competence. Certainly, effective formation of competence requires modernization of the professional training of the future management corps that will work in different structures and institutions. There are tasks to find ways of an organic combination of professional knowledge of specialists with the formation of a deep scientific world outlook, social activity, managerial qualities. This applies to both specialized higher educational institutions, postgraduate education institutions and advanced training in the system of the State Emergency Service of Ukraine as well as self-

education of each specialist [4, pp. 7-8]. At the same time managerial training should be oriented to mastering along with theoretical knowledge, proper level of practical skills. To do this it is necessary to foresee management practice at enterprises, organizations, institutions, executive bodies and local self-governments with the reproduction of circumstances that are as close as possible to real extreme situations.

Consequently, professional training of future human safety specialists should be based on substantially new theoretical and methodological provisions that determine the construction of a system for training cadets and students in higher educational institutions of the State Emergency Service of Ukraine for management activities that will meet public requirements for coordinated, effective work of the emergency units.

The methodological basis of the research is the scientific provisions of praxeology; phenomenology; humanistic paradigm of the philosophy of education; the synergetics philosophy; theory of management and system theory; methodological approaches: systemic; personally oriented; active; polysubject; competent, environmental, resource; the theory of development and self-development of social and professional qualities of the personality of a specialist; modern didactic approaches to the content, methods and technologies of professional training for activities under special conditions.

For the given research the interdisciplinary level of the methodology is important which belongs to a group of interdisciplinary method, presented by the integrative methods used at the intersection of scientific disciplines (in particular, in the study of education management). Such approaches are inherent in modern scientific and pedagogical researches since they reflect integrative trends in education and science. Studying of pedagogical objects through the transfer of models and ideas from other fields allows to gain new knowledge. Science knowing, organizational, historical, informological and other approaches are included to interdisciplinary ones [5, p. 30].

To sum up, we note that the breadth and multidimensionality of the subject of our research causes the necessity to use a number of other methodological approaches - synergetic, axiological, culturological, technological, integrative, informological, axiological, contextual, etc. in addition to the mentioned individual provisions. Taking into account the requirements of the considered approaches it is necessary to develop specific principles of specialists' training in the field of human safety for management activities.

**Conclusions.** Thus, the study of modern scientific-pedagogical literature, normative-legal base and practices of higher educational institutions of the State Emergency Service of Ukraine as well as its own long-term experience of pedagogical work gives grounds for arguing that consideration of the research problem should be carried out at four methodological levels (philosophical and methodological, general scientific, psychological and pedagogical and interdisciplinary) and the substantiation of methodological approaches (systemic, personally oriented, dialectical, polysubject, competent, environmental, resource). The complex application of these provisions will help to understand the essence, content and structure of future human resources professional training for management activities and will provide an opportunity to

develop a concept of future human safety specialists' training for management activities, to substantiate the pedagogical conditions for the effective formation of specialists' managerial competence in human safety, to reveal the methodical features and to offer technological support to the cadets and students' training in higher educational institutions of the State Emergency Service of Ukraine for management activities.

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## **MEDICINE AND PHYSIOLOGY**

### **PECULIARITY AT INFORMATION TECHNOLOGY USE IN THE PROCESS OF LEGAL PREPARATION OF FUTURE ECONOMISTS**

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**Annotation.** *The article presents application of information technologies in the process of legal preparation of future economists on the basis of informatization of higher economic education. The basic approaches to ensuring the legal training of future specialists in economic specialties at a higher education institution are determined and analyzed. Based on the specifics of the content of economic education, management, informational and methodological, educational, technological, evaluation aspects, the formation of professional competence of future economists in higher education institutions is disclosed.*

**Key words:** *information technologies, legal preparation, informatization of activity, process of preparation of future economists.*

In the beginning of the XXI century humanity entered a new era of its development - informational. There was a new notion of "information society" as the historical phase of civilization, when human life and activities are primarily related to the creation, processing and use of information [6].

The Ukraine entry into the world economic space and processes of globalization, the growth of the role in information and communication technologies make significant changes at the overall development of society. Their penetration into various sectors of the economy, the modern labor market, economics and the system of higher economic education in Ukraine is rapidly adapting in the information space, possessing modern methods and technologies for processing information related to the specifics of the organization of information processes in the professional environment.

Therefore, the priority is the professional preparation of a specialist who focuses not only on the development of entrepreneurship and initiative, capable of continuous professional growth and self-improvement, social and professional mobility, and so on.

According to S. Sysoev, the information society produces a large amount of diverse information coming from a source of different degrees of reliability, and therefore search, critical assessment, structuring, work with information - is the strategic knowledge that each person must have for targeting in the information space and the creation of their own ideas about the surrounding world [10, p. 82].

V. Kremin points out that the purpose of the information society is the full development of the person, creation of conditions for its spiritual and intellectual enrichment, the growth of national human capital as the basis for the development of political, social,



economic, humanitarian, cultural and other spheres of public life in order to increase the well-being of citizens and efficiency of the economy [7, p. 6].

It is believed that three major revolutions took place in higher education. The first is the transition from oral traditions to writing, the second is the change in the division of students into small groups by the modern system of libraries and student towns, and the third was caused by information technologies [8]. Each of these revolutionary changes improved the quality of education, retained the best of old methods, while at the same time giving way to new technologies. Different companies and organizations today are looking for graduates of higher education institutions the qualities that can be shaped in the process of communication between the learner and the learner, namely: the ability to think critically and effectively communicate both verbally and in writing ; Ability to work in groups, both in their own field and in related disciplines; ability to adapt quickly to new technologies; knowledge of the global environment and cultural peculiarities necessary for work in the conditions of the worldwide division of labor.

Today, information has become a social strategic resource that provides the competitive advantage of institutions of higher education, especially of economic departments, taking into account the specifics of legal training, among which there is a competitive struggle in the market of educational services, in this connection, there are significant changes in the role of information and in the management of higher education institutions education.

The decision of these difficulties heads of institutions of higher education decide through the creation of an information system of such an institution, which contains information on the organization and monitoring of initial activities of students, methodological and scientific work of teachers. An information system that ensures quality monitoring must meet the needs of a particular institution and reflect: student achievement and performance indicators; the ability of graduates to get a job and, consequently, job placement; satisfaction of students with the educational programs they perform; the effectiveness of the teachers; character of the student's staff; available teaching resources and their cost; key indicators of the activity of this educational institution are one of the components of the Standard on the internal quality assurance in higher education institutions. A. Biloshchitsky [1] emphasizes the necessity of using the facilities and services of a computer-oriented information and communication environment for solving various problems.

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Taking into account the aforementioned, it is possible to distinguish between two approaches to the definition of "information technology teaching" in the legal training of future economists. The first is characterized by the introduction into the legal training of

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So for the modern students are the task of learning independently by means of information and communication technologies, namely, no-line training, which is particularly acute, but it is also complicated by the fact that young people after graduation from a higher educational establishment, entering into a new independent life, have certain difficulties in adapting to new living conditions.

The complication of the process of independent work of students of non-pedagogical specialties of higher educational institutions is primarily due to the economic conditions of life (city, rural areas) and the teaching of informational and communicative literacy, as well as the partial restriction of students from rural areas to the knowledge of work on a computer.

Starting professional training for the future work from the first year of higher education, future economists are looking for ways to independently adapt to the complex and controversial conditions for preparation for classroom work: learn to independently acquire information, knowledge, commune, to master the profession, participate in student life, organize leisure activities, adapting to the conditions of a higher educational establishment. Learning independent work affects a young person, becoming one of the conditions for her successful preparation from the first year.

R. Gurevich and T. Poyask noted that at the present stage there are two distinct approaches to the definition of information technology education. Within the framework of the first approach, it is proposed to consider ITN as a didactic process, organized using the totality of newly introduced tools and methods of teaching data (teaching methods) introduced into the system of education, consisting of the purposeful creation, transmission, storage and display of information products (data, knowledge, ideas) with the least cost and in accordance with the regularities of cognitive activity of those who study. The second approach involves the creation of a specific technical learning environment, in which the information resources used are the main place [3, p. 5; 9, p. 86].

Thus, the first approach reflects technology as a learning process, and the second one is the use of specific software and hardware in the learning process. Information technologies related to the second approach today are actively used in the educational process of a number of educational institutions of higher education in Ukraine.

Among the widely used information technologies, the following should be distinguished: Electronic Library Catalog, Electronic Textbook, Computer Aided Design, Multimedia System, Database, Database (Database), E-mail (Electronic Mail), Voice Mail, Bulletin System, Teleconference, Computer Research System, Smart Board, Desktop e-mail Crimson (Desk-Top Publishing) and others.

We must clearly understand the need for legal knowledge of future economists in the application of information technology. The positive point is that future specialists, at a lower cost of time, have the opportunity to carry out on a regular basis the legal

and regulatory documents necessary for the study of economic specialties. Knowledge of international accounting standards, international standards of audit, etc., enables the future specialist of the economy to be competitive in the labor market.

Applied information technology should be divided into two classes: stationary and network. For realization of stationary information technologies the following means are used: computer training courses, recorded on solid carriers (laser disks, memory cards), educational information, audio and video materials, electronic publications, etc. Networks form the core of distance learning, which is realized through a specialized information environment through means of exchange of educational information at a distance (computer communication, satellite television, etc.) [5, p. 85-86]. The use of network technologies in the educational process provides users with access to worldwide networks with their huge amount of information in various fields without spatial and temporal constraints, which provides the opportunity to develop new educational technologies and approaches to traditional methods. Computer networks are now the most important part of the modern information sphere. Using the Internet for educational purposes (using search engines) improves the skills of independent work of students [9, p. 89-90].

Thus, integration of the university into the system of computer communications has become an integral part of education. The key direction was the technological informatization associated with the use of the possibilities of computer science and information technology to improve the efficiency of the education system. Promising in the training of future economists in terms of legal training are both stationary and network technologies. Stationary will become more widespread in the daytime learning form. Particular attention should be paid to the development of training courses with the use of computer technologies, educational audio and video materials with knowledge of regulatory legal acts, electronic publications, electronic libraries, etc. Distance learning and distance education should be based on network technologies that facilitate the exchange of legal training information for future economists between teachers and students through computer communications, telecommunication technologies, and more. The educational process of a modern institution of higher education must be constantly improved, and this improvement can take place, in particular, through the active use of information technology.

In the 90 years of the twentieth century, a new model of distance education appeared, which, according to R. Klopov, should be regarded as a technology of physical education or tele-education [4]. In this case, teleconferencing is the main form of interaction between the teacher and the student, between the students themselves. Such a model dramatically changes the organization of education, which is manifested in the fact that on the basis of this model began to develop a new form of modern education - virtual universities. These technologies enable those who are taught to communicate with teachers and with each other, being at any distance from each other. Modern communications are complemented by computer training programs [4].

**Conclusions.** Therefore, informatization of higher economic education under the

condition of legal training is a process of creation of optimal conditions for the integrated application of information and communication technologies in the educational process, knowledge of legal norms, scientific research, administrative management, changes in the content, methods and organization of student learning forms with the aim of transitioning to learning using information and communication technologies that do not replace traditional forms and methods of training, but complements them, expands the possibilities of their implementation.

During the legal training of future economists, the main goal of informatization of higher economic education is realized, which involves: formation of informative competence of students and teachers; creation on the basis and at the expense of information and communication technologies of new and additional conditions for improving the quality of training of future economists; the introduction of distance learning or its improvement with knowledge of regulatory documents, the development of new forms of education and learning technologies based on the use of information, distance and modern information technologies.

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## CLINICAL EFFICIENCY AND TOLERABILITY OF THE NEW DETOXIFYING AGENT "NEOREODEZ" IN PATIENTS WITH ACUTE PERITONITIS

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**Annotation.** *In a clinical study, it has been shown that the use of drug "Neoreodez", a solution for infusion of 200 ml and 400 ml as a component of basic therapy significantly increases the effectiveness of treatment in patients with acute peritonitis compared with the administration of basic therapy only. Registered efficacy in the main group of patients receiving Neoreodez was 94.2%, that is significantly higher than the control group - 52.0%. Thus, the hypothesis regarding the excess of treatment efficacy in the main group of patients as compared to the control group has been confirmed.*

**Key words:** *clinical efficacy, acute peritonitis, detoxifying therapy, "Neoreodez".*

Peritonitis is one of the most severe complications of diseases and damages of the abdominal cavity and it is steadily occupying a leading place in the structure of surgical lethality, which varies from 1.3% at local to 80% with disseminated purulent peritonitis (DP), with the toxic and terminal stage of DP - 25-30%, in case of progression of multiple organ failure syndrome - 60-87% of cases [1, 2, 3]. The use of modern achievements of intensive care, aggressive surgical tactics, introduction of minimally invasive interventional diagnostic and therapeutic technologies for the treatment of patients with hypertension did not significantly improve the results, that supports the interest of scientists in the development of innovative principles for treatment of patients with DP [4, 5].

For today, a new innovative solution "Neoreodez" has been synthesized, which represents a 0.06% solution of sodium hypochlorite stabilized with taurine (2-aminomethansulfonic acid) with the reproduction of N-chlorateurin (N-chloro-2-aminomethansulfonic acid), stable in vitro but unstable (disassociated with sodium hypochlorite and taurine) in vivo [6].

The presented medicinal product contributes to reducing the toxic and metabolic load on the organs of excretion and detoxification, and also corrects metabolic processes, which can significantly reduce the severity of endotoxemia and avoid its chronicity and related complications. Also, the drug exhibits a moderate antimicrobial action in vitro, stimulates reparative processes in the body, while not exposing the irritant to the skin and mucous membranes. In addition, the solution "Neoreodez" shows an expressive anti-aggregate activity, while not causing changes in the gas transport function and shifts of acid-alkaline state in the blood [7].

The mechanism of therapeutic action of the drug is due to the reproduction of taurine

chloramine, namely, taurine captures chlorine from hypochloric acid, thus becoming non-aggressive antioxidant, which does not damage the white blood cells and endothelium. In addition, it is believed that taurine chloramine suppresses inflammatory signals through the nucleic factor (NFkappa b), which contributes to a clear cytoprotective effect [9].

The purpose of this work was to establish the clinical efficacy of the preparation "Neoreodez", which is used on the background of basic therapy in patients with acute peritonitis compared with the group of patients receiving baseline therapy only.

**Materials and methods of research.** Research design - opened, randomized comparative, parallel.

104 patients with acute peritonitis were included in the clinical trial. Patients were divided into main (52 patients) and control group (52 patients) on the basis of the randomization method in the 1: 1 ratio. All patients received detoxification therapy solutions of crystalloid, reamberin, and lotrene on the background of specific treatment (laparotomy, sanation, drainage of the abdominal cavity, antibiotic therapy). In addition, the patients of the main group assigned a test solution "Neoreodez" within 3 days.

The efficacy of treatment was evaluated by changing of the average weight molecules level after 3 days of therapy compared to the original state. The treatment was determined to be effective if the level of the average mass molecules declined by 35% from the original level and more.

The safety of the drug was assessed on the basis of monitoring data on the patient's condition, frequency and nature of adverse reactions, laboratory data, assessment of the subjective state of the patient [8].

In the course of the study, known clinical and statistical methods were used: quantitative analysis, variation statistics, and comparison of the effectiveness between groups [10].

**Research results.** Patients aged 19 to 65 years were included in the clinical trial. Distribution of patients by age categories is presented in Table 1.

Table 1

**Distribution of patients by age**

Age,	Main group		Control group	
	n	%	n	%
18-30	5	9,6	4	7,7
31-40	9	17,3	10	19,2
41-50	13	25,0	15	28,8
51-65	25	48,1	23	44,2
<b>Total</b>	52	100,0	52	100,0

To assess the homogeneity of groups by age, a hypothesis was checked regarding the normal distribution of the relevant data in each group using the Shapiro-Wilk criterion. According to the results of this test, the data for the "Age" indicator were normally



distributed in both groups, therefore, for comparison of groups by age the Student criterion was used according to the significance level of 0.05. Consequently, according to the results of the groups comparison by age, one can conclude that the experimental groups were statistically homogeneous.

There were 64 men and 40 women among the patients included in the clinical trial. Distribution of patients by sex is presented in Table. 2. For the evaluation of gender homogeneity, the Chi-squared Person criterion was used, taking into account the correction for continuity.

Table 2

**Distribution of patients by sex**

Sex	Main group		Control group		Total	
	n	%	n	%	n	%
Male	31	59,6	33	63,5	64	61,5
Female	21	40,4	19	36,5	40	38,5
Total	52	100,0	52	100,0	104	100,0

Clinical trials included patients urgently taken to a clinic with manifestations of acute abdomen, and also operated earlier in the planned order, which subsequently developed peritonitis.

Distribution of patients by the nature of acute peritonitis main cause by methods of descriptive statistics (frequency and fraction in %) are presented in Table. 3

Table 3

**Distribution of patients by the nature of the underlying disease**

Disease	Main group		Control group		Total	
	n	%	n	%	n	%
Destructive appendicitis	24	46,2	25	48,1	49	47,1
Destructive cholecystitis	9	17,3	10	19,2	19	18,3
Perforation of the stomach and duodenum	6	11,5	7	13,5	13	12,5
Perforation of the small intestine	2	3,8	-	-	2	1,9
Postoperative peritonitis	5	9,6	4	7,7	9	8,7
Penetrating abdominal wounds	2	3,8	3	5,8	5	4,8
Purulent-inflammatory diseases of the uterus and appendages	1	1,9	2	3,8	3	2,9
Purulent-inflammatory complications of pancreatic necrosis	2	3,8	1	1,9	3	2,9
Perforation of the large intestine	1	1,0	-	-	1	1,0
Total	52	100,0	52	100,0	104	100,0

The duration of peritonitis symptoms before the patient was admitted to the clinic was from 3 to 35 hours. Postoperative peritonitis (general causes of anastomosis failure, inadequate rehabilitation of the abdominal cavity, inadequate hemostasis, intraoperative tissue injury) developed from 24 to 72 hours after surgical intervention.

Also, an assessment of the peritonitis clinical signs severity (namely, symptoms of peritoneum irritation, signs of intestine paresis and the amount of fluid from the peritoneal cavity) was evaluated. The degree of expressiveness for these signs was evaluated on the following scale: 0 - absence of signs, 1 - insignificant degree of expressiveness, 2 - moderate degree of expressiveness, 3 - significant degree of expressiveness (also the volume of fluid was taken into account: 0 is absence, 1 - up to 100 ml, 2 - 100-1000 ml, 3 - more than 1000 ml and 0 - no separation, 1 - serous separation, 2 - serous purulent, 3 - purulent).

The method of the average mass molecule (AMM) determination was used to evaluate the degree of endogenous intoxication. The estimation was carried out with spectrometry in different modes of  $X = 254 \text{ nm}$  and  $X = 280 \text{ nm}$ . Output data for the estimation of MSM by descriptive statistics are presented in Table. 4.

Table 4

**Analysis of the initial homogeneity of the groups according to the estimation of the medium-molecular peptides level by the methods of descriptive statistics**

Index	Group	N	Arithmetic mean	Median	Standard deviation	Min	Max
AMM when $X = 254 \text{ nm}$	Main	52	0,635	0,629	0,019	0,600	0,670
	Control	52	0,651	0,633	0,022	0,610	0,680
AMM when $X = 280 \text{ nm}$	Main	52	0,879	0,867	0,019	0,840	0,910
	Control	52	0,890	0,892	0,026	0,830	0,920

Of the patients included in the study, 52 patients in the main group and 50 patients in the control group completed all procedures according to the protocol. 2 patients in the control group were eliminated from the study (1 patient was transferred to the emergency ward with the increasing polyorganic insufficiency phenomena and a relaparotomy was performed due to purulent complications in 1 patient).

In all other cases, the postoperative process proceeded steadily. As a baseline therapy, all patient were taking parenteral antibiotics, taking into account the sensitivity of the microflora, analgesics, anticoagulants and prokinetics if necessary. As a detoxification therapy patients were given crystalloids, reamberine 400 ml / per 1 time per day, DEK 400 ml / per 1 time a day, Lotr - 200 ml 1 time a day. In addition, the test patients included in the main group received the study drug Neoreodez, a solution for infusion of 400 ml at a concentration of NaCl 600 mg / l in glass bottles produced by the state enterprise "Cherkasy-Pharma". The drug was administered intravenously, drip, slowly at a rate of 20-40 dpi / min (approximately 3-3.5 ml / min) per 400 ml twice daily in 12

hours for 3 days.

As a result of treatment, at the end of 3 days of therapy a re-assessment of the of the average mass molecules level was conducted according to the protocol of the clinical study (Table 5).

Table 5

**Estimation of the relative change of the AMM level in dynamics  
(in relation to the baseline), %**

Index	Group	Degree of relative changes
AMM when X = 254 nm	Main	-44,25 %
	Control	-29,11 %
AMM when X = 280 nm	Main	- 46,08 %
	Control	-32,25 %

Thus, at the end of the treatment course, 49 (94.2%) patients in the main group and 26 (52.0%) patients in the control group managed to reduce the level of AMM at X = 254 nm and the AMM level at X = 280 nm by 35% and compared to the original rate.

During the clinical study, definition of the drugs effectiveness was studied simultaneously with their tolerability examination. For this purpose, the data of the objective and laboratory examination of patients were analyzed in the dynamics, taking into account the appearance of subjective complaints of patients during the treatment.

Daily control of the general well-being of the patients was carried out during the study. In all patients of both groups, gradual decrease in the severity of endogenous intoxication indicators - tachycardia, hyperthermia, tachypnea was determined from 1-2 days of treatment. Initially reduced blood pressure gradually normalized. The positive dynamics of the estimated indicators was somewhat better in the main group of subjects. Thus, the phenomenon of hyperthermia was determined after 3 days of treatment in 13 subjects of the main group and in 22 patients of the control group. The heart rate decreased significantly without achieving normal values.

There were no adverse reactions that could be associated with the administration of the investigated drugs during the course of the clinical study. There were no local and general reactions immediately after the introduction of the drug "Neoreodez" and in the subsequent period at every-day skin examination. The skin and visible mucous membranes remained clean, allergic manifestations were not observed. No cases of postinfusional phlebitis have been observed. No cases of peripheral edema appearance were observed. In some cases, hyperthermia was determined. All cases of hyperthermia were due to post-traumatic inflammatory reaction, in no single case, the temperature response to the administration of the studied drug was noted. Vesicular breathing was determined in the auscultation of the lungs in all patients included in the study, initially accelerated and superficial breathing 2-3 days after beginning of therapy normalized. Auscultation of the heart revealed no significant changes in comparison with the baseline

data; in some cases, extrasystole and respiratory arrhythmia were observed.

During the study, there was no adverse effect on blood pressure, heart rate and respiratory rate, and these rates gradually normalized. In several cases, episodes of arterial hypertension associated with concomitant hypertension were determined. Laboratory indices have not undergone any negative changes in any one case.

**Conclusions.** Thus, the use of the drug "Neoreodez", a solution for infusion of 200 ml and 400 ml in glass bottles produced by the State Enterprise "Cherkasy-Pharma" as part of basic therapy significantly increases the effectiveness of treatment in patients with acute peritonitis compared with the use of basic therapy alone. Thereby, the effectiveness in the main group of subjects receiving the drug Neoreodez was 94.2%, which is significantly higher than the indicator of effectiveness in the control group - 52.0%. So, the hypothesis about the superiority of treatment in the main group of subjects compared to the control one is confirmed.

**Prospects for further research.** The next stage of our study is investigation of the clinical and economic rationale for the treatment of acute peritonitis with the innovative detoxifying agent "Neoreodez".

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## **HISTORY**

### **ROLE OF COMMUNICATIONS IN THE INFORMATION SOCIETY FORMATION**

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***Annotation.*** *It is proved in the article that international relations become an open system with a high level of communication interconnection. Any changes in the international environment affect both the adoption of a specific foreign policy decision of a particular state and the entire system of international relations. In particular, it is shown that a planetary system of communications is being created, and intellectual technologies and systems are developing. Undoubtedly, these processes will have a positive impact on the structure of social governance, the institutions of democracy, the development and functioning of the state and the law.*

***Key words:*** *information, transformation, information society, technological revolution, Internet, types of telecommunications, communications, contemporary system of international relations.*

The problem of information society formation in the era of communications transformation of the system of international relations of the information age attracts the attention of representatives of various scientific schools in the science of international relations. It is the subject of the analysis of the academic community in the countries of the Euro-Atlantic political and cultural orientation.

The information and technological revolution has led to a widespread introduction of the Internet and various types of telecommunications, which, along with economic factors, made it possible to communicate more closely and interact with individuals, different social groups, institutions and various international organizations. As a result, interstate borders have become more transparent in virtually all areas of communication and cooperation. Thus, there are new objective factors and conditions for accelerating and large-scale growth of globalization processes.

For the contemporary system of international relations, a new hierarchy of values will be characteristic. Previously, states sought control over the territory, population, industrial potential, and others like that. Today, basic geopolitical characteristics lose part of their content. At the forefront is the struggle for influence in making strategic decisions, in establishing their own control over information, communications and financial flows.

The global scale and radical change that occurs in various sectors of society, is a truly unique phenomenon in the history of mankind. It is difficult to make a comprehensive picture of the tremendous changes in the very essence of world life and in the conditions of existence of man, society, state and international community. Any current characteristics of a new era, whether “post-industrial”, “informational” or “technotronic”, as well as many others, do not reveal in its entirety its actual content. They touch, in essence, upon the intensification of material production, scientific and technological progress, including the information revolution and the globalization of world economic relations.

Also, it should be noted, that nowadays, in each category of current participants of international relations, taking into account states, there is a strident quantitative growth, largely due to the fact that the process of formation of new participants and their diversification is still going on today. Thus, the factor influencing world political processes is the activity of mass media in connection with their specificity (the effect is on the consciousness of people, the speed of the transfer of information across the globe, etc.). Therefore, media are often considered as independent participants in world political processes.

On the world stage, there are also so-called “hybrid entities”, which represent a combination of state and non-state structures. They operate in different spheres, especially in business, where a multinational company has a mixed (public and private) capital. It should be underlined that hybrid entities also exist in the media.

In particular, Professor O. Zernetska emphasizes on this. The researcher believes that “Information and communication is necessary for a democratic life, and it must guarantee citizens participation in public affairs. Mass media represent a public opinion or inform that they should assume the specific functions of public authorities or their institutions in educational or cultural character, which would have led to the transformation of mass media into power – media culture. The power, accumulated in the hands of media TNCs grows at an enjoyable pace, both within the nation-state and across its borders, crosses state borders. This gives grounds to talk about increasing their influence on the mass consciousness of both the national and global audiences, all of which leads to the “mediaization” of politics. Television and the Internet are becoming channels of political communication” [1, p. 34, 35, 36].

In this respect a well-known American scientists J. Nye [2, 79-83] and R. Keohane [3, p. 727-733] define four types of transnational global interaction that are relevant to information, transport, finance, and tourism. The state can not fully realize the interactions in these areas without the participation of non-state actors in international relations. Under the influence of non-state actors, relations between states which national interests interact in transnational structures may change. There is an increase in the interdependence among the various actors operating on the international scene, which leads to the development of containment mechanisms. As a result of the activities of non-governmental organizations, the ability of governments to influence the policies of other states is increasing. There are independent influential non-state actors which can defend their own interests, opposing them to the state one, and even change the state



policy to achieve their goals.

The study of the importance and impact of accelerated information and technological development, one of the decisive factors that directly influences changes in the political, socio-economic life of the contemporary stage of the transformation of the system of international relations, is relevant both from theoretical and practical point of view. In addition, this phenomenon requires a thorough study at the national and global levels in order to more effectively regulate the processes of informatization and scientific-technological globalization, which determine the further formation and evolution of the complex structure of the system of international relations.

The contemporary system of international relations is in a state of transformation, which is primarily associated with globalization as well as with the information and technological revolution. Gaining momentum, the information and technological revolution in many respects predetermines the development of globalization processes. These most important factors significantly influence the comprehensive transformation of the contemporary system of international relations.

The single information space, together with up-to-date means of movement, made the world interdependent and created a significant number of problems both within society itself and in its relations with the environment. The analysis of the appearance and dynamics of the development of negative trends and problems in the era of global transformations of the modern world requires the study of human activity and decisions that it takes in order to preserve and further the sustainable development of the civilization of the world.

A characteristic feature of the information and technological revolution is that information has become the most important resource, without which it is now fundamentally impossible to manage the current socio-political processes, to control the changes taking place in the environment, social and political life. Modern electronic equipment and computer technology greatly enhance human capabilities to predict both concrete results and possible consequences of its activity [4, p. 94].

The most developed regions of the world carry out the transition from industrial to information society, which is due to the lack of alternative humanity that would allow it to survive as a biological species and thus provide opportunities for further progress of society.

The wide introduction of information and communication technologies (ICT) in all spheres of public life has led to the emergence of new approaches to understanding contemporary society and its importance in the era of global transformations. All the well-known scientists who explore the phenomenon of the information society, pay special attention to the “explosion of signs” in the modern world and are increasingly beginning to talk about information as a major feature of the modern world. Among the scholars who present this trend in the understanding of modern transformational processes, it is possible to distinguish D. Bell with the well-known concept of the emergence of a post-industrial society, based on an increase in the number of employed workers in the service sector; M. Castells with the study of informational capitalism in a networked society; G.

Schiller, who studies the needs of developed capitalism in information and manipulation of it; Y. Habermas, who believes that the branch of the “public”, and together with it the truth of the information found themselves in decline; E. Gidens with reflections on “reflexive modernization”, which pays personal attention to the role of information that is being collected for observation and control under a man; J. Baudrillard, S. Bauman, J. Wattimo, M. Poster and J. Lyotard with their considerations on the postmodern age. Despite the fact that the researchers of the phenomenon of the information society can see different changes in the information society, they agree that information is something special.

In the comprehensive work of the English scientist F. Webster “Theories of the Information Society” [5] five definitions of the information society are presented. All of them are related to the parameters of the identification of novelty: technological; economic; the one that is connected with the sphere of employment; spatial and cultural one. At the same time, they are not necessarily mutually exclusive, although theorists highlight one or another definition according to their representations. However, the basis of all these definitions is the belief that quantitative changes in the field of information led to the emergence of a qualitatively new type of social system – the information society [5, p. 6-7].

In this respect it should be noted that in the early 1980s a technological criterion, developed by such authoritative scholars as K. Evans and E. Toffler appears. In general, technological concepts are stipulated for the process of increasing technological innovation. Proponents of this approach believe that the latest technology is one of the most visible signs of the formation of an information society. The main idea is that the modern scope of technological innovations must lead to social restructuring, given its significant impact on society. The dissemination of domestic, international and global information exchange within banks, corporations, governments and public organizations, as well as between them, points to the tendency of developing a technological infrastructure that provides instant computer communication at any time and anywhere where there is appropriate equipment. The complexity of determining the mark on a technological scale, to which society can be considered informational, is a central problem in the wording of the definition of the information society. This criterion does not take into account socio-economic and political dimensions in the context of technological innovation.

The economic criterion involves accounting for the growth of the economic value of information activities. If a person can assume an increase in the share of information business in the gross national product (GNP), it is logical to conclude that the economy has acquired an information dimension. If in the economic field information activity prevails over activities in the field of agriculture and industry, then we can talk about the information society. F. Mahlup has admitted to information such fields as education, law, publishing, mass media and computer production. He also tried to establish their variable economic value. Subsequently, M. Porat [6, p. 52-54], who believed that in the information society the main activity was related to the production of an information product and information services, as well as public and private clerical work [6, p. 198].

The main problem with this approach is the subjectivity of constructing categories and what it is to include in the information sector and what to exclude from it.

The next criterion is related to the employment sector. It is represented by the works of the well-known sociologist and theorist of the “post-industrial society” D. Bell, as well as by such scholars as R. Reich, P. Draaker [7] and M. Castells [8], who believe that the driving force of contemporary international system is a man whose main function is to use information. They argue that the world is entering the information society, when most of the people work in the information industry. The decline in the level of employment in the field of production and increase in services and in the information sphere can be considered as the emergence of an information society.

The main idea of the spatial criterion focuses on information networks that connect different places of the world, and therefore can have a significant impact on the organization of time and space. The question of what is really a network is rather controversial and concerns not only how to establish differences between different levels of networks, but also how to determine the beginning of a network (information) society.

The concept of an information society that uses the culture criterion is perhaps the easiest to admit, but it's even harder to measure than others. Authors such as M. Poster and J. Baudrillard [9] believe that the circulation of information in social life has increased significantly. J. Baudrillard writes: “Information is increasing but notion is declining. We are attacked by signs, we create ourselves from signs, we have no opportunity to escape from them – and all this results in a collapse of information value” [9, p. 200]. But we also should take into account the lack of criteria by which to measure the increase in the number of information values.

Thus, after considering the various definitions of the information society, it becomes clear that all of them are either insufficiently deployed or inaccurate or have both shortcomings. All concepts – technological, economic, the one that is related to employment, spatial or cultural – give a very dubious idea of what really constitutes an information society.

According to M. Castells, information technologies are not the cause of the changes that we are currently experiencing. However, in the absence of new information and communication technologies, nothing that changes our lives would not have been possible. Since the 1990s, the planet has been united into a single telecommunication computer network, which is the basis of the information system and communication processes. The whole sphere of human activity is based on the power of information and technological innovations, the speed of appearance of which is constantly increasing.

However, technologies themselves are not able to solve social problems. Access to information and communication technologies and their use in the context of our reality are a prerequisite for social and economic development. The decisive role of ICT is in stimulating development that has two sides. On the one hand, they enable countries to rapidly develop their economies, modernizing production systems and increasing their competitiveness much faster than before. The most significant in this sense are the economies of some countries in the East Asian region. In general, a country or region has

very little chance of becoming developed if it is excluded from the technological system of the information age [10, p. 84-86].

In order to obtain reliable knowledge about the information society, as well as how it resembles other social systems and how it differs from them, it is necessary to determine the content of information and informatization. In everyday life, receiving information or exchanging it, people first of all estimate its value. But for information theory, which is the basis of many measurements of an information explosion, these parameters are not significant. It provides definition of information regardless of its content, considers it as part of the physical world, such as energy or matter.

However, a new stage in the development of mankind, based on the latest information technologies, along with obvious benefits for the individual, society, and the state, causes a lot of new dangers that can acquire not only negative but also threatening forms in the event of an unbalanced and unregulated policy of informatization by the state.

According to Ukrainian scientist O. Sosnin, the negative effects of informatization are divided into direct and indirect ones. Direct ones include general complete control over the personality, informational totalitarianism, information expansion and information imperialism, information censorship. Indirect negative consequences of informatization can be considered as structural changes in society; raising requirements for the intellectual and educational level of members of society; depersonalization of knowledge; redistribution of intellectual functions between man and machine; domination of algebraic, logical thinking over geometric, figurative ones; acceleration of social processes by increasing the effectiveness of feedback [11, p. 52].

Thus, from the standpoint of the negative consequences of informatization, it can be said that it does not solve social problems and does not determine the social orientation of transformations, but only creates conditions for accelerating the processes of information exchange, strengthens information communications in society. Considering the problem of power, its organizational and socio-cultural role in the destinies of peoples, states and humanity, it should be emphasized the possibility of the development of information, that is, the power of information and information dictatorship.

Consequently, along with the undeniable possibilities, pluses and advantages, new technologies also contain fundamentally new threats. Among them is the digital inequality that exists between states and somewhere within them. This causes the negative aspects of globalization integration, aggravating the problem of information security of the individual, society and national states. An unprecedented acceleration of information and technological processes not only exacerbates the existing gap between developed countries and the rest of the world, but increases it every time.

Globalization in the information sphere, the development of communication system networks create the possibility of manipulating the consciousness of certain groups of people, regions or countries in order to impose evaluative characteristics, attitudes, norms of behaviour for destabilization of power, public structures, unauthorized interference in the internal affairs of states.

The control of the information space gives the technical ability to control private

life from one or more centers and, therefore, interfere with it. The “Total Information Consciousness” program, developed by the United States, provides the creation of a global database, which will gather all possible information about the citizens of the country. Another project provides the creation of technical devices that will allow a person to record and transmit by electronic channels everything that a person sees and hear, what e-mails creates or receives, watching telecast, whom is calling. It should be stated that the monitoring schemes are also possible on a global scale [12, p. 30].

Consequently, we considered the question of the acceptability of the very concept of the information society, identified various criteria by which, as we see, it is possible to quantitatively measure the emergence of the information society. Proponents of a new society argue that the quantitative side is an indicator of the qualitative dimension of social organization. It also concerns the interpretation of the concept of information. In this respect analysts seem to be removed from the obligation to determine the quality and value of information. However, in this case, they agree that the information is devoid of meaning.

Thus, humanity is witnessing the rapid expansion of communication frontiers in all branches of activity, the process of the emergence of a global information space, the formation of which causes a lot of social consequences and, above all, the growth of interdependence and the need to develop agreed solutions, in particular in the field of international relations.

Modern information and communicational technologies determine the mobility of information. The dissemination of ICTs is both a cause and a consequence of globalization through the fact that they enable a global exchange of information that promotes the development of international processes and operations. Information and communication technologies help to expand the borders of cooperation, mutual assistance and mutual information in politics, economics, science, culture and education through the emergence of new means of knowledge and communication, and the availability of information resources. The process in the field of microelectronics and information technologies and their convergence made possible international interactions, increased control and control capabilities, eliminating barriers of time and distance [13, p. 263].

Information and communication technologies have played a central role in reducing costs and increasing the speed of communication; ensure the functioning of world financial markets in real time; coordination of remote departments of production; an increase in the volume of trade in services; dissemination of information through global telecommunication networks and dissemination of ideas through global media; in increasing competition through more intensive sharing of information. These technologies, contributing to the diffusion of more competitive labour models and organization of production, have led to the internationalization of labour markets, the strengthening of their interdependence, the increased availability of highly skilled labour and its cosmopolitanization, the industrialization of services, the individualization and pluralization of lifestyles.

One of the main dangers of information globalization is the weakening of social

security. There is a new type of social insecurity – informational one, which manifests itself in two forms: overinforming and underinforming. Excess of information turns into psycho-emotional overload of the individual in conditions of growth of information flows. The development of mechanisms to filter these streams is an important social task.

A well-known American scientist J. Rosenau pointed out that “the very high technologies” have lowered the processes of globalization from the leash. “Under different conditions, we inevitably live in the world of imperfect information, and if there were even perfect information, we would not be able to fully utilize it. Details of any situation are really endless and there is not enough time to use it in full [14, p. 98]. It is clear that an American political scientist is right when he says that something can not be understood without separating the important from the secondary one.

The main conclusion is that the latest technology is a very powerful in the eventual sense of the transformation of the contemporary system of international relations. Information and communication technologies promote mobility, increase information, eliminate barriers of time and space, international cooperation, development of the global information space and the formation of a single planetary structural and functional system. In the cultural aspect, the role of globalization in the transformation of the international system is analysed together with such concepts as universalization, homogenization, modernization and Westernization of the world.

**Conclusions.** Consequently, on the basis of information systems, assessments of the situation are made in order to make appropriate foreign policy decisions. The global and national informational environments within which foreign policy decision-making systems operate under the influence of ICT are constantly transforming. This substantially updates the theoretical understanding of the transformation of the contemporary international system, taking into account the information technology revolution and modern globalization processes as the main and interconnected factors of the turbulent state in which the system of international relations is currently in place.

As a result, communications give participants of the international community, their actors, other subjects of international relations to react in time to changes in the international environment. Streams of information, intensive informational international interaction arising within the communication chains (chain of events caused by the information interaction of the subject, which was carried out by combining in a special complex communication channels), involves a consistent change in the state of subjects and their international environment, which is a lot in what is determined by the interrelated nature of the distinctive reactions of the subjects to the corresponding foreign policy signals.

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## PERSONAL AND INDIVIDUAL POTENTIAL OF MARGARETY BABOTY

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**Annotation.** *The personality and individual potential of one of the most prominent Ukrainian cultural and educational activists of the Transcarpathian region in the interwar period, and later Ukrainians of Presovshchyna (Slovakia), a member of the famous Ukrainian family of Sitsinsky-Chekhov-Sichinsky-Shandorov, Margareta Babota, have been discovered.*

**Key words:** *Margareta Babota, cultural and educational activist, Ukraine, Slovakia.*

"Personality - is a reflection of the social nature of man, considering it as a subject of socio-cultural life, determining it as the carrier of an individual's beginning (interests, abilities, aspirations, self-consciousness) that is a self-disclosure in the context of concrete social, cultural, historical relations" [4, p.233; 14]. "Personality in history is a collection of ideas about the place of man in the course of historical time and space, in particular, with respect to its collective, group and personal roles, social, professional, family practices, real and possible life scenarios, the connection of a particular person with known events, phenomena, processes, facts, etc" [15].

Expanding the notion of the term "personality potential" or "personality-individual potential" I. Murashko [9] et al. [17] argue that this is a set of properties that includes "predispositions, inclinations, interests, the desire to create a new manifestation of general intelligence, persistence, purposefulness, determination, diligence, ability to develop personal strategies" [9, p.203]. In a concrete historical study, every member of the Ukrainian Sitsinsky-Chekhov-Sichinsky-Shandor family is considered to be a personality in history that acts as the integrity of a well-known family and is revealed in the reflection of the unity of the general, special and individual activities of the whole family.

The main part of the study. A much less-known figure in Ukraine is the figure of the native sister of a prominent Ukrainian scientist, socio-political and cultural figure in the history of Transcarpathian region of the twentieth century, the plenipotentiary of the Government of the Carpathian Ukraine in Prague in 1938-1939, doctor of law Vikentyi Shandor, Margareta (Babota in marriage; \*31.03.1917 - †24.02.2009) [1; 8; 11, p.9], one of the most prominent Ukrainian cultural and educational activists of Transcarpathian region in the interwar period. This courageous woman was born, "which passed the notorious Kovner, and in the future was constantly under the watchful eye of the special services of the then Czechoslovakia", whose life "is an example, worthy of surprise and admiration" [19], in the large family of village aged Ivan Shandor and Maria Petrusov, where there were five children - Vikenty, Mikhail, Ivan, Margareta and Fedir, in the

village. Baranyntsi, one of the "most famous villages in the whole neighborhood" of Uzhhorod. Here she graduated from the folk (primary) school. The "Prosvita" reading room and FC "Baranyntsi" football club acted in the village, and the nationally conscious young people sat on St. Nicholas and "on the occasion of various national and national anniversaries", "set up theatrical performances" [6]. Later studied at the Uzhgorod Russian Girls 'Civic School and the Russian Girls' Teaching Seminary in Uzhgorod, after which she worked as a teacher in rural schools in Transcarpathia [6; 11, p.9].

During the interwar period, she met, collaborated and corresponded with many prominent Ukrainian patriotic figures, including Zoreslav, W. Greend-Don, Augustine Voloshin, Yaroslav Nevryl, Mykola Nevryl, Ivan Olbrakht, Volodymyr Birchak, the most well-known local figures of the Brothers Brothers, "Judge Dr. Pezhansky, Dr. Duba's family (president of the highest court in Brno), lawyer Dr. Gupalovsky, Dr. Ivan Pankevich, artist Joseph Bokshay, doctors Dr. Doliani, Dr. Dzyuban, Dr. Nemean, priests of. Viktor Zheltwai, Fr. Vasyl Lar (both were directors of the teacher's maiden seminary)" and others. In the interwar period, she took an active part in the cultural and artistic, in particular, the theatrical, life of Transcarpathia, maintained good relations with famous Transcarpathian actors and directors, including Nikolai Arkas, even "sang in the choir, which he led". After the Vienna Arbitration of 1938 with. The lambs went to Hungary, so the villagers felt direct political pressure and economic shortages; the Russian school in the village was changed to Hungarian. Michael Shandor, brother of Margaret, "the Magyars were arrested", and she and her three brothers, left their relatives and "green border" fled from the occupied territory to Czechoslovakia. Michael was fired in January 1939, for "the day before the death of his father". In March 1939, "there was a great expectation", Carpathian Ukraine was proclaimed in Hust [7, ark.3], and Margareta worked first as a government official, later as head of the department of the protocol of the Ministry of Education of the Carpathian Ukraine in Hust [7, ark.4; 11, p.9].

However, "joy was great, but short. Persecution of national conscious people, arrests, even liquidation. All this prompted many to go abroad". After the Magyar occupation, she was lucky because she was transferred to the school, which was located "in the house of the former Carpathian Sich", where on the walls and stairs "one could still see the dried blood of the wounded Scythians, and two different rooms were shredded with various Siqiv paper". In 1939-1940, during the school year, she was transferred to a school near the village of Kires near Khust-Boronaviyah, where during the year she taught "8 anniversaries (all together), in which there were 76 pupils". Subsequently, he taught at the central school in Khust-Boronivy, Saldoboshi (Steblyvti) and Sokirnitsy. In 1942 she volunteered to go as a part of a group of 10 Transcarpathian teachers for advanced training courses at the economic school in Kecskemayt" [7, ark.4; 11, p.9; 13, p.96-97]. Here, on October 24, 1942, she, among other "Ukrainian people's peoples", was arrested by Major Samuel Galbory [3] and arrested in the Mukachevo prison "Kovner" on the order of the Uzhhorod Magyar counterintelligence [16]. On the way to the prison, at the railway station, she went to the toilet and sent a postcard to her brother, Andriy Bagoty, who lived and worked in Budapest, explaining ambiguously to her that she was arrested

and asked to inform Mykola of everything. Kovner took her late in the evening, brought him to a large room and "ordered to lie down on the floor like she was dressed". There was a free space near Dr. Bandusiak, who told her to know what the Madaria police knew, in particular, about the letters M. Bandusyak had passed through to her for Yu Rewa. In prison, despite the fact that she was "the only woman" among those arrested, she was subjected to inhuman torture, which "lasted for hours until the body stopped reacting": "they were beaten on the palms of the hands and soles of the legs, then they wove on a duck and continued to beat on the soles", bound hands and feet to the tangle and suspended" head down and again beaten on the soles". She was accused of allegedly heading the "anti-Hungarian illegal women's organization", "carrying letters abroad" ... Among those who had been arrested were: Mykola Bandusyak, Yuriy Brashchyako, Andriy Voron, Fedir Revay, Vasily Sverenyak, Yevhen Shereghii ("Gourshok"). In Kovner, prisoners at night smelled "swallow" bugs (blasphemers), and on the day they were forced to sit under the constant supervision of the gendarmes "silently on the floor, face to the wall, feet underneath, arms on the back". Later, Margareta Babota recalled that "she was never a member of any women's organization, because she", she said, "was not at all" [3; 7, ark.5; 11, p.9; 13, p.96-97].

Having received the postcard, Andriy Babot sent her, through the mediation of the Slovak embassy, to her brother Nicholas in Lisztjan, where the Minister of Carpathian Ukraine Julian Revai worked as a governor, and her brother Viktoria was in the near future in Bratislava in the Mortgage Bank. A friend of Viktoria's brother from military service, a great supporter of Ukrainians and the head of the Military Sanatorium in Lisztany, Pavel Shkodachev, appealed for the release of Margareta Baboty from prison to a prominent military and political figure in Croatia, Marshal Slavka Quaternik, who at that time was treated at a sanatorium and, along with Chief of the Magyar General Staff of Szombatheli, studied at the Austro-Hungarian Military Academy. Marshal, who recently, at the request of Szombatheli, released two Magyar spies, promised to help. On December 19, 1942, the head of Uzhhorod intelligence Colonel Oshvat, under the personal order of Szombathely, was released from prison, not only Margareta, but also on December 22 "all prisoners who were not convicted". A little later, at a meeting with the Marshal Quaternik in Lisztjan, Margareta "thanked him for everything he had done for the laid-off" and invited him to be a witness at her wedding. Margaret's family life was complex and rich in various events. She met her husband while she was studying at the Teacher's Seminary, because Mykola Babota was friends with her brother Vikenty Shandor and often visited a family residence of Samandors in Baranynets. In order not to get into the Hungarian prison again, in 1943, she emigrated to Slovakia, where she married Mykolai Babot, the wedding ceremony of Zoreslav in the Roman Catholic chapel in Lisztjan. The witnesses of their wedding were Yu Rewai and Marshal S. Quaternik. A year after the marriage, a daughter L'ubica was born in her (\*04.09.1944), a year later, son Bogdan (\*1945), and shortly thereafter (\*1946) three sons, but all four boys died. In 1948, Margareta Babota entered the Pieshtian Biennial Higher Hotel School, which she graduated from in 1950. In February 1951 Margareta Babota and her family moved to

Bratislava, where her husband worked at the foreign company "Exico". But in April of the same year, on a "request" of the special services he was transferred to physical work [7, ark.5; 11, p.9], prohibiting to work in his profession (Mykola Babota was a highly qualified bank expert) [11, p.9].

In October 1952, the authorities drove the family for Ukrainian studies and educational activities in the village of Drna (southern Slovak region of Rimavska Sobota) and banned Margarita from working in the field of education. Mykola Babota worked in the nearby village of Essenskoe at the machine-tractor station, and Margareta, after a while, began working as an accountant at the same MTS. In the spring of 1954, the family moved to the village. Essenesk and live in a "normal" apartment. Only in 1960, after certain complications, Margareta was allowed by a teacher at a village school at the place of residence. In 1969, the family moved to Rimavska Sobota, where Margareta worked for one year in a special school for children who were heavy children. Only before retirement Margareta was transferred to the Magyar school in the village. Gostitse, where he taught "Slovak and Russian languages and visual education" [7, ark.5; 11, p.9].

In 1980, the family moved to Presov, the center of Ukrainian social and cultural life, where Margareta worked for two years at the Ukrainian Primary School and Gymnasium. Taras Shevchenko (replaced the teacher, who was on maternity leave), and then, with certain breaks, three times approached the technical staff of the research department of the Department of Ukrainian Language and Literature at the Faculty of Philosophy of the Presov University, who were on maternity leave [7, ark.5]. Also, from the first days of his stay in Pryshev was active in the Ukrainian women's movement [11, p.10], in particular, he deliberately became a member of the Society of the Red Cross and the Union of Slovak Women [17].

In general, as Margaret Babota observed, Ukrainians from the Transcarpathians were "not difficult to apply to their local life", but "we had to realize that" we are not at home "and act on that basis", because "life here was better than that in one of the neighboring states, and we were able to live our lives here" [7, ark.5; 11, p.9]. Only after the proclamation of Ukraine's independence, and after repeated appeals and petitions, Margareta Babotina's family in 1992 was rehabilitated and allowed her to visit her native Transcarpathia, where her close relatives lived. She often visited them, closely followed the events in Ukraine, spoke at conferences, solemn evenings, from time to time and in the press [2; 4; 16; 17]. When asked by Mykola Mushinka how she evaluates her life's journey, she replied: "If you were born a Ukrainian, you stay Ukrainian even in a foreign country, and you really care what is happening in your homeland". She believed in the power of her people, in his true victory [11, p.10; 12; 13, p.96-97].

Margareta Babota, one of the active participants in the events of the Carpathian Ukraine, one of the most prominent representatives of the Ukrainian diaspora in Slovakia, February 24, 2009, died a little before the 70th anniversary of the Carpathian Ukraine. She is buried in Prinshiv cemetery, where the graves of her husband and mother [10; 18; 19].

The scientific novelty of the results obtained is that for the first time, the personality

and individual potential of a member of the famous Ukrainian family of Sitsinsky-Chekhov-Sichinsky-Shandorov, one of the most prominent Ukrainian cultural and educational activists of Transcarpathia in the interwar period, and later Ukrainians of the Presov regions (Slovakia), Margareta Babota.

The concrete theoretical and practical significance of the results obtained is that they enable the creation of a holistic social portrait of the Ukrainian family of the Sitsinsky-Chekhov-Sichinsky-Shandor dynasty, whose members lived in Ukraine, and although "in life nothing like that", Margareta Babota modestly remarked, "did not do what could be of interest to the descendants", but they, with their daily work, took care that Ukraine became a powerful state and lived "free life in a circle of free peoples" [7, ark.6].

Approbation. The article is submitted for the first time and has never been published anywhere.

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## CONTEMPORARY CHALLENGES AND THREATS IN CYBERSPACE: FORMING THE MECHANISM OF INTERNATIONAL INFORMATION SECURITY

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**Annotation.** *One of the world trends is the tendency to a significant increase in the number of cyber attacks, which are becoming more sophisticated and less predictable. Information operations of the Russian Federation can lead to the widespread use of information and communication technologies in interstate conflicts. Ensuring cybersecurity is extremely important for Ukraine in conditions of a hybrid war. The Law of Ukraine on Cybersecurity and further development of international cooperation in the field of cyberspace protection with the United States and the European Union is more urgent than ever. It is necessary to improve international mechanisms and a common international policy to develop and implement effective methods for combating cyber threats.*

**Key words:** *cyberspace, cybersecurity, cyber attack, critical objects of state infrastructure, international cooperation in the field of cyberspace protection.*

Due to the powerful information campaign of the United States and its allies, as well as Russia and its allies, the events in Ukraine and Syria have turned into a fierce struggle for recognition / non-recognition of Russia as a "great power". In fact, the West ignored Russia by denying it the status of a "great power", while Russia ignored the West's views.

Facing Russian hybrid aggression, more and more countries will rely on the militarization of the information space and the development of its security technologies. The current level of informatization of Ukraine as a whole and public authorities in particular testify the urgency of threat of using cyber-attack technologies against the Ukrainian state.

A special goal of cybercriminals is critically important objects of state infrastructure. In June 2017, there was the largest cyber attack in Ukraine's history, which blocked the work of thousands Ukrainian companies and government agencies.

The main victim of the virus-encryptor Petya.A became Ukraine, where more than 75% of all cases of infection were registered [1]. Within one day, the computer virus "Ransom: Win32 / Petya" attacked the private and public sectors of Ukrainian economy, in particular banks, airports, the state railway company, television companies, telecommunications companies, large network supermarkets, energy companies, state fiscal services, public authorities and local government, etc. The virus also affected private and state actors of other states. Up to 10% of computers in Ukraine suffered from cyberattack by Petya.A virus [2].

A virus-extortionator blocking access to data and requiring a \$300 redemption in unlocking batons, attacked dozens of energy, telecommunication and financial companies



and organizations around the world. Experts in this area agree that Ukraine suffered the most [3].

The state was unable to resist the cyber attack, which, in turn, showed insecurity of vital interests of man and citizen, society and state in the use of cyberspace and the lack of ability to timely identify, prevent and neutralize real and potential threats to national security in cyberspace.

The realization of such cyber attacks is possible not only because of situational and technical difficulties that arise in the area of cyberspace security, but also because Ukraine for a long time did not have a coherent policy on cyberspace and cyber security. In 2015-2016, the transition to a systemic and coherent policy for building up the national cybersecurity system adequate to modern challenges and realities, has just begun. In 2015 National Security Strategy of Ukraine [4], for the first time, the threats to the cyber security and security of information resources were formulated, as well as priorities for securing cyber security, which include the development of the state information infrastructure, the development of CERT, the development of law-enforcement agencies' capacities for investigating cybercrime, ensuring the security of critical infrastructure objects, state information resources from cyber attacks, creation of a cyber security training system for the needs of sector organs of defense and security, the development of international cooperation in the field of cyber security, intensification of cooperation between Ukraine and NATO, particularly within NATO Trust Fund to strengthen the capacity of Ukraine in the field of cybersecurity.

In 2016, the Strategy of Cybersecurity of Ukraine was adopted, aimed at implementing the provisions of the Strategy of National Security of Ukraine until 2020 [5]. This document identifies the threats to cybersecurity, identifies priority areas for cybersecurity (in particular, the development of safe, stable and reliable cyberspace, cyber defense of state electronic information resources and information infrastructure, cyber defense of critical infrastructure, development of the security and defense sector potential in the field of cybersecurity, the fight against cybercrime). The strategy lays the foundation for the formation of the National System of Cybersecurity, defines its main subjects. In addition, in 2015, the formation of the Department of Cyber Police of the National Police of Ukraine was commenced.

In order to avoid cyberattacks in the future and to overcome their consequences in a timely manner, the Government of Ukraine in 2016 allocated 80 million UAH for measures to urgently update IT equipment. At the same time, such a step, as noted in the Analytical Report of the President of Ukraine, (p. 54) is only part of the decision that should accelerate the implementation of the provisions of the Strategy of Ukraine's cybersecurity.

Because of the increased attacks in cyberspace, there was an urgent need to adopt a law aimed at the formation of a common state policy of cybersecurity, as well as the distribution of roles between different departments. For the first time in Ukraine, the draft law on cybersecurity was registered by a group of MPs from different fractions in June 2015. In early 2016, because of the approval of the Strategy for Cybersecurity of

Ukraine by the President, the document lost its relevance and was withdrawn. Later, a new, substantially revised project was registered. In October 2017, the Law was finally adopted by the Parliament, and will come into force on May 9, 2018 [6].

The new Law gives powers to special services for cyber defense of the state. The President will coordinate actions in the sphere of cyber security through the National Security and Defense Council (NSDC). It also provides for the creation of National Cybersecurity System, which will unite a number of ministries and departments. It will include the State Service of Special Communication and Information Protection, the National Police, the Security Service of Ukraine, the Ministry of Defense and the General Staff, the National Bank, and intelligence agencies. The Law clearly defines which agency and for what will be responsible in the field of cyber defense. Coordination and implementation of state policy become the responsibility of the State Communications Committee. The national police will have to ensure the protection of citizens, society and the state in cyberspace, as well as take measures to prevent cybercrime. Among the tasks of the Security Service of Ukraine is the investigation of cyberincidents and cyber attacks carried out against state information systems. At the same time the Ministry of Defense and the General Staff will have to prepare the state "to repel military aggression in cyberspace." The National Bank is responsible for cyber security in the banking sphere, in particular, by creating a cyber defense center of the National Bank of Ukraine (NBU). In addition, Ukraine will create a National telecommunications network, which will include information systems of the budget sphere (state authorities and state enterprises). Its formation is assigned to the government. The State Center for Cyber Defense will be the responsible for the protected access of state bodies, anti-virus protection and audit of information security.

According to Law it is assumed to compose a list of objects of critical information infrastructure. Responsibility for the development of rules for its formation and work, as well as criteria for inclusion of objects in this register rests with the Cabinet of Ministers. The similar registry in the banking sphere, will have to be created by the NBU as well. Enterprises that work in the energy sector (for example, nuclear power plants), chemical industry, transport, information and communication technologies, electronic communications, as well as enterprises of the banking and financial sector, can be classified as critical infrastructure objects. In addition, the register can include enterprises in the areas of centralized water supply, electricity and gas supply, food production and health care. Also in the register of such enterprises are those that have potentially hazardous production, as well as those of strategic importance for the economy and security of the state.

If an enterprise falls into such a list, according to Law, its owners or managers automatically become responsible for ensuring cyber security of communication systems and protecting technological information. In addition, business leaders will have to immediately inform the CERT-UA government response team to computer emergency events about cybersecurity incidents. CERT-UA will analyze data on incidents, help prevent cyber attacks and eliminate their consequences if necessary. In addition, in

critically important enterprises, an independent audit will be conducted annually on the effectiveness of cyber defense systems. In the legal field, public-private interaction is also introduced as one of the principles of ensuring cybersecurity. Interaction provides for the exchange of information on incidents of cybersecurity, the implementation of joint research projects, training personnel in this field, and more.

The Law also presupposes the strengthening of international cooperation in the field of protecting cyberspace, primarily with the European Union and NATO. At the same time, the Law limits the participation in cyber defense of any companies and institutions from Russia, as well as sub-nationals or other countries. To finance cybersecurity by Law can be both for budgetary funds, and private or credit ones. It is also acceptable to use international technical assistance or other sources that are not prohibited by Law.

One of the essential points in the adopted Law is the actual equating of crimes in cyberspace to ordinary ones. Thus, the Law introduces into the legal sphere the very notion of "cybercrime", which is designated as socially dangerous action, for which criminal liability is provided.

The US supported the activities of Ukrainian lawmakers and in February 2018 the US Congressmen approved a draft law on cooperation with Ukraine on cybersecurity, aimed at promoting active interaction between Ukraine and the United States in the field of cybersecurity [7]. The bill was created on the Capitol Hill under the guidance of a member of the Committee on Foreign Affairs of the House of Representatives Brendan Boyle specially for the Ukrainian state. In the course of the discussion of the document Boyle responsibly stated: "Over the past few years, Russia has used Ukraine as a testing ground for cyber attacks, which threaten the national security of our great ally, Ukraine, as well as its neighbors in the region" [8].

Experts note that this will be the first US Law in the field of cybersecurity, where the word Ukraine is given in the headline. And it also mentions the Budapest Memorandum, and Ukraine is offered, together with America, to play a leadership role in improving cybersecurity throughout Central and Eastern Europe. The Law demonstrates the responsible attitude of the superpower to security in the region. The US commitment to the Charter on strategic partnership between the United States and Ukraine is confirmed, as well as the US commitment to supporting cooperation between NATO and Ukraine [9].

The Congress made it clear that it understands the dangers of an unconventional war, and that all those attacks on energy facilities, the gas transportation system, airports, metro in Ukraine do not remain out of sight of congressmen. It is worth to note that American experts have long warned of a real cyber threat to the West, which comes from the Russian Federation. So, in March 2015 the Director of National Intelligence, James Clapper, told the Senate Armed Services Committee during the 2015 presentation of the "Worldwide Threat Assessment of the U.S. Intelligence Community": "While I can't go into detail here, the Russian cyber threat is more severe than we had previously assessed". The report shows sophisticated cyberattacks as the principle national security threat facing the United States. "Cyber threats to U.S. national and economic security are

increasing in frequency, scale, sophistication, and severity of impact,” the assessment notes. Russia is singled out as one of the most sophisticated nation-state actors in cyberspace. The report also notes that Russia’s Ministry of Defense is establishing its own cyber command, responsible for conducting offensive cyber activities (similar to the United States Cyber Command). The report says that Russia’s cyber command will also be responsible, again (similar to its U.S. counterpart), for attacking enemy command and control systems and conducting cyber propaganda operations. Furthermore, “unspecified Russian cyber actors” have developed the capability to target industrial control systems and thereby attack electric power grids, air-traffic control, and oil and gas distribution networks [10].

The US Law on Cooperation with Ukraine on Cybersecurity has certain provisions that actually contain obligations for American authorities. For example, the Secretary of State should take actions, in accordance with US interests, to help Ukraine improve its cybersecurity. The Energy Department will be responsible for the creation of the Ukrainian-American working group for the development of the Cyber Security Program of Ukraine. That is, there are clear provisions that this is the task of the State Department and the Ministry of Energy, and how exactly they should help the Ukrainian side. The format of relations is established, it is ascertained, what they should be because until that moment, there were no formal documents in which it was fixed. The US government must take certain steps to protect critical infrastructure [11].

It should be mentioned, however, that "cybersecurity" in the document is far from being in the first place. Most of its provisions are confirmed by other bilateral US-Ukrainian initiatives: the United States should help Ukraine combat Russian propaganda in social networks, and expand cooperation in politics, economy, trade and culture. In particular, the US should organize assistance to protect government Ukrainian computer networks, exchange of information, disposal of Russian software. This is a framework document which enables to begin an effective bilateral dialogue, and how successful it will be depends on the participants of the dialogue, on the commission that will work both in the United States and Ukraine [12].

It is also worth to consider other aspects of American politics. For example, the study of RF activities in cyberspace in connection with the results of the 2016 US presidential elections had begun even before D. Trump became the Head of the White House. The committees of the American Senate announced this in advance (Committee on International Relations, 04.01.2017; Committee on Armed Forces, 05.01.2017; Committee on Intelligence, 06.01.2017). It is also worth recalling that in May 2017, the US Department of Justice appointed the former FBI Head, Robert Mueller, as special prosecutor to investigate Russia's interference in the US presidential elections in 2016 [13]. The order of the Department of Justice directly states that Mueller should investigate: 1. the attempts of the Russian government to interfere in the US elections in 2016; 2. any connection or coordination between Russia and any persons associated with the election headquarters of Donald Trump.

The situation with growing threats from Russia in the information and

communication sphere is also considered in other states of the Euro-Atlantic community, where representatives of special services constantly declare about the danger coming from the Russian Federation. For example, on February 15 of this year, London blamed Moscow for a large-scale cyber attack using the NotPetya virus in Ukraine. According to the statement of the Deputy Head of the UK Foreign Office Tariq Ahmad, supervising problems of cyber security in the British FO, the given attack has shown "continuing neglect of the Ukrainian sovereignty" from the side of the Russian Federation [14].

In order to counteract the information policy of the Russian Federation, the European Union's Strategic Communication Task Force (StratCom Task Force) is working, which was created by the decision of EU Heads of State and Government in March 2015 to counter Russian misinformation campaigns [15]. The group develops communication materials and campaigns to explain EU policies in the Eastern Partnership countries (Azerbaijan, Armenia, Belarus, Georgia, Moldova and Ukraine). It works in close cooperation with the EU institutions and its representations in the Eastern Partnership countries. The operational working group supports the common aspirations of the EU to strengthen the media environment in the Eastern Partnership countries, in close cooperation with other EU entities. The group analyzes and reports on trends of disinformation, explains and refutes its narratives, and raises awareness of the problem [16]. For the years 2018–2020 its budget makes up 1.1 million euros. The subsidy for the aforementioned amount has been laid in the EU budget, and the project was developed during the Eastern Partnership summit, where the British Prime Minister stated that in the next 5 years only London will spend £ 100 million to fight the "Kremlin propaganda" in the Eastern European countries. By the way, soon after this statement, Britain concluded a bilateral agreement with Poland in order to counteract "Russian misinformation" in concord.

In autumn 2017, the European Center of Excellence for Countering Hybrid Threats, headed by the Head of the Finnish Security Police Department (Supo), Matti Saarelainen, officially began its activities in Helsinki in Sörnäinen area [17]. The European Centre of Excellence for Countering Hybrid Treats will strengthen cooperation between the EU and NATO, also delivering expert analysis, developing methodologies and conducting training to enhance capabilities to respond to hybrid threats. A Finnish initiative, the Centre will contribute to security in Europe with strengthened cooperation between the EU and NATO, in line with the Joint Communication on countering hybrid threats that was adopted in April 2016. The Centre follows a comprehensive, multinational, multidisciplinary and academic based approach. It works to: a. encourage strategic-level dialogue and consultations between and among participants, the EU and NATO; b. conduct research and analysis into hybrid threats and methods to counter such threats; c. develop doctrine, conduct training and arrange exercises aimed at enhancing participants' individual capabilities, as well as interoperability between and among participants, the EU, and NATO for countering hybrid threats; d. engage with and invite dialogue with government and non-government experts from a wide range of professional sectors and disciplines; and e. involve or cooperate with, communities of interest focusing on specific issues that can make up hybrid threats, on methodologies for understanding

these issues, and on ways to adjust organisations to better cope with such threats.

It is known that the United States and European countries, including the United Kingdom, Spain, Germany, France, Norway, Sweden, Poland and the former Soviet republics of the Baltic states joined the project; the main financing of the structure is carried out at the expense of Finland. As the NATO Deputy Secretary General, Arndt Freitag von Loringhoven, who visited the seminar on the opening day, said: "Russia is one of the countries under surveillance in the Center."

In September 2017 at the summit on digital technologies, President of Lithuania Dalia Grybauskaitė came up with the initiative of the "cybernetic Schengen" – the creation of the forces of rapid reaction to cyber attacks within the EU. In her opinion, this structure will complement NATO in combating hybrid threats, terrorism and helping third countries [18].

As early as December, the participants of the European Program of the Permanent Structured Cooperation (PESCO) approved the provision of mutual assistance to ensure cyber security and the creation of a cyber-rapid reaction group, including this initiative into 17 approved projects. As the Europeans note, the creation of such forces will bring the interaction of the EU states in the cybernetic sphere to a new level, where the participating countries will not limit themselves to the national format. Adviser to Lithuanian President Nerijus Aleksiejunas said that Lithuania is ready to take the lead in cybersecurity issues both in the EU and in cooperation with the United States. "We do this while creating the cybernetic rapid reaction forces of the European Union and discussing with the US the establishment of a regional center for cyber security in Lithuania," he said [19].

In the world cyberspace, dangerous trends can be observed, the number of cybercrimes, cyber attacks and other criminal acts of cybercriminals is growing. The tension between countries, especially the world's leading states in the field of cyberspace, is growing, all the components of cyberwar are evident.

The solution of problems in the field of cybercrime seems to be important first of all from the point of view of the formation of a reliable mechanism of international information security. The cross-border nature of cybercrime, the use of servers and technical sites of different countries necessitates the development of cooperation at the interstate level. The world states need to develop adequate models of state policies and national concepts on cybersecurity that meet the requirements of national security of countries facing global challenges and other trends of the present

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## ARCHITECTURE

### **ХУДОЖЕСТВЕННАЯ МЕТАЛЛОПЛАСТИКА В АРХИТЕКТУРЕ ГАЛИЧА И ИВАНО-ФРАНКОВСКА КОНЦА XIX - НАЧАЛА XX ВЕКА**

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*Kachkovskaya N. Artistic repoussage in the architecture of Halych and Ivano-Frankivsk of the end of the XIX - the beginning of the XX century.*

*Annotation. This research paper deals with the problems of preservation of forged products in the architecture of the cities of Halych and Ivano-Frankivsk at the end of the 19th and the beginning of the 20th century, which are the national artistic heritage, a component of a valuable historical architecture. The author confirms the attribution of metal architectural parts and their elements, as a result of which a number of authentic balcony and staircase fences of four temporary and stylistic periods of the late 19th - early 20th century have been found. The parts that appeared as a result of later reconstructions, and several lost staircase and balcony fences known by iconography have also been found.*

**Key words:** *forging, metal, architecture, Halych, Ivano-Frankivsk, corrosion.*

Ковка принадлежит к древнейшей и наиболее употребляемой технике художественной обработки металла. Изначально металлы деформировали в холодном состоянии, потом начали нагревать. Основные приемы ковки и инструментарий на протяжении тысячелетий остались почти неизменными. Прежде всего это наковальня, различные молотки, зубила, пробойники, гвоздодеры. По классификации А. Минжулина, наиболее характерными приемами свободной ковки являются: вытяжка, осадка, рубка, высадка, торсирование, прошивка, рассечение, сгибание, сварка [3, с. 21]. Подавляющее большинство исследуемых металлических архитектурных деталей в Галиче и Ивано-Франковске выполнены именно при помощи техники ковки.

В процентном соотношении количество объектов архитектурного металла, выполненных техникой литья, значительно меньше, чем произведенных техникой ковки. Однако стоит отметить, что они гораздо лучше сохранились, чем кованные (если речь идет о внешнем декоре, а не о изделиях из металла в интерьере, на которые в меньшей мере влияют атмосферные факторы).

Натурные исследования позволяют сделать выводы, что из сохранившихся архитектурных деталей, выполненных техникой литья, в Ивано-Франковске яркими примерами являются ограждения балконов домов: № 1, № 6, № 17 по ул. Гетьмана И. Мазепы; № 111 по ул. Е. Коновальца; № 3 на Вечевом майдане; №2 по ул. Бачинского; №2 по ул. Старозамковой; №4; по ул. Т. Шевченко, № 9 по ул. Галицкой и тому подобное. Часть подвальных решеток также выполнена

техникой литья, например: дома № 13 и 38 по ул. М. Грушевского, № 16 по ул. М. Тарнавского, № 9 по ул. Шопена, № 33 по ул. Б. Лепкого и тому подобное.

«Строительная горячка» последней четверти XIX – начала XX века стимулировала активизацию строительства, а следовательно, активное использование кованого архитектурного металла, элементы которого выступали не только составляющей декорирования фасада, а его своеобразной визитной карточкой. Художественный металл играл важную роль в архитектурном образе исследуемых городов. Зодчие уделяли значительное внимание архитектурному металлу, который чрезвычайно выразительно воспроизводил определенный стиль и придавал зданиям особый колорит. Трудно найти дом, возведенный в конце XIX – начале XX в., который не украшался бы ажурными воротами, балконными и лестничными ограждениями, оконными решетками и корзинами для цветов, металлическими деталями дверей, фонарями и многими другими изделиями. Разнообразие орнаментов придает домам легкость и нарядность (ил. 1, 2).



Иллюстрация 1. Ограждение балкона,  
г. Галич, Майдан Рождества, 33 (нач. XX в.)



Иллюстрация 2. Ограждения балкона,  
г. Галич, ул. Караимская, 2 (пр. 1910 г.)

На состоянии архитектурных сооружений и декора, в первую очередь, быстро сказывается разрушительный фактор времени. Исследовав натурно ценные исторические здания Галича и Ивано-Франковска, можно констатировать, что наибольшим потерям, значительным деформациям, коррозионным разрушениям подвергаются произведения художественного металла во внешнем декоре домов. Значительная часть уничтожается именно вследствие коррозии. Кроме того, специалисты наблюдают малоисследованный на сегодняшний день феномен «диффузного растворения» металла в воздухе [2, с. 79 – 85].

Процессы коррозионного разрушения металла зависят от влажности атмосферы. Причинами коррозионного разрушения является влага и мокрые атмосферные коррозии. Причиной влажной атмосферной коррозии является невидимая чрезвычайно тонкая пленка воды, образующаяся на поверхности металла в результате конденсации при резких перепадах температуры воздуха. Мокрая атмосферная коррозия происходит при 100% влажности воздуха или

во время дождя (критическая влажность). При высокой влажности начинается усиленное разрушение металла. Вследствие взаимодействия некоторых газов и твердых оксидов с водой образуется кислая среда, в которой активно разрушается металл. Частицы пыли и других веществ оседают на поверхности металла и способствуют коррозии потому, что абсорбируют газы и воду из атмосферы [3, с. 33].

Множество высокохудожественных образцов архитектурного кузнечного искусства исчезли, канув в лету из-за человеческого фактора (ил.3).



Иллюстрация 3. Фрагмент ограждения балкона - корзина для цветов.  
г. Галич, ул. Т. Шевченко, 17 (1925 г.)

Стоит заимствовать отношение к уцелевшим образцам архитектурного металла у жителей европейских городов, в частности, Братиславы, где на домах старой части города размещены таблички-аннотации с указанием автора изделия, мастерской, года и имени архитектора здания.

Интересным примером для подражания является таллиннский мастер-альтруист Энке, слесарь по специальности, который в подвале своего дома устроил мастерскую по реставрации старых кованых художественных изделий из металла: флюгеров и старых таллинских фонарей [4, с. 9–43].

В классификационных таблицах № 1 и № 2 приводятся примеры кованых балконных и лестничных ограждений Ивано-Франковска и Галича которым присущи общие стилистические и композиционные признаки. Изделия выполнены преимущественно из тонкого квадрата, металлической полосы, а также листовой стали, из которой изготавливали цветы, листья.

Таблица 1

**Металлические балконные и лестничные ограждения  
городских домов Галича**

Стиль/период	Балконные и лестничные ограждения городских домов Галича	
Историзм 1890-е гг.	 1898 г.	 Майдан Рождества, 19
	 конец XIX века	 Майдан Рождества, 20
	 начало XX века	 ул. Витовского, 1
Сецессия после 1898-1914 гг.	 начало XX века	 Майдан Рождества, 33
	 приблизительно 1910 г.	 ул. Караимская, 2



<p>Ар-деко</p> <p>1925-1939 гг.</p>	 <p>приблизительно 1925 г.</p>	 <p>ул. Т. Шевченко, 17</p>
<p>Функционализм (стримлайн)</p> <p>конец 1920-х - 1939 гг.</p>	 <p>1938 г.</p>	 <p>ул. Коновальца, 36</p>

Таблица 2

**Металлические балконные и лестничные ограждения городских домов Ивано-Франковска**

Стиль / период	Балконные и лестничные ограждения городских домов Ивано-Франковска	
<p>Историзм</p> <p>1890-е гг.</p>	 <p>1887 г.</p>	 <p>пл. А.Мицкевича, 12-а</p>
	 <p>ул. Д. Гнатюка, 3</p>	 <p>ул. Д. Гнатюка, 3</p>
	 <p>конец XIX в.</p>	 <p>ул. Грушевского, 6</p>

<p>Сецессия после 1898-1914 гг.</p>	 <p>начало XX в.</p>	 <p>ул. Гетьмана Мазепы, 83</p>
<p>ар-деко 1925-1939 гг.</p>	 <p>после 1925 г.</p>	 <p>ул. Сечевых стрельцов, 35</p>
<p>функционализм 1920 - 1930 гг.</p>	 <p>приблизительно 1930 г.</p>	 <p>ул. М.Грушевского, 8</p>

**Выводы.** В целом, многочисленные образцы металлопластики конца XIX – начала XX в. свидетельствуют о наличии высокопрофессиональных ячеек производства художественного металла на Галичине. Детальное натурное изучение, предварительный анализ фотофиксаций архитектурных деталей зданий Галича и Ивано-Франковска, выполненных в техникековки и литья, дают основания утверждать об изготовлении многих из них в одних и тех же мастерских, что требует дальнейшего научного исследования для выяснения конкретных мастеров и центров.

Большинство изделий архитектурного металла конца XIX – начала XX в. Галича и Ивано-Франковска составляют научную и художественную ценность. Художественный металл в архитектуре исследованных городов придает зданиям индивидуальной неповторимости, что роднит его с произведениями искусства и отличает от тиражируемой формы.

Для сохранения как национального художественного достояния необходимо провести атрибуцию – работы по выявлению, идентификации, научному изучению, классификации, оценке, а также по консервации и реставрации.



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## СТИЛЕВЫЕ ОСОБЕННОСТИ АРХИТЕКТУРЫ СТАНЦИЙ КИЕВСКОГО МЕТРОПОЛИТЕНА 1960-1980-Х ГОДОВ КАК ОСОБОГО ВИДА ОБЩЕСТВЕННЫХ ЗДАНИЙ

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**Povar M. Style features of the architecture of Kyiv metropolitan stations of the 1960s-1980s as a special type.**

**Annotation.** The research paper analyzes the stylistic characteristics of the Kyiv metropolitan stations built during the 1960s-1980s. These type of buildings have been chosen as the subject of this study, because it combines architectural and artistic solutions of underground spaces and the uniqueness of forming the ground pavilions. The relationship between avant-gardism of the 1920s and modernist trends in the architecture of the 1960s-1980s is the focus of this article. The effect of these trends on the further development of domestic architecture is evident. The perspective directions of work are determined taking into account the importance of the metropolitan stations of Kyiv of 1960s - 1980s and their influence on the further development of Kyiv architecture and architecture in general.

**Key words:** public buildings, metropolitan, style features, ground pavilion, escalator tunnel, design, center platform, side platform.

**Введение.** Станции метрополитена это особый вид общественных зданий массового посещения. Наземные павильоны и подземные вестибюли метро это - среда, с которой ежедневно контактируют тысячи людей, возлагает на авторов таких объектов повышенную степень ответственности. Технологичность указанных зданий предусматривает типичную организацию функционального пространства, при этом от архитектора требуется создание образности и стилистической выразительности объекта. Об этом свидетельствует ряд исследуемых станций метро 1960-1980-х годов.

В настоящее время не существует единой системы классификации станций метро по стилевым признакам, однако, они являются одновременно объектами подземной и наземной урбанистики которые можно рассматривать в комплексе со знаковыми общественными зданиями исследуемого периода.

Наземные павильоны или вестибюли метрополитена часто бывают совмещенными с общественными и даже с жилыми объектами, что позволяет рассматривать их не только как транспортные сооружения. При этом очевидным является взаимное влияние зданий метрополитена в развитии общественного строительства Киева, как исследуемого периода, так и на сегодняшний день.

Актуальность исследования. В период 1960 - 1980-х в Киеве было построено около половины ныне существующих станций метро, были запущены в эксплуатацию две линии: Святошинско-Броварская (1960) и Курневско-Красноармейская (1976).

Среди открытых станций знаковыми объектами можно считать «Университет»,

«Крещатик», «Шулявская». Однако каждая из ряда исследуемых станций имеет свою индивидуальность и влияние на развитие архитектурной мысли. С каждым годом киевский метрополитен развивается и охватывает новые районы города. Функционируют открытые участки линий с наземными станциями. Все больше появляется линий мелкого заложения. Метрополитен работает в комплексе со скоростным трамваем и городской электричкой, активно влияя на градостроительную ситуацию. К станциям метро тяготеют различные объекты инфраструктуры со зданиями общественного назначения, таким образом превращая их в своеобразные общественно-культурные центры.

Соответственно, исследование развития и формирования стилевых особенностей станций метрополитена как особых зданий общественного назначения имеет большое значение для развития архитектурной науки. К проведению данного исследования станции метрополитена не рассматривались как отдельный вид общественных зданий во всем комплексе их функциональной структуры и взаимосвязи с другими знаковыми общественными зданиями

**Цель статьи** - способствовать решению теоретической архитектурной проблемы определения роли архитектуры метрополитена в исследовании общественных зданий Киева последнего стилового периода в архитектуре СССР и в дальнейшем развитии архитектурной науки.

Для достижения главной цели следует:

- исследовать стилевые особенности ряда станций метрополитена построенных в пределах определенного периода;
- систематизировать и классифицировать исследованные объекты;
- Обозначить основные стилистические тенденции в процессе развития объектов метрополитена и других общественных зданий Киева 1960-1980-х годов;
- определить перспективы функционирования станций метро в контексте с другими общественными зданиями Киева.

**Анализ последних исследований и публикаций.** Еще до пуска первой линии метрополитена был издан ряд публикаций по этой теме. Ход строительства и характеристики конкурсных проектов будущих станций подробно описаны в работе Л. Сапрыкина [9].

Вопрос стилевых особенностей станций метрополитена рассматривается в публикациях Г. Головки, Н. Коломийца [3], А. Касьянова [4]. Прогрессивные идеи и новаторские решения в строительстве первой очереди Киевского метрополитена изложены в работе инженеров М. Щеголя, В. Бронштейна [13].

Общее описание строительства метрополитена на разных этапах его развития и архитектурную характеристику станций предоставляет в своей книге Кость Козлов [6].

Историко-публицистический характер носят работы Б. Ерофалова, в которых описано архитектурно-художественные особенности авторского исполнения проектов станций метрополитена первой очереди [4].

Однако, до сих пор не было проведено фундаментальных исследований

и глубокого анализа архитектурной стилистики станций метро в комплексе с развитием архитектуры зданий общественного назначения в целом.

**Изложение основного материала.** В 1960 году были запущены первые пять станций Киевского метрополитена: «Вокзальная», «Университет», «Крещатик», «Арсенальная», «Днепр». Все они, за исключением «Днепр» - глубокого заложения с пилонной конструктивной схемой. Внутренние подземные залы не имеют определенного стилевого направления. Чувствуется стремление к дворцовой помпезности.

Такое эклектичное отношение к архитектуре метро в целом было заложено при решении станций московского метро в период, когда преобладала показательная сторона архитектуры, когда считалось почти обязательным каждую станцию делать в другом стиле, и архитекторы нередко не пренебрегали использованием значительного количества материалов для декорирования. В результате стандартные конструкции станции или подземного вестибюля разукрашивались самыми разнообразными архитектурными деталями, которые требовали индивидуального, иногда кустарного изготовления [5].

Подобный архитектурный подход был присущ большинству станций Киевского метрополитена, однако некоторые из них по праву можно считать образцами неомодернизма.

Явно выраженные новейшие черты в архитектуре наземного павильона станции метро «Крещатик» Рис.1., Рис.2., который одновременно является и рестораном «Метро». Архитекторы: А. В. Добровольский, В. А. Сазанский, Ф. Н. Юрьев [11].



Рис.1



Рис. 2

Рис.1. Наземный павильон станции метро «Крещатик» на ул. Крещатик, эскиз;

Рис.2. Наземный павильон станции метро «Крещатик» на ул. Крещатик, реализованный проект в первые годы эксплуатации;

Данное здание выделяется из общей концепции застройки послевоенного Крещатика своей лаконичной формой. Фасад имеет большую площадь остекления. Открытая терраса под консольно нависающим крышей придает зданию легкость

и современный вид.

Заслуживает внимания также наземный павильон с выходом на улицу Институтскую (архитекторы И. Л. Масленков, Ю. Б. Тягно) Рис.3., Рис.4. [11].

Круглое в плане купольное здание приобрело современные черты благодаря нетрадиционному размещению световых проемов в куполе и полностью остекленных стен. Подобный мотив «космического стиля» ранее были использованы в архитектуре лондонской подземки – станции Southgate, спроектированной Чарльзом Холденом Рис.5. Станция с «футуристическим» дизайном, относится к линии Пикадилли, была открыта в 1933 году [8].



Рис. 3.



Рис.4.



Рис. 5.

Рис.3. Наземный павильон станции метро «Крещатик» на улице Институтской, эскиз;

Рис.4. Наземный павильон станции метро «Крещатик» на улице Институтской, реализованный проект в первые годы эксплуатации;

Рис. 5. Станция Southgate лондонского метро.

Необычную форму имеет наземный павильон станции метро «Шулявская». Открытая 5 ноября 1963, до 2 февраля 1993 года носила название «Завод Большевик». Архитекторы: А. В. Добровольский, Б. И. Приймак, А.

И. Малиновский и другие Рис.6., Рис.7.

Центральное место в композиции здания занимает круглый в плане высокий объем эскалаторного зала. Со стороны шоссе он окружен помещениями кассового вестибюля (на первом этаже) и залом кафе (на втором этаже), которые огорожены стеклянными стенами. С противоположной стороны к нему примыкают обслуживающие помещения наземного вестибюля и кафе. Весь объем здания перекрыт плоской железобетонной плитой, имеющей вдоль главного фасада большой вынос. Конец этой квадратной плиты поддерживается двумя столбами [3].

Подобные черты модернизма были продолжены в 1966 году архитектором М. Будиловским совместно с архитектором С. Хлебниковой в проектировании здания музыкально-хореографического училища в Киеве на Сырце Рис.8., что свидетельствует о взаимосвязи черт общественных зданий исследуемого периода.



Рис. 6



Рис. 7



Рис. 8

Рис.6. Наземный павильон станции метро «Шулявская», («Завод Большевик»), проект;

Рис.7. Наземный павильон станции метро «Шулявская», современный вид;

Рис.8.Музично-хореографическое училище в Киеве на Сырце. Фото из открытых источников



Оригинальной является наземная станция «Днепр». Архитекторы: С.С. Павловский, Г.И. Гранаткин, А.Ф. Игнащенко, П.Ф. Красицкий, С.И. Крушинский Рис.9., Рис.10., Рис.11.

Вестибюль станции, в отличие от всех остальных, находится под эстакадой, рядом с крайними опорами у портала тоннеля. Широкая парадная лестница сочетает вестибюль с двусторонней платформой, часть которой покрыта железобетонной ребристой оболочкой, имеет пролет 16,0 м, и 6-метровыми консолями по бокам.

Большие площади остекления боковых стен зала вестибюля помогают активно включить окружающий пейзаж в интерьер станции. Все элементы интерьера, ажурность конструкций, облицовки стен керамической плиткой цвета морской волны, мозаичный пол диагонального рисунка, алюминий в отделке стен и оконных рамах и упрощенный витраж окон служат связью архитектуры сооружения с окружающим пейзажем.

Вполне справедливо можно определить, что в данном здании заметны черты конструктивизма, явно не характерного предыдущему архитектурному периоду.



Рис.9.



Рис.10.



Рис.11.

Рис.9. Станция «Днепр». Лестницы выхода на платформу;

Рис.10. Главный вход, кассовый вестибюль;

Рис.11. Лестничные марши и дополнительные входы-выходы.

Следующие станции метро открытого типа построены по типовым проектам с минимальной отделкой. Они полностью соответствуют тенденциям типичного индустриального строительства 60-х годов и до сих пор остаются устойчивым типом наземной станции метрополитена.

Несколько оригинально, благодаря своей конструкции, выглядит станция «Черниговская», открытая 4 октября 1968 под названием «Комсомольская». Архитекторы И. Л. Масленков, В. С. Богдановский, Т. А. Целиковская Рис.12.

Посадочная платформа размещена под путепроводом, имеет два вестибюля, построенные в виде стеклянных объемов. К двум наземным вестибюлям ведут



мостики, которые одновременно служат крышей платформенной области. Архитектурный образ станции простой и одновременно современный. Станция построена по типичному проекту, аналогичная станциям метро «Багратионовский», «Фильовский парк», «Пионерская» и «Кунцевская» Рис.13. Фильовской линии Московского метрополитена [2].

Это свидетельствует о том, что идеи модернизма после нескольких десятилетий перерыва (с конца 1930-х годов), стали вновь распространяться на территории постсоветского пространства. Следует отметить, что подобные черты присущи сооружениям транспорта и за рубежом. Примерами этому являются станция пригородной электрички S-Bahn в берлинском административном округе Марцан-Хеллерсдорф Рис.14. [10], станция метро Hagsätra в Стокгольме Рис.15., которая была открыта 1 декабря 1960 [7] и другие. Все они являются логическим результатом научно-технического развития.



Рис.12.



Рис. 13



Рис.14.



Рис.15.

Рис.11. Станция метро «Черниговская» Святошинско-Броварской линии Киевского метрополитена; Рис.12. Станция пригородной электрички S-Bahn в берлинском административном округе Марцан-Хеллерсдорф. Реконструкция 1976 г. ; Рис.13. Станция метро «Кунцевская» Фильовской линии Московского метрополитена. Открытая 1965 Рис.15. Hagsätra - конечная станция маршрута T 19 стокгольмского метрополитена.

После завершения Святошинско-Броварского участка метро началось

строительство следующей, Куренёвско-Красноармейской линии, где по условиям рельефа были применены преимущественно станции мелкого заложения. Большинство из них выполнено без наземных павильонов по единому типовому проекту с применением сборных железобетонных элементов.

Среди указанного ряда станций колонного типа выделяется «Минская», как первая односводчатая станция Киевского метрополитена Рис.16., Рис.17.

Архитектурное решение станции основывается на приемах, которые не имели до этого прямых аналогов в киевском метро: свод станции представляет собой ступенчатую конструкцию, в которой смонтировано скрытое закарнизное освещения белого цвета. Центральная ось зала визуальнo подчеркнута стилизованной росписью в виде белорусского орнамента, сплошной полосой проходящего вдоль всего потолка. Путевые стены имеют сравнительно небольшую высоту и покрыты травертином в гамме орнамента на карнизе стен и белом потолке.



Рис.16. Рис.17.

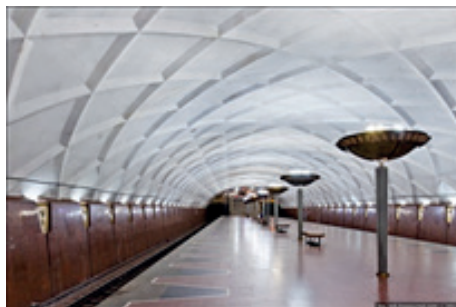


Рис.18. Рис.19.

Рис. 16. Строительство станции метро «Минская», 1981 г.; Рис. 17. Интерьер зала станции «Минская»; Рис. 18. Станция метро «Спортивная» Харьковского метрополитена; Рис. 19. Станция Baker Street лондонского метро, 1863.

В мировой и отечественной практике строительство односводчатых залов уже имело место. Такова одна из старейших станций лондонского метро - станция Baker Street Рис.19., открытая в 1863 году [1].

В августе 1975 года вступила в действие первая очередь Харьковского метрополитена общей протяженностью 10,8 км. Она насчитывала восемь станций, шесть из которых - мелкого заложения. Эти станции предполагалось построить из сборного железобетона. Но в то время Харьковметрострой чувствовал острую нехватку сборных железобетонных изделий, необходимых для сооружения станций мелкого заложения, поскольку завод железобетонных конструкций Харьковметростроя находился в стадии строительства.

«Харьковметропроектом» был разработан проект односводчатых станций что, возводились индустриальным методом из монолитного железобетона с применением передвижной металлической опалубки [12].

Таким методом было построено ряд односводчатых станций первой линии Харьковского метрополитена Рис.18. В отличие от них первая киевская односводчатая станция «Минская» выполнена из сборных железобетонных конструкций.

Главное преимущество односводчатой конструкции - это отсутствие опор на платформе, максимальное раскрытие внутреннего объема станционного зала, улучшает визуальную ориентацию, органическую связь пространств вестибюля и посадочных платформ.

Сочетание односводчатых станций со станциями, выполненными по другим конструктивным схемам, обогащают архитектурный облик метрополитена в целом.

Применение только пилонных или колонных станций ограничивает палитру архитектора и способно привести к однообразию и монотонности архитектурных решений [12].

**Выводы.** За период 1960 - 1980-х годов прошлого века было построено около половины всех ныне действующих станций Киевского метрополитена. Особый интерес для исследования вызывает именно ряд первых станций, поскольку:

- в процессе проектирования принимали участие известные архитекторы, авторы знаковых общественных зданий исследуемого периода;
- строительству станций метро уделялось очень большое внимание, как к особым объектам столичного города, рассчитанных на массовое посещение киевлянами и многочисленными туристами;
- для строительства станций метро привлекались лучшие специалисты-конструкторы, использовались самые передовые технологии и самые современные, наиболее долговечные и качественные строительные материалы;
- отделка типовых конструктивных решений подземных вестибюлей осуществлялась на основе синтеза искусств, для чего привлекались лучшие скульпторы, художники-монументалисты и другие художественные силы;

Станции метро исследуемого периода можно классифицировать следующим образом:

- наземные станции;
- подземные станции;

- глубокого заложения;
- мелкого заложения;
- пилонного типа;
- колонного типа;
- односводчатые;
- с наземным павильоном;
- без наземного павильона.

Учитывая, что станция метро является в первую очередь объектом транспорта с достаточно жесткой технологической схемой роль архитектора в ее проектировании не является первостепенной. Всего в устоявшуюся конструктивную схему архитектор пытается вписать свою идею. Говоря современным языком архитектор выступает в роли дизайнера интерьера подземных помещений станции. Первая очередь метрополитена открыта в 1960 году несет отпечаток предыдущей эпохи со значительной тематической идеологической нагрузкой. Творческая роль архитектора определялась при решении вопросов, выходящих за рамки стандартной схемы. Например, станция метро «Крещатик» должна была иметь три наземные выходы. Таким образом появились два уникальных сооружения наземных павильонов, которые и сейчас имеют современный вид.

И наоборот, станция метро «Арсенальная», перегружена дополнительными функциями, имеет роскошный наземный павильон и крайне не соответствующее пассажиропотоку подземное пространство с укороченным центральным залом, что создает крайне некомфортную среду для пассажиров.

Станции глубокого заложения преимущественно выполняются по пилонной схеме, однако пилоны занимают значительную площадь и полностью перекрывают визуальную связь между путевыми и центральными залами. Поэтому, при строительстве станций «Площадь Независимости», а позже «Золотые ворота» пилоны заменены колоннами, так как по традиционной схеме, существенно уменьшалась площадь залов, а это не соответствовало потребностям пассажирской загрузки. Как следствие, указанные станции получили новый архитектурно-художественный облик.

Начиная с 1963 года, внутренние пространства станций метрополитена теряют свою помпезность, преобладают прямые линии, рядом с мрамором на передний план выходит керамическая плитка. На станции метро «Шулявская» наземный павильон центрального выхода построенный в стиле неомодернизма. На этом практика строительства наземных павильонов прекратилась.

Наибольшие возможности для архитектурной образности имеют наземные станции. Тем не менее, станции «Гидропарк», «Левобережная», «Дарница», построенные в 1965 году по типовому проекту, оказались слишком идентичными из-за минимального художественного оформления, что обусловлено сжатими сроками строительства и экономией средств. Это свидетельствовало об окончательном завершении периода дворцовой помпезности в архитектуре метрополитена.

Станции мелкого заложения имеют стандартный вид колонного пространства.

Изменения ощутимы только в применении новых материалов: метала, изделия из стекла, гипсокартона, подвесных потолков (Luxalon). Однако основным средством отделки остается природный камень, поскольку он самый надежный по долговечности и имеет высокие эксплуатационные показатели.

Тенденцию развития стилевых особенностей станций метрополитена можно изложить в следующей последовательности:

1. 1960-1963 год. - Сталинский ампир с отличительными чертами:

- синтез архитектуры, скульптуры и живописи;
- мотивы классицизма;
- барельефы с геральдическими композициями и изображениями идеологического направления;
- оптимистичный настрой всего произведения;
- использование мрамора, бронзы и ценных пород дерева в оформлении интерьеров.

2. 1963 - в 1968 год. - единичные проявления модернизма с элементами национальных мотивов.

3. 1968-1982 -год - разнообразное декорирование типовых индустриальных конструкций, символизм, элементы хайтека.

Анализ особенностей станции Киевского метрополитена периода 1960 - 1980-х годов позволяет утверждать, что эти объекты являются:

- авторскими произведениями, вписанными в конструктивно-технологическую схему;
- объектами комплексной инфраструктуры включающих наземные здания и систему подземного пространства;
- уникальными объектами, с индивидуальной архитектурно- художественной образностью;
- архитектурно-дизайнерскими произведениями, созданными на основе синтеза различных видов искусств;
- объединяющими центрами в градостроительной структуре.

**Перспективы исследования.** Очевидно, что здания метрополитена 60-80-х годов подлежат детальной классификации и систематизации. Многие из них являются уникальными примерами дизайна интерьера, подлежащих сохранению и реставрации, как национальное достояние. Отдельное место занимают наземные павильоны, занимающие видное место среди знаковых общественных зданий Киева. Гипотеза наличия национальных черт и продолжение в них стилевого направления архитектуры 20 - 30-х годов вполне подтверждается в результате проведенного анализа. Однако перспективы исследования данных объектов должны учитывать реконструкцию станций метро, как объективный процесс развития городской инфраструктуры. Вместе с тем развитие транспортной сети приводит к сочетанию метро с такими видами транспорта как скоростной трамвай и городская электричка, открывает новое пространство развития стиля, данных зданий. Это может быть предметом дальнейшего исследования вопроса.



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