

## **LJUBLJANA SCHOOL OF BUSINESS**

Proceedings of the 2nd International Scientific Conference

# **EASTERN EUROPEAN CONFERENCE OF MANAGEMENT AND ECONOMICS**

Environmental Management and Sustainable Economic Development

May 29, 2020

**EECME 2020  
Ljubljana 2020**

**LJUBLJANA SCHOOL OF BUSINESS**  
(Slovenia)

**ODESSA INSTITUTE OF TRADE  
AND ECONOMICS OF KYIV  
NATIONAL UNIVERSITY OF  
TRADE AND ECONOMICS**  
(Ukraine)

**COLLEGE OF COMPUTER  
SCIENCE AND BUSINESS  
COMMUNICATIONS  
EMPIRICA**  
(Bosnia and Herzegovina)

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Katalogni zapis o publikaciji (CIP) pripravili v Narodni in univerzitetni knjižnici v Ljubljani

COBISS.SI-ID=18665219

ISBN 978-961-91021-9-0 (pdf)

INTERNATIONAL Scientific Conference Eastern European Conference of Management and Economics (2; 2020; Ljubljana)

Proceedings of the 2nd International Scientific Conference Eastern European Conference of Management and Economics: Environmental Management and Sustainable Economic Development, May 29, 2020 / [organizer] Ljubljana School of Business, [co-organizers] Odesa Institute of Trade and Economics of Kyiv National University of Trade and Economics (Odesa, Ukraine) and College of Computer Science and Business Communications EMPIRICA (Bosnia and Herzegovina); editors Lidija Weis, Viktor Koval, Katarina Aškerc. – Ljubljana: Ljubljana School of Business, 2020.

**Publisher:** Ljubljana School of Business

Tržaška cesta 42, 1000 Ljubljana

info@vspv.si

ISSN 2712-2522

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## Section 1. Environmental Economics and Social Marketing

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### MARKET ANALYSIS OF OTC MEDICINES ATTRIBUTES WITHIN PATIENT INFORMATION LEAFLETS

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**Abstract.** *An extended usage of the Over-the-counter (OTC) medicine usage is reported, however a knowledge about the patients' decision process is lacking. In this research study, we aimed at obtaining further findings about the preferences of the patients for the specific attributes: benefits, possible medicine adverse events and price of the chosen OTC medicines. The conjoint analysis was used as a method in the study in order to determine the respondents' preferences for the individual attributes. The online questionnaire was sent to 85 respondents of various age, gender, disease history and purchase habits. The results showed that the medicine adverse events prevailed medicine benefits, described in the patient information leaflet (PIL). The respondents' preferences for the price were not high.*

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**Keywords:** *OTC medicines, attributes, preferences, average importance, conjoint analysis, decision process.*

#### Introduction.

The preferences for the OTC medicine attributes affect the decisions for a purchase and may also be related to their usage, the efficacy and a possible occurrence of the adverse events. A large usage of the OTC medicines has been observed worldwide. However, research studies with the evidenced patients' preferences towards individual prescribed medicines attributes are still lacking. Some researchers [1] emphasized, also in the generic medicine area, that little was known about the attitudes of patients towards the particular attributes. During a purchase of the OTC medicine, a patient usually receives only a few information.

Besides some basic information given by the pharmacist, some ambiguities may still remain unclear. The patient is expected to carefully read the patient information leaflet (PIL) as an official source of written information. Only if the PIL information is well understood by the patient, a proper usage of the OTC medicine is enabled and may affect the efficacy and safety of the medicine. Although an emphasis on assigning a larger role to the patient in decision making has been established, the researchers [2] observed a need to improve doctor/patient communication and to consider the patients' preferences.

#### **Rational and emotional theories of the decision making.**

Some theories describe a predominant role of rational behavior, whereas other theories assign a larger importance of emotional behavior.

The researchers [3] claim that rational choices should satisfy some elementary requirements of consistency and coherence. Within a decision frame, the defined problem and also the norms, habits, and personal characteristics of the decision-maker are regarded.

Emotional behavior is described as prevalent related to rational behavior by other authors. Zajonc [4] thought that the affective reactions preceded rational reactions. Damasio (1994) also determined an importance of emotions within decision process and reasoned his results by physiological findings [5].

#### **Perceived medicine benefits and risks.**

Main attributes included in the medicine materials refer to medicine benefits and benefit risks. Within the medicine benefits the efficacy of the medicine is described. Medicine risks comprise medicine contraindications, possible adverse events, eventual interactions and other factors which may cause a diminished treatment safety. Daniel Bernoulli [6] wrote already in 1738 that people were generally averse to risk. The researcher also concluded that the reasons for risk aversion were decreasing with increasing wealth. Finucane et al. [7] aimed at finding out a relationship between perceived risk and perceived benefits. It was assumed that people relied on affect when judging the risk and benefit of specific hazards. Although the researchers acknowledged the cognitive strategies, they concluded that affect played an important role in decision making. Peters et al. [8] studied a reaction to hazards and found out that it may have included emotional responses such as fear and anger, related to the individual differences, emotional appraisals, and risk perceptions.

#### **Background of the present study.**

OTC medicines are extensively purchased. Especially the OTC medicines were described as one of the most used therapeutic groups. The researchers [1] described an expansion of the generic OTC pain medicines market. At purchasing OTC medicines only, some information is given to the patients, yet the OTC medicines have been widely used and also adverse events and interactions with other medicines may occur.

We decided to determine the perceived importance of the chosen attributes. The results of the research study may influence the creating the health and medicine information.

#### **Hypothesis.**

*H1*: Risks more influence patients' decisions not to purchase an OTC medicine than benefits influence patients' decisions to purchase OTC medicines.

### Methods.

A conjoint analysis was used to determine the respondents' preferences, obtained from the questionnaire. An advantage of the conjoint analysis is an accuracy of the method. A conjoint analysis has also been increasingly used in the healthcare research studies.

#### Usage of conjoint analysis in the healthcare studies.

An importance of conjoint analyses in the healthcare studies has increased during the recent years. Marshall et al. [9] performed a systematic review of conjoint analysis in the health literature. Several scientific electronic databases were reviewed. The researchers established an increasing number of conjoint analysis studies over time. The majority of articles comprised the data from Europe (57%), followed by the USA (30%). Similar research study established an importance of the usage of the conjoint analysis in the healthcare research studies [10].

Various attributes were included in the studies, e.g. price, brand, onset time of effect, place of purchase and source of information. From 3 to 16 attributes were included in the studies. The most questionnaires included six attributes, and the majority included between 3 and 7 attributes [9]. Each attribute usually included two or three levels. Most often between 100 and 300 respondents were involved, 259 in average.

#### The course of the present research study.

85 respondents were included in the study, 68 females and 17 males. The demographic structure of the respondents, according to gender and three age groups, is shown in the Table 1.

**Table 1. Respondents according to gender and age**

Gender	Number (Share in %)	Age (Years)	Number (Share in %)
Females	68 (80,0 %)	< 30 years	34 (40,0 %)
Males	17 (20,0 %)	30-50 years	18 (21,2 %)
		>50 years	33 (38,8 %)
Total	85 (100,0 %)		85 (100,0 %)

### Attributes.

Attributes were taken from PILs of two OTC medicines. The first OTC medicine contains paracetamol and is indicated for easing the pain and lowering a high body temperature, as the symptoms of a bacterial or a viral infections and other diseases.

The second OTC medicine includes a combination of paracetamol, pseudoephedrine hydrochloride and dextromethorphan hydrobromide. This medicine is indicated for lowering high body temperature and easing the pain. Other indications include lowering an excess nasal drainage and easing of breathing at nasal congestion and relieving of an aggravating cough.

The stated OTC medicines are included in the research study, because of their widely usage. When using these OTC medicines, adverse events and interactions with other medicines can occur and are stated in the PILs.

Table 2 shows the groups of attributes and attributes, used in the study.

**Table 2. Groups and subgroups of attributes**

No.	Attributes' Groups	Attributes' Subgroups
1	Medicine treatment benefits	Mainly pain relief
		Mainly respiration ease at nasal congestion
		Mainly cough relief
2	Medicine treatment benefits, including compliance benefits	Lowering body temperature
		Tablets are easily swallowed
		Once daily dosage
3	Possible medicine adverse events	Rash, itchiness, dizziness
		Heart problems
		Breathing problems
4	Price	Three levels of price (according to the real medicine price calculations)
5	None	

**Results.**

The results include the preferences for the defined attributes and the groups of attributes. For analyzing the results of CBC studies, we used the SMRT software system and SSI Web. The first step in analyzing the choice results was conducting a "Counting" analysis. CBC's Counts program reports the percent of times each attribute level was chosen when available on the screen [11]. Counts provides an intuitive measure of the impact of each attribute level on overall choice. Counts are proportions ranging from 0 to 1. For example, a Count of 0,22 for an attribute means that when a medicine was displayed, including that level, the respondents chose it in 22% of the cases.

**Table 3. Analyze by Counting Choices**

<b>Medicine treatment benefits</b>	
	Total
Total Respondents	85
Mainly pain relief	0,22
Mainly respiration ease at nasal congestion	0,22
Mainly cough relief	0,16
Within Att. Chi-Square	13,75
D.F.	2
Significance	p < .01

Respondents on average chose 'Mainly pain relief' and 'Mainly respiration ease at nasal congestion' in 22%, respectively, and 'Mainly cough relief' in 16%. 'Lowering body temperature' was the most preferred benefit, being chosen 25% of the times, presented and available for choice. 'Tablets are easily swallowed' and 'Once daily dosage', were the least preferred (17%). The counts for possible adverse events are presented in the following table.

**Medicine treatment and compliance benefits**

	Total
Total Respondents	85
Lowering body temperature	0,25
Tablets are easily swallowed	0,17
Once daily dosage	0,17
Within Att. Chi-Square	22,52
D.F.	2
Significance	p < .01

These results require a different interpretation:

**Possible medicine adverse events**

	Total
Total Respondents	85
Rash, itchiness, dizziness	0,35
Heart problems	0,07
Breathing problems	0,17
Within Att. Chi-Square	195,57
D.F.	2
Significance	p < .01

‘Rash, itchiness, dizziness’ was the most preferred attribute on average, being chosen 35% of the times, which means it is less inconvenient for the respondents. Most often respondents avoided ‘heart problems’, shown by the least common choice of only 7%. The fourth attribute is price, with three levels:

**Price**

	Total
Total Respondents	85
Price 4,5 €	0,22
Price 6,5 €	0,20
Price 8,5 €	0,18
Within Att. Chi-Square	4,35
D.F.	2
Significance	not sig

The respondents prefer lower prices but the possibility of decreases for each step increased in price. Chi-Square statistic of the one-way effects of attribute levels on a choice shows significant results, except for a price. In the next step, we used the SMRT module for a logit analysis [11]. Utilities or the level values of each attribute are shown in the Table 4. The values are given in the form of positive and negative numbers. The reason is that the program uses a method that returns the results to zero centered.

**Table 4. Average utility values of attributes**

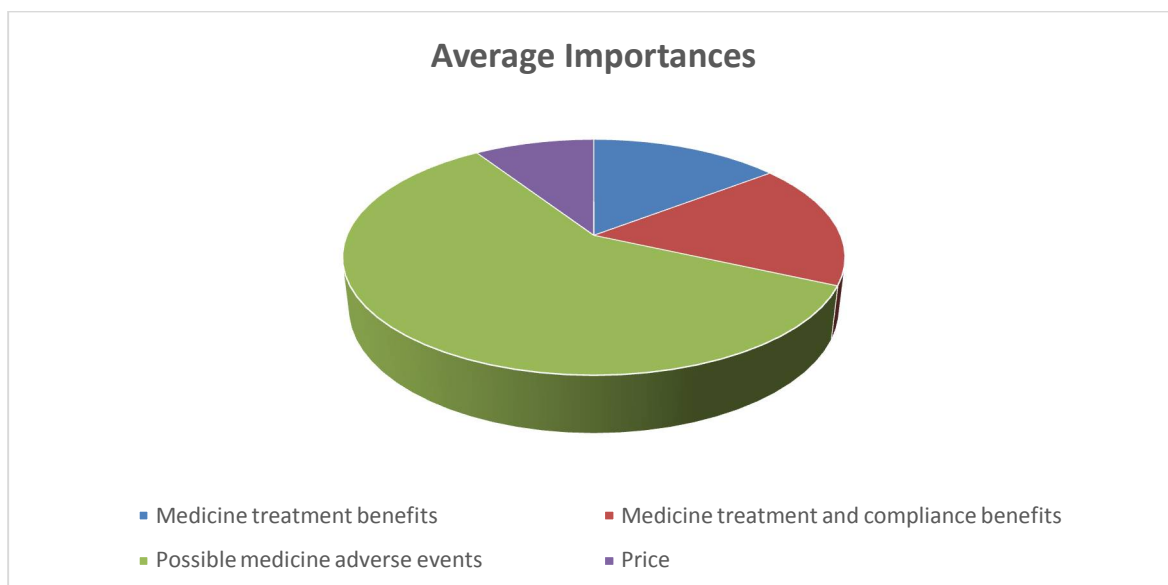
Utility Run:	Logit Run
<b>Average Utility Values</b>	
Rescaling Method:	Zero-Centered Diffs
	Total
Mainly pain relief	19,80
Mainly respiration ease at nasal congestion	18,82
Mainly cough relief	-38,62
Lowering body temperature	43,86
Tablets are easily swallowed	-19,23
Once daily dosage	-24,63
Rash, itchiness, dizziness	113,99
Breathing problems	8,24
Heart problems	-122,23
Price 4,5 €	15,97
Price 6,5 €	4,92
Price 8,5 €	-20,89

Of particular interest is the calculation of the average importance of individual traits: to find out what proportion of importance was attached to the consumer's choice of medication.

**Table 5. Average importance of the attributes**

<b>Average Importances</b>	
	Total
Medicine treatment benefits	14,61
Medicine treatment and compliance benefits	17,12
Possible medicine adverse events	59,05
Price	9,22

It is evident from the Table 5 and even more clearly from the Chart 1 that the decision process regarding a purchase of the OTC medicines is largely dependent on the possible medicine adverse event.



**Fig. 1. Average importances of the attributes**

### Conclusions.

The respondents assigned higher preferences to risks compared to the benefits of the determined OTC medicines. The hypothesis is confirmed, risks more influence patients' decisions not to purchase an OTC medicine than benefits influence patients' decisions to purchase OTC medicines. The findings of the risks' preferences comply with other research results [12], claiming that the treatment risk attributes influence the treatment decisions more than other attributes. However, unlike in many other studies, no major importance was attributed to price in our study.

The research findings contribute to the scientific results of the consumer behavior. They may also be an incentive for creating comprehensive written health and medicine information.

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## **DEVELOPING SUSTAINABLE BUSINESS MODEL WITH KNOWLEDGE SHARING AND ACCOUNTING OUTSOURCING**

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**Abstract.** *New sustainable business models are based on specialization, innovation and cooperation where business entities are making strategic decision to outsource the activities that were traditionally done using internal resources. In other words, in search to find sustainable and resilient business model companies are making strategic decisions to outsource key activities, specialized activities and support activities. In this process, especially when it comes to transferring accounting and financial services to other company, sharing the information and knowledge has specific role in the relationship between entities. On one hand, there is issue of trust associated with outsourcing of sensitive financial information that needs to be considered in deciding to outsource. On the other hand, there are benefits of knowledge sharing with professional service providers. This paper will present how knowledge sharing and trust influence the decision of company to outsource accounting and finance activities.*

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**Keywords:** *accounting and financial services, knowledge transfer, outsourcing.*

### **Introduction.**

According to Theory of Resource Optimization business entities have to reduce costs and to optimize the use of their own resources in order to grow and become more resilient in competitive market [5]. If business entities optimise the utilization of their own resources they can achieve a competitive advantage. Research on this topic shows that the root causes of enterprise decay are: lack of planning, lack of knowledge and skills, lack of management skills and lack of key competences [3]. Business entities can overcome shortcomings in resources, knowledge and skills by outsourcing them from other companies that are professional in those areas. In entering outsourcing arrangements there are factors that need to be considered. At one side, there are benefits that business entities in this arrangement can acquire resources, knowledge and skills that they would not be able to develop internally. On the other side outsourcing involves risks coming from sharing internal information with another business entity. Information sharing is particularly sensitive in accounting and financial services outsourcing and this paper will address that issue.

Paper will present the development of outsourcing as business strategy, importance of knowledge sharing in financial service outsourcing, factors that influence knowledge sharing like trust and risk involved and conclusions about risks and benefits involved with knowledge sharing in accounting and financial service outsourcing.

### **Development of outsourcing as business strategy.**

Outsourcing is not a new concept, the term itself was used during the period of the Industrial Revolution to define subcontracting works in production. Companies have come up with ways to better position themselves in the market and improve profitability. In the 1950s and 1960s, companies were strategically focused on diversification because they wanted to increase profits and benefit from the economies of scale. The concept of economy of scale implies that the average cost of production per unit is reduced by increasing the volume of production [1]. The expansion in production that was happening in those years led to the crisis of large companies in the 1970s and 1980s, which became so great that they lost their flexibility. To overcome lack of flexibility and to be able to respond to the frequent change in the market needs, companies have developed a new strategy. The base principle of *the new strategy* was to focus on the core business, while other activities – support activities for the basic business, are being outsourced. The new strategic direction concerned the identification of key services and the selection of other non-key services (support or specialized services) that can be outsourced. In other words, the term outsourcing means transferring a job to an external supplier. The term was created by combining the word out - external (outer), resource - source, tool, and use.

As a business strategy, outsourcing was only defined in literature in 1989. At the beginning, companies that were not able to organize some functions internally because of lack of competence were using other providers for those services. With this type of outsourcing arrangements, they were able to grow focusing on the activities where they had competences. A new phase of evolution of outsourcing comes when engagement of external suppliers begins not only for production, but also for the provision of certain services, for example, services for which certain expertise, skills, specialization and the like were required. It emerges during the nineties when outsourcing is applied to support services. In those years, managers have contracted with new service companies to deliver: accounting, human resources, data processing, internal mail distribution, security, plant maintenance and the like [4-7]. Today, services on the market are largely outsourced. Namely, enterprises are increasingly involved in such relationships, while the market of specialized service providers and support functions is growing more and more. According to the data in 2019, the size of the outsourcing market was 92,5 billion USD. Specialized services in the field of information technologies are still most outsourced 66,5 billion USD, but outsourcing internal back-office function like accounting and financial services is growing more in recent years [26].

### **Knowledge sharing in accounting and financial service outsourcing.**

Most business entities operating in the context of the global market recognize the importance of knowledge for growth and development of their own capacities, as well as for maintaining competitive advantage [9-11]. Multinational corporations have developed mechanisms (business procedures) for sharing knowledge that are highly researched and documented in academic literature. One of the examples was the contribution to the development of the United States economy, as well as to global business education, that came from transfer of knowledge in the production process that Toyota managers transferred to US company managers. Business tools that are commonly used today like SWOT analysis, Fishbone analysis and many other methods are products of that cooperation and knowledge sharing- they have contributed to businesses but also to economics theory development.

Today in order to achieve efficiency in knowledge management business entities must consider their own needs for knowledge sharing. From the field of accounting and financial services the knowledge sharing decision becomes one of the most important strategic decisions when considering the growth and development of the organization [2-3; 18].

*Knowledge sharing* is a much wider concept than the *transfer of knowledge* itself. In theory and literature, the transfer of knowledge is used when considering the technical aspects of transferring activity from Entity A to Entity B. In this terms the activity is transferred and implemented in the same way at the entity B following strict procedure. The concept of knowledge sharing, however is expanding further in the analysis of transfer itself. What is transferred in accounting and financial services is not just the knowledge, it is also the experience (tacit knowledge) [13-15]. With knowledge sharing it is not known exactly: how the recipient of the knowledge received information (knowledge), how it was processed and how the knowledge was adopted.

Discussions about the knowledge sharing in literature are based on two levels of analysis of knowledge sharing: at the level of the organization and at the person's level, individual level (Bartol 2002):

1. Literature analysing the sharing of knowledge *at the level of the organization* deals with factors that influence the height, quality, method of acquiring knowledge, etc. Knowledge sharing in accordance with the organizational level implies that the organization should have the ability to create, accept, integrate and share knowledge.

2. Observing the sharing of knowledge with the new person, *at the individual level*, implies that knowledge is untouchable and that there is tacit knowledge that also gets shared; It is also understood that knowledge is acquired through experience and under normal conditions this knowledge is also shared at individual level.

Behaviour of persons is not easy to predict, especially in the context of knowledge sharing. For this reason, the opportunism in the behaviour of participants in the knowledge exchange is used when evaluating entry into the outsourcing services, especially financial and accounting services (Everaert, 2010). In researching outsourcing of financial services and accounting services trust and opportunism in behaviour of parties involved, are often taken into account as variables in analysing factors that influence outsourcing. By observing knowledge sharing in a professional environment of financial and accounting service outsourcing, researchers have noticed the following [1]:

1. Knowledge is not only shared formally but through various forms of interaction and experience sharing; there is tacit knowledge (knowledge acquired through experience) which is transmitted and upgraded by daily interaction in the client-user context.

2. With knowledge, a certain type of behaviour is transmitted, i.e., social interaction related to the profession reflected in language, behaviour, attitude towards the profession;

3. The development of professional knowledge is limited by the regulatory activities of professional agencies.

In the literature, the process of knowledge sharing during process of outsourcing is not much explored. Factors influencing outsourcing process, profits generated by this process are main focus of the research in this area, but not the benefits and innovation potential of knowledge sharing and accumulation of knowledge during outsourcing.

In [16] research on outsourcing on a strategic level has shown that *risk involved in knowledge sharing are one of the basic barriers to entry into the outsourcing process*. Through the process of outsourcing accounting services, organization will reveal to the service provider high quantity of information about suppliers, buyers, the amount of collection and receivables, personal data about employees, level of salaries etc. The provider and the recipient of the outsourcing service share a lot of knowledge and therefore the relationship should be created on trust [18-20].

#### **Issue of trust in knowledge sharing and outsourcing.**

In accounting outsourcing, accounting agencies take over accounting tasks from the client and perform a complete or partial accounting service for them. This process is documented by contract between organizations that specifies the service and the responsibility of the actors involved in the process. In order for information to be shared and tasks transferred, there must be trust among actors in the process. Mutual trust will lead to a quality relationship that will share and also enhance knowledge. In all research of accounting outsourcing trust is highly perceived and valued by parties involved therefore there is argument that confidence-based relationship will have a high-quality result of cooperation. The quality of the outsourcing tasks performed in accounting (i.e. the quality of financial statements) is influenced by a large number of other factors. However, the process of cooperation and opportunism in behaviour will be under control when both actors have confidence in each other. The relationship of trust and control will convince both actors that they will gain an advantage through cooperation.

In order to fully understand the importance of trust in outsourcing, we need to define confidence. According to [3], the existence of trust is present when there is a perception and fear that a person will be discovered in a negative action or in gaining own advantage and when a punishment will follow. Person *A* trusts person *B* just because person *A* believes and believes that person *B* cannot do something bad, because if he does, he will bear the legal consequences.

In the research of outsourcing accounting, it is important to observe trust through two dimensions. The company may decide to internally establish an accountancy service in that case it is essential to define the trust within the organization. On the other hand, the company can make the decision to enter the outsourcing process and to outsource a complete or part of an accounting service – in that case, the confidence that is generated and evolves between organizations is important to define.

There are three types of trust [19]: (1) trust based on contractual relationship, (2) trust based on perception of knowledge and abilities (competence) and (3) goodwill trust based on the principles of good behaviour. There can be various kinds of trust between organizations, one or more types can be present. Contractual trust is based on the sincerity and obligation arising from the contract, while competence based trust is based on an understanding of ethical and professional behaviour, while goodwill trust is based on the principles of fair treatment and respect for the partner. What has been observed is that trust based on the goodwill develops only within long-term relationships through frequent exchanges [19]. Trust contributes to the quality of cooperation between organizations, and is based on the belief that an organization will not do actions that would have negative consequences for another organization.

In outsourcing of financial and accounting service the knowledge in this field is held by an accountant. The fact that an accountant is possessing knowledge implies that an accountant has both power and control in relation- knowledge is a source of power [15]. Those who possess knowledge created in practice, through professional training, networking in the profession, etc. such as professional groups of doctors, accountants, engineers, etc. have accumulated specialized knowledge, cultural capital in their field, which will affect their perception of their own power. In practice, their actual power will depend on how much their knowledge is needed to businesses and how rare their knowledge is on the market. Therefore, there is a need and obligation to cooperate between the two business entities involved in outsourcing.

### **Transaction Cost Economics model explaining the importance of trust in knowledge sharing.**

*The transaction cost economics (TCE)* in the literature is used for the analysis of various types of outsourcing [21-22]. In economic theory, transaction costs are all costs that businesses must bear in order to carry out an economic transaction. There are many different transaction costs, for example, costs of searching and obtaining information on the market; cost estimation alternatives; research costs - whether a particular product is available on the market, who has the best price, etc.

The use of transaction costs in economic theory has been greatly enhanced by the American economist and winner of the Nobel Prize in Economics (2009) Oliver E. Williamson, who is considered to be the creator of the *Transaction Cost Economics*.

*Transaction Cost Economics suggests* that the costs and difficulties associated with market transactions sometimes favour the internal establishment of services (internal services or production), and sometimes outsourcing (the provision of services or products on the market under market conditions). Based on the stated theory the decision whether certain tasks are performed within the company or whether the company will outsource them depends on the amount of transaction costs of both alternatives.

TCE represents a good framework for analysing why individual companies prefer to organize accounting within a company, while other companies prefer engaging external accountants for the same type of service and thus reduce transaction costs. Costs of outsourcing accounting transactions must include all transaction costs that are: cost of contracting and of preparing contract with an accounting agency (*ex-ante costs*) as well as the cost of monitoring and providing feedback (*ex-post costs*) [23].

TCE assumes that the *specificity of the assets* and certainty i.e. the *uncertainty* that exists on the market are the two basic components that will affect the decision on outsourcing [10]. Apart from the above two components, it is also necessary to observe the *trust in the external accountant* and the *frequency of services*, because for some routine services that need to be performed frequently it is more likely to be able to reduce costs due to outsourcing (Everaert 2010).

The trust in external service providers has importance in making the decision about sharing knowledge and entering into outsourcing process with accounting service provider. From TCE model, it is implied that if there is greater trust among the actors in the process of outsourcing accounting, there is less need to establish a mechanism for controlling the behaviour of the accountant and therefore the costs of outsourcing are lower.

Trust is key component in knowledge sharing and if there is trust between companies there is less behavioural uncertainty (opportunistic behaviour of external service providers). Accounting is highly regulated area with Laws on Accounting and Auditing, International Accounting Standards and high fees in case of not complying to the law. This regulation reduces the opportunistic behaviour of actors on the market and increases the trust to share knowledge and information through outsourcing process [24-25].

In research conducted in Montenegro on 126 small and medium sized companies during period of 2017-2018 [21] the interdependence of the dependent variable (outsourcing of accounting) and independent variables was examined using the following linear regression model:

$$\text{Outsourcing accounting} = a1 + a2 \text{ trust} + a3 \text{ specificity of assets} + a4 \text{ uncertainty in the environment} + a5 \text{ uncertainty of behaviour} + a6 \text{ frequency}$$

When it comes to trust hypotheses was created that there is positive and significant relationship between trust in professional work of accountant (accounting agencies) and the outsourcing of accounting tasks. In other words, if there is more trust there will be more knowledge sharing and more will to outsource accounting to third parties. Based on the model and using statistical software SPSS from multiple linear regression two independent variables showed high coefficient of regression with outsourcing those are specificity of company's asset and the other one is trust (Tomasevic, 2018). In other words, trust has significant positive relationship with outsourcing of accounting and financial services. For each unit of increasing variable of trust the outsourcing of accounting and financial services was increased by 1,893. This was statistically relevant at level of 0,05.

### **Conclusion.**

Companies today often use third parties to carry out activities that they would normally have to perform themselves and which, as the areas of finance are significantly, are regulated by law. These outsourcing arrangements are specific and become very complex in area of knowledge and information sharing and protection. In the case of accounting outsourcing, the basic accounting functions are regulated by the law. The implementation of the law is monitored by an accounting/tax/financial authority. Outsourcing process then becomes much more complex in terms of regulation, as there is a division of responsibilities between enterprises and third entities, i.e. subcontractors who also become subject to the same regulation. Financial and accounting outsourcing is particularly prevalent today because subcontractors have:

1. accumulated a lot of knowledge from their key competencies
2. much of the key knowledge and competencies is by nature tacit

The results of a global company survey that was conducted in February 2015, and examining their existing level of outsourcing of basic accounting and financial services, as well as their plans to outsource these services in the future, the results showed that financial and accounting services are outsourced at a large scale. In less developed countries like in Latin America countries, as many as 55% of companies surveyed are outsourcing accounting and financial services (more than IT services). Outsourcing accounting and finance is also highly present in the United States 22%, more than in the European Union 19% (IT services are still mainly outsourced). Companies in Africa (13%), as well as companies from developing countries in the Asian-Pacific region (8%) are starting to see outsourcing finance and accounting as their long-term, i.e., strategic commitment.

In international literature, accounting outsourcing is also found under the broader concept of financial accounting outsourcing (FAO), and the jobs most often offset by this area are: the preparation of tax returns (for companies and individuals), bookkeeping services that include payroll and preparation of financial reports, auditing services, financial consulting and planning

Liberalization and development of knowledge transfer, communication, collaboration and new technology for sharing information is contributing to financial and accounting outsourcing. Although outsourcing process started with the expectation of cost reductions researchers like Wines, Windsor 2007 suggest that outsourcing creates additional costs associated with losing control. However, knowledge sharing and development of knowledge in financial outsourcing process and the flexibility that company achieves with outsourcing of accounting and financial services is more valued by the company nowadays. Accumulation of knowledge and new business models (with aggregation of specific knowledge in knowledge centres) have more influence on outsourcing decision than basic cost reduction.

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**MANAGEMENT DECISION-MAKING ON THE OUTSOURCING IMPLEMENTATION:  
METHODOLOGICAL GUIDELINES**

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**Abstract.** *The preconditions for a management situation that requires decisions on outsourcing have been investigated. Underdevelopment of the methodological guidelines concerning the substantiation of management decision-making on the implementation of outsourcing at the enterprise, which would take into account the financial and economic state of the enterprise, the expediency and its readiness for the activity based on outsourcing, has been proved. In the research, the following scientific approaches and methods have been used: analysis, synthesis, statistical, logical, system, and structural analysis, expert estimation, economic and mathematical modeling and integrated economic estimation to improve the methodological guidelines for the substantiation of management decision-making on the outsourcing implementation. The research scientific novelty is a comprehensive methodological approach to the substantiation of management decision-making on the outsourcing implementation, the main guidelines of which have been summarized in the corresponding model. The integral indicator of the outsourcing activation at the enterprise has been calculated. The proposed methodological guidelines have been brought to the level of specific methods and practical recommendations and can be used in the practical activity of enterprises that use outsourcing in their economic activity.*

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**Keywords:** *outsourcing, business processes, enterprise management, management decision-making, substantiation of decision-making.*

**Introduction.**

These days Ukrainian enterprises operate in difficult economic conditions that have arisen in the midst of the constant growth of raw material costs, tariffs on energy resources, the difficult situation in the east, lack of stability in the monetary and financial sector, unfavorable investment climate, and ineffective economic policy of Ukraine. As a result, most enterprises operate on the verge of survival. Amid a complex situation, the competitive struggle with foreign producers is aggravated, being accompanied by a narrowing of the Ukrainian market. The use of classical management tools at enterprises does not give positive results.

For the efficient management of Ukrainian production enterprises in a transformational economy, it is necessary to continuously improve existing management methods and develop new ones. An alternative option is adaptation and application of methods and management tools that have been recognized in the foreign practice and can be used taking into account the features of the national economy. One of these tools is the use of outsourcing in the management of business processes of the enterprise.

### **Analysis of research and problem statement.**

Theoretical, methodological and practical aspects of outsourcing management of business processes of the enterprise have been reflected in the works of the following scientists: Anderson E. and Trinkle B. [1]; Arlbjorn J. S. and Haug A. [2]; Didukh O.V. [3]; Halvey J. K. and Melby B. M.[4]; Heric M. and Singh B. [5]; Melvor R. [6]; Rudaia I.L. [7]; Shtub A. and Karni R. [8]; Willcocks L. P. and Craig A. and others.

The analysis of scientific works related to the mentioned topic indicates that certain issues of the enterprise's business processes outsourcing remain open, in particular, to substantiate the management decision-making on the implementation of outsourcing of the enterprise's business processes as a tool for improving the economic activity efficiency. The presented scientific results of the research are based on the synthesis of the findings obtained by the Ukrainian and foreign scientists, and used to develop a comprehensive methodological approach and a corresponding model of justification of the management decision-making on the implementation of the enterprise's business processes outsourcing.

*The aim of the article* is to develop a methodical approach to substantiating management decision-making on the implementation of business processes outsourcing as a tool for improving the enterprise efficiency in the modern conditions of management and strengthening its competitive position in the Ukrainian and international markets.

### **Results.**

In the article, outsourcing is considered to be a tool for managing the enterprise's business processes, which aims to increase efficiency of the enterprise's financial and economic activity through the transfer of non-core business processes to the outsourcing enterprise, which assumes the responsibility for their implementation in favor of the enterprise-customer.

The rapid formation and development of outsourcing as an entrepreneurial activity has been facilitated by the fact that companies using outsourcing services receive a number of advantages, namely: ability to focus on core activities; ensuring the proper quality of non-core processes; possibility of realization of diversification strategy at the expense of the released potential; redistribution and risk reduction; cost savings; access to new technologies and knowledge; optimization of the control system; increase of investment attractiveness, etc.

The management decision to use outsourcing as a tool for improving the enterprise's economic activity efficiency is a multifaceted and complex process that requires the involvement of human, financial and information resources and the development of a methodological approach to substantiate decision-making on outsourcing.

The methodical approach to substantiating decision-making on the enterprise's business processes outsourcing, proposed in the article, involves analysis of the prerequisites for the emergence of a management situation and the need for decision-making; choosing a business

process and justifying the expediency of its transfer to outsourcing; assessment of the company's readiness to use outsourcing; assessment of the outsourcing activation level; forecast changes in the enterprise profitability after the outsourcing activation.

The first step in justifying the decision on the need for using outsourcing is to analyze the enterprise environment in order to identify threats and opportunities for the enterprise and develop a strategy for achieving goals. At this stage, the analysis of economic activity and a number of works on the description and analysis of the business model of the enterprise and assessment of the value of individual business processes are carried out, an alternative way of improving the efficiency of the enterprise is being assessed, where different options can be considered along with outsourcing; among them are benchmarking, insourcing, co-sourcing, crowdsourcing, crowdfunding, reengineering, outplacement, kaizen, subcontracting, externalization and others.

Based on the analysis results of the management situation, which requires management decision-making to find the ways to increase the enterprise efficiency, the business processes potentially possible for outsourcing are identified with the definition of the outsourcing type – full, partial or joint.

With the aim of developing a methodological approach to substantiating management decision-making to outsource certain enterprise's business processes, a number of criteria have been identified that determine the expediency of outsourcing for management. By means of expert evaluation, the most significant of them have been identified: 1) density of connection with the main business process and access to commercial secrecy of the enterprise; 2) cost savings due to business process outsourcing; 3) market availability of the appropriate spectrum outsourcing agents of the offered services, possibilities to satisfy the customer needs; 4) positive practice of outsourcing of enterprises' specific business processes; 5) availability of the outsourcing agent's experience in a particular field; 6) outsourcing services quality.

Based on the selected criteria, mathematical calculation of the expediency of business processes outsourcing is proposed:

$$d = \sum_{i=1}^6 I_i \cdot k_i \quad (1)$$

where  $d$  – the expediency of business processes outsourcing;

$I_i$  – quantitative assessment of the  $i^{\text{th}}$  criterion;

$k_i$  – weight coefficient of the  $i^{\text{th}}$  criterion;

$n$  – number of criteria ( $n=6$ ).

For a quantitative assessment of the expediency criteria, a four-point scale has been proposed: 0.25 / 0.50 / 0.75 / 1.00 [9].

The methodical approach to evaluating the expediency of business processes outsourcing involves determining the importance of the proposed criteria. The evaluation of the gravity of the criteria is proposed by the expert estimation. Each criterion is evaluated in the range from 0 to 100. Zero is assigned to the criterion that is of no importance in the expert's opinion, and 100 points is the criterion that plays the most important role. An expert can provide the same number of points with several criteria if he considers them to be equivalent. When processing the materials of the expert estimation of the criteria relative weight, it is proposed to use the method of rank correlation. To do this, the data obtained by grades are appropriately ranked in descending order, thus obtaining

grades of ranks. If the expert estimated the two criteria as being equivalent, then the ranks obtained are bound (identical). Under this condition, each of the criteria is given an average rank, calculated from the corresponding numbers of the natural series. On the basis of the survey data, a matrix of points and a matrix of ranks are created. Then the average rank and the average value in points for each criterion are calculated. The greater the value of the average is, the higher the criterion relative importance is.

When assessing the importance of individual criteria, it is necessary to determine the frequency index of the maximum possible estimates (100 points) obtained by each criterion. This indicator can take values from 0 to 1. The importance of a certain criterion grows with increasing frequency of the maximum possible estimates from 0 to 1.

The estimates put by experts on specific criteria may vary, so it is recommended to calculate the magnitude of the variation. It is also recommended to calculate the activity of experts for each criterion using the activity factor. The statistical processing of expert assessments involves assessing the degree of consistency of expert opinions. The degree of coherence is the concordance coefficient.

The next step in implementing the proposed methodological approach to justifying management decision-making on transferring certain business processes to outsourcing agents is the analytical justification of the benefits and risk assessment associated with outsourcing. It is recommended to conduct a risk assessment based on expert assessments using the classical mathematical tools for forecasting management situations for a short (up to 1 year) period. Considering the current conditions of high-volatility enterprises, predictive results for a longer period will have a low probability.

An important step in the decision-making process for outsourcing is the assessment of the company's readiness to transfer certain business processes to the outsourcing agent. The basis of the methodology for assessing the readiness of the enterprise to outsource is the criteria proposed by the authors, namely: 1) availability of previous positive experience of outsourcing; 2) transparency of the enterprise activity; 3) availability of an effective system of monitoring of the environment; 4) main business processes are identified and described; 5) content of auxiliary business processes is identified and described; 6) availability of development strategy; 7) presence of qualified change management personnel; 8) availability of effective management system; 9) presence of a multi-level quality management system; 10) availability of high-quality and effective legal support; 11) innovative direction of the enterprise development; 12) availability of a corporate social responsibility system.

To assess the company's readiness for the implementation of outsourcing, it is suggested for experts to assess the demonstration degree of each criterion in the enterprise's activity by the following scale:

- «5» – if the criterion is completely demonstrated;
- «4» – if the criterion is not completely demonstrated;
- «3» – if the criterion is weakly demonstrated;
- «2» – if the criterion is not demonstrated.

The average assessment of the degree of the company's readiness to the outsourcing implementation is proposed to be determined by the formula:

$$S = \frac{1}{m \cdot n} \sum_{i=1}^m k_i \sum_{j=1}^n S_{ij} \quad (2)$$

where  $S$  – the company’s readiness for the outsourcing implementation;

$S_{ij}$  –  $j^{\text{th}}$  expert’s score of the demonstration level of the  $i^{\text{th}}$  criterion;

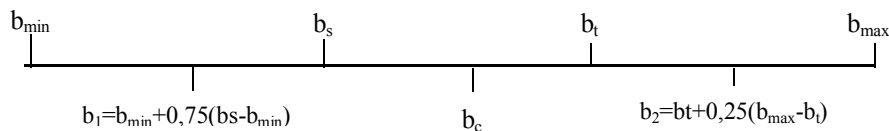
$n$  – a number of experts;

$m$  – a number of considered criteria;

$k_i$  – the coefficient of importance of the  $i^{\text{th}}$  criterion, determined by the rule:

$$k_i = \begin{cases} 1 - \text{if the } i - \text{th criterion is "less important",} \\ 2 - \text{if the } i - \text{th criterion is "important",} \\ 3 - \text{if the } i - \text{th criterion is "very important"} \end{cases} \quad (3)$$

To determine the company's readiness to implement outsourcing on the basis of a certain average score, the appropriate scale is proposed (Fig. 1).



**Fig. 1. The scale of the company’s readiness level to implement outsourcing**

Source: compiled by the author according to the materials [10]

The character of the enterprise’s readiness level to implement outsourcing is determined as following:

– *very high*, if the average score falls in the interval  $(b_{max}; b_t + 0,25(b_{max} - b_t))$ , where  $b_{max}$  – average score which corresponds to the case of full compliance of all 12 criteria with the optimal state – «5»,  $b_t$  average score, which corresponds to the case of not full compliance of all 12 criteria with the optimal state – «4»;

– *high*, if the average score falls in the interval  $(b_c; b_t + 0,25(b_{max} - b_t))$ , where  $b_c = \frac{b_{min} + b_{max}}{2}$ ;

– *moderate*, if the received average score falls in the interval  $(b_s; b_{min} + 0,75(b_s - b_{min}))$ , where  $b_{min}$  – average score, which corresponds to the case of complete non-compliance of all 12 criteria with the optimal state – «2»,  $b_s$  – average score which corresponds to the case of poor compliance of all 12 criteria with the optimal state – «3»;

– *low*, if the received average score falls in the interval  $(b_{min}; b_{min} + 0,75(b_s - b_{min}))$ .

An integral indicator has been calculated that determines the level of necessary activation of outsourcing at the enterprise taking into account the author's methodical approaches mentioned above as for the enterprise’s expediency and readiness to outsource. The indicator shows how actively the enterprise can implement the outsourcing of the enterprise’s business processes, taking into account the expediency of such a transfer, the willingness of the enterprise to implement outsourcing and the financial state of the enterprise. The basis of the calculation of the activation rate was the distance method. The distance method refers to the methods of integrated assessment and is aimed to assess the performance of a particular enterprise compared with the standard for which it strives.

The method is based on determining the proximity degree of the objects being studied to the object acting as a reference one. Objects that are closest to the standard get the best estimate. The conditional object with the maximum estimates by all indicators is taken as the standard. The complex estimation is calculated by the formula of the Euclidean distance from the reference to the specific value of the indicators of the objects under study. When the distance elements are non-uniform units of indicators, the normalization is conducted by dividing the values of the indicators by the value of the indicator of the reference object.

For each object, the distance to the standard ( $K_j$ ) is calculated by the formula:

$$K_j = \left[ \sum_{i=1}^n \left(1 - \frac{x_{ij}}{x_{j,n+1}}\right)^2 \right]^{\frac{1}{2}} \quad (3)$$

where,  $x_{ij}$  –  $i^{\text{th}}$  indicator of  $j^{\text{th}}$  object;

$x_{j,n+1}$  – reference value of  $i^{\text{th}}$  indicator of  $j^{\text{th}}$  object.

By ranking values  $K_j$  for growth, we get a comprehensive assessment of the priority of objects.

To calculate the activation of outsourcing at the enterprise, the author proposed the following formula:

$$O_a = \sqrt{\left(1 - \frac{fs_i}{fs_{max}}\right)^2 + \left(1 - \frac{d_i}{d_{max}}\right)^2 + \left(1 - \frac{s_i}{s_{max}}\right)^2}, \quad (4)$$

where,  $O_a$  – integral indicator of outsourcing activation at the enterprise;

$fs_i, fs_{max}$  – actual/reference enterprise's financial sustainability is calculated through prediction of bankruptcy by means of a universal discriminatory function;

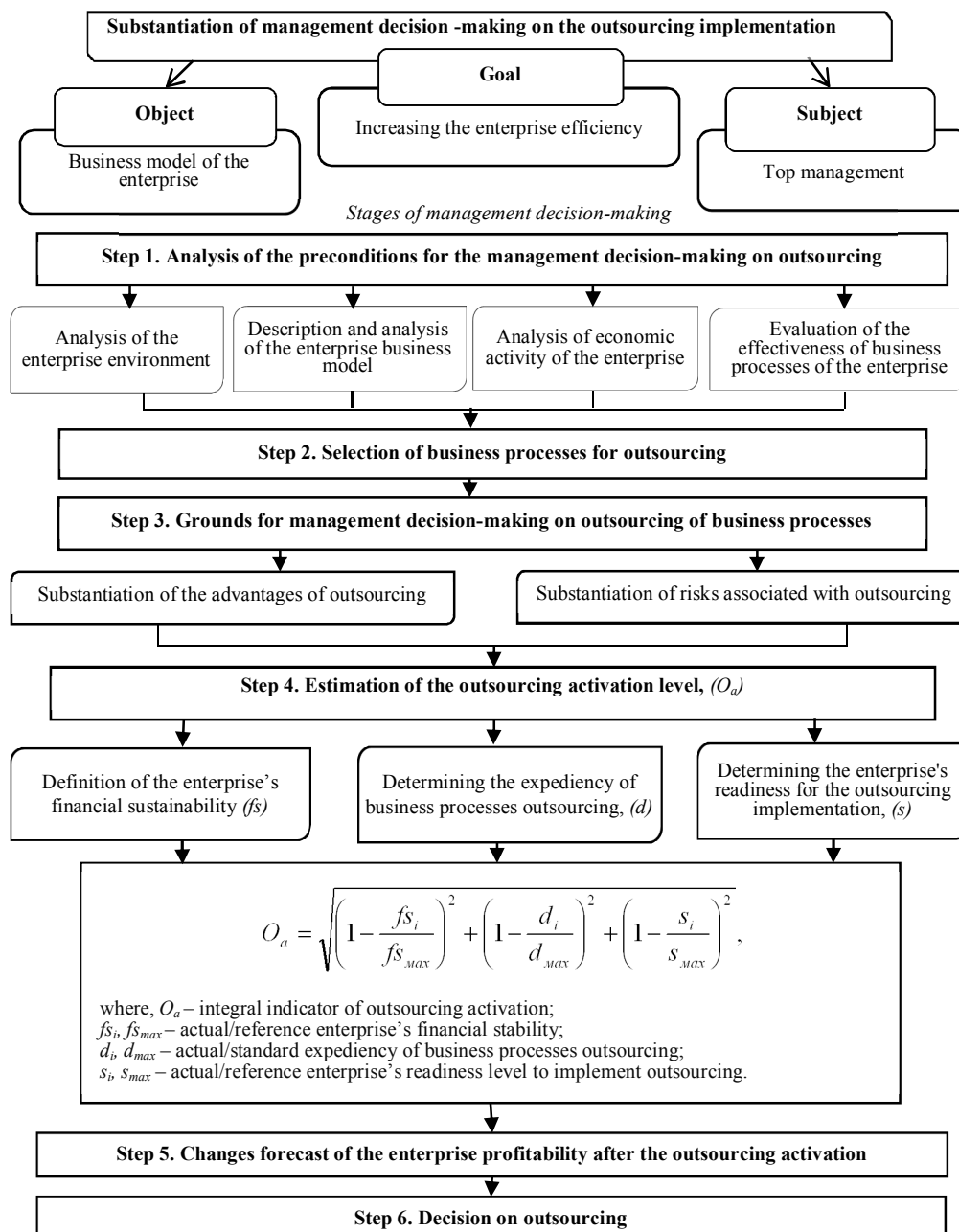
$d_i, d_{max}$  – actual/reference expediency of business processes outsourcing;

$s_i, s_{max}$  – actual/reference enterprise's readiness level for the outsourcing implementation.

The closer the calculated integral value approaches "0", the closer to the benchmark values of financial sustainability the enterprise is, the expediency of business processes outsourcing, and the company's readiness to implement outsourcing with minimal risks, and therefore all the necessary conditions for the outsourcing implementation at the enterprise are fulfilled.

The general result of the presented research is a complex model of the substantiation for management decision-making on the outsourcing implementation of the enterprise's business processes (Fig. 2).

The integrated model accumulates new scientific and methodological provisions for evaluating the readiness, expediency and outsourcing activation level of business processes that make up the scientific novelty of the proposed methodological approach to substantiating the management decision-making on the outsourcing implementation at the enterprise. The model is universal and can be used in the practical activities of any enterprise. The use of the proposed integrated methodological approach helps to improve the process of making management decisions on the outsourcing implementation and improving the efficiency of the enterprise as a whole.

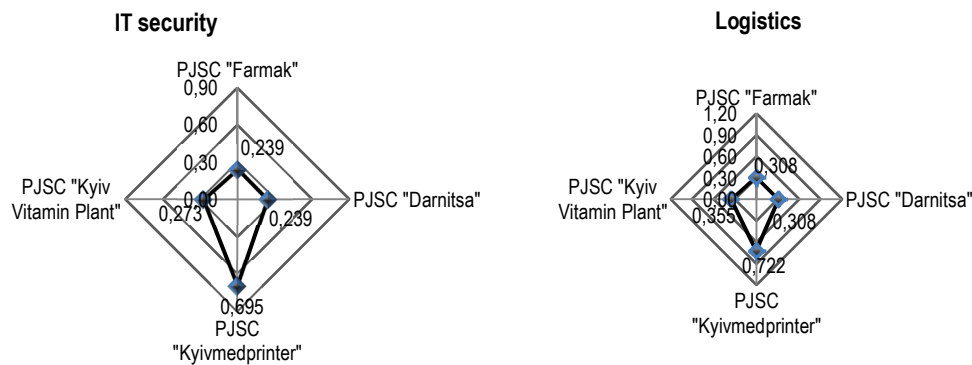


**Fig. 2. Integrated model of the substantiation of management decision-making on the implementation of the enterprise's business processes outsourcing**

Source: own elaboration

### Discussions.

To test the proposed methodology for substantiation of the management decision-making on the implementation of the individual enterprise's business processes outsourcing, the pharmaceutical industry was selected, namely: PJSC Farmak, PJSC Kyivmedprinter, PJSC Darnitsa, PJSC Kyiv Vitamin Plant, on the basis of which empirical studies have been conducted. The pharmaceutical enterprises' business processes such as IT security, logistics have been selected by expert assessment as the most appropriate for outsourcing. The results of calculating the integral indicator of outsourcing activation in the above-mentioned pharmaceutical companies are presented in Fig. 3.



**Fig. 3. The calculation results of the integral indicator of outsourcing activation in pharmaceutical enterprises' business processes: IT security, logistics**

*Source:* own elaboration

According to the calculations, it is possible to conclude that there is a very high ( $0 < O_a < 0.35$ ) readiness to activate the outsourcing of PJSC Farmak, PJSC Kyivmedprinter, PJSC Darnitsa, PJSC Kyiv Vitamin Plant for all recommended for the transfer of business processes. At PJSC Kyivmedprinter, the activation of outsourcing for the business process of IT security is high ( $0.36 < O_a < 0.7$ ), for logistics it is moderate ( $0.71 < O_a < 1.0$ ). The high level of activation suggests that for the business processes outsourcing there are all the necessary conditions at the research objects: the availability of outsourcing readiness to provide a range of services, high quality of outsourcing services, the possibility of cost savings through outsourcing, the positive image of potential outsourcing, stability of the enterprise's financial condition, etc. Taking all these into account, these companies are recommended to implement the outsourcing of these business processes.

Thus, as the study result, it has been established that the outsourcing implementation of some business processes as a tool for improving the enterprise's activity efficiency is primarily intended to improve the implementation quality of certain business processes, in order to be able to focus on profile business processes. The task of reducing costs is not a priority, since enterprises with high indicators of financial and economic activity are ready to invest significant funds in long-term development, thus increasing the enterprise competitiveness. However, if the company's management main goal of the outsourcing implementation is to save the cost of performing certain business processes, it is recommended to conduct a cost analysis of the business processes recommended for outsourcing and compare the cost of the business process with independent and third-party implementation based on the results of the analysis to approve or reject the management decision on the use of outsourcing in the management of the enterprise's business processes.

### Conclusions.

The developed methodological regulations are brought to the level of concrete methods and practical recommendations aimed at solving the problem of assessing the enterprise feasibility and readiness to implement the outsourcing of business processes, which enables the management to decide on a number of criteria and the appropriate scale of assessment, on the adequacy of the company's potential for the use of outsourcing services and overcoming the risks associated with it.



The proposed comprehensive model of the management decision-making on the implementation of the enterprise's business processes outsourcing involves the following main steps: analysis of the prerequisites for the management decision-making on outsourcing; the choice of business processes for outsourcing; assessment of the enterprise's expediency and readiness to use outsourcing; evaluation of the outsourcing activation level ( $O_a$ ); forecasting the value of the integral indicator of outsourcing activation; decision-making on outsourcing. Methodological regulations are universal and can be used in the practical activity of enterprises that plan or already use outsourcing in their economic activity.

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## **INVESTMENT SECURITY OF UKRAINE: THE STATE AND PROSPECTS OF IMPROVEMENT**

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**Abstract.** *The article presents the views of scientists on the analysis of the concept of “investment security” and provides its own definition. It is determined that investment security is considered as an important prerequisite for the effective social and economic development of the state, region, and enterprise in the context of globalization processes. It is emphasized that investments, in particular, their size can be a determining factor for the development of an economy of any state, that is, with the help of the latter it is possible to determine certain economic dynamics, aimed at qualitative and quantitative transformations in the economy, while taking into account the level of security. Investment security has been proven to be part of economic security. It has been suggested that under the investment security one should understand the state of the economy, which allows attracting and using effectively the available resources, which in turn are protected from negative external and internal factors, which in turn satisfy the needs of the state economy. Ukraine's place in the world rankings is determined and their change is tracked. capital investments by types of economic activity, as well as sources of financing during 2017-2019 are analyzed and minimization.*

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**Keywords:** *investment, security, improvement, economy, effectively.*

### **Introduction.**

In today's market economy, underfunding of the economy of any country in the world can lead to negative consequences, in particular, the lack of funding for important sectors of the economy, which in turn fill the state budget. These negative dynamics are most affected by enterprises, because unable to fully pay taxes to the state budget, which in turn leads to the imbalance of the state's economy. In this way, Ukraine is no exception, as the current situation requires additional attraction of funds from investors. One of these additional financing options can be investments, which can be the catalyst for assistance to the Ukrainian economy. Before investing in a country's economy, an investor looks at the major economic indicators available in that country, observes the state's position in international rankings, and only then makes the decision to invest. In its turn, the Ukrainian economy must have certain safeguards for the protection of investments and investors, which may include proper regulatory framework, transparency of the economy, shading in the industries, etc.

To ensure the abovementioned processes, it is necessary to properly ensure the investment security of the state, as it is a component of economic security that has a direct impact on national security.

### **Problem Statement.**

Investment security is considered as an important prerequisite for the effective social and economic development of the state, region, enterprise in the context of globalization processes. Investment itself, in particular, its size can be a determining factor for the development of any country's economy. With the help of the latter, one can identify certain economic dynamics that are aimed at qualitative and quantitative transformations in the economy, taking into account the level of security. Investment security depends on the existing investment climate in Ukraine, as well as the proper and effective state regulation in the country. Problems of ensuring investment security are reflected in the works of such researchers as L. Akimova [11; 12], O. Baranovsky [1], L. Lipich [6], A. Meshcheryakov [7], L. Novikova [7], A. Poruchnyk [8], L. Savchuk [6], N. Tatarenko [8], V. Tomareva [9], O. Yurkevich [5].

### **Conceptual Models.**

However, the research of these scientists is in the field of definition of the conceptual and categorical apparatus, that is, defining the concept of "investment security" at the same time, not analyzing the main indicators that are inherent in determining the investment security, which determines the relevance of this research.

### **Purpose of the Study.**

The main purpose of the study is to analyze approaches to the interpretation of the concept of "investment security", as well as to examine the dynamics of the main indicators that characterize and determine the level of investment security. The main problem today is the complexity of assessing Ukraine's investment security, as there are different approaches to defining it.

### **Research Methods.**

The State Statistics Service of Ukraine for different time periods was used to study the main indicators of investment security. The following methods were used: benchmarking method: Ukraine's place in the world rankings, indicators of capital investments by types of economic activity for 2017-2019, capital investments by sources of financing for 2017-2019; abstract-logical method - for analytical generalization and formulation of conclusions.

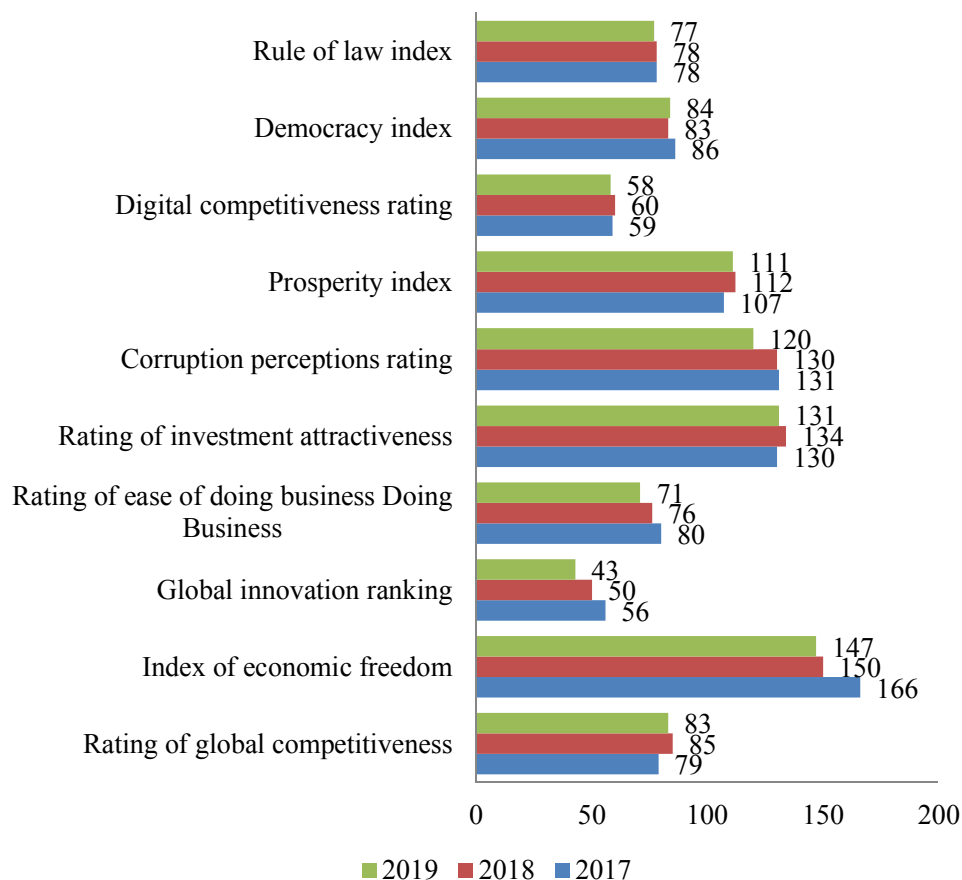
### **Findings.**

Today, an important aspect in defining investment security is first and foremost an awareness of the definition itself, since misunderstanding of the research may lead to inaccurate delineation and effective analysis. O. Yurkevich assures that investment security should be understood as protection of interests in the sphere of investment (growth of production, increase of its technical and technological level, prevention of moral and physical deterioration of fixed assets), which is ensured by creation of proper conditions for formation of investment resources and their efficient use [10, p. 405]. L. Lipich believes that investment security is a component of economic security and such a level of national and foreign investments (provided their optimal ratio), which is able to ensure long-term positive economic dynamics with adequate level of financing of scientific and technical sphere, creation of innovative infrastructure and adequate innovative infrastructure. Mechanisms [5, p. 28].

Researcher N. Tatarenko notes in his writings that investment security is an opportunity to accumulate resources or capital investments [7, p. 24]. Researchers A. Meshcheryakov and L. Novikov believe that investment security is the ratio between the size of the country's investments abroad and the received investments, which meets the needs of the domestic economy and maintains a positive balance of payments of the state [6, p. 24].

V. Tomareva assures that investment security is the ability of the economic system to accumulate, attract and use investment resources effectively to ensure the competitiveness of the state. [8, p. 5]. O. Baranovsky believes that investment security is an achievement of the level of investment, which allows to optimally meet the current investment needs of the national economy in terms of volume and structure, taking into account the efficient use and return of invested funds, the optimal ratio between the size of domestic and foreign investment, foreign investment in country and domestic abroad, maintaining a positive national balance of payments [1, p. 366]

So, investment security should be understood as the state of the economy, which allows attracting and using effectively available resources, which in turn are protected from negative external and internal factors, which in turn satisfy the needs of the state's economy. To determine the state of the economy of Ukraine, it is necessary to determine the place of Ukraine in the international ratings, which in turn allow us to characterize important aspects when deciding investors to invest in the economy of a country (Fig. 1).



**Fig.1. Ukraine's place in the world rankings**

Source: source-based author development [9]

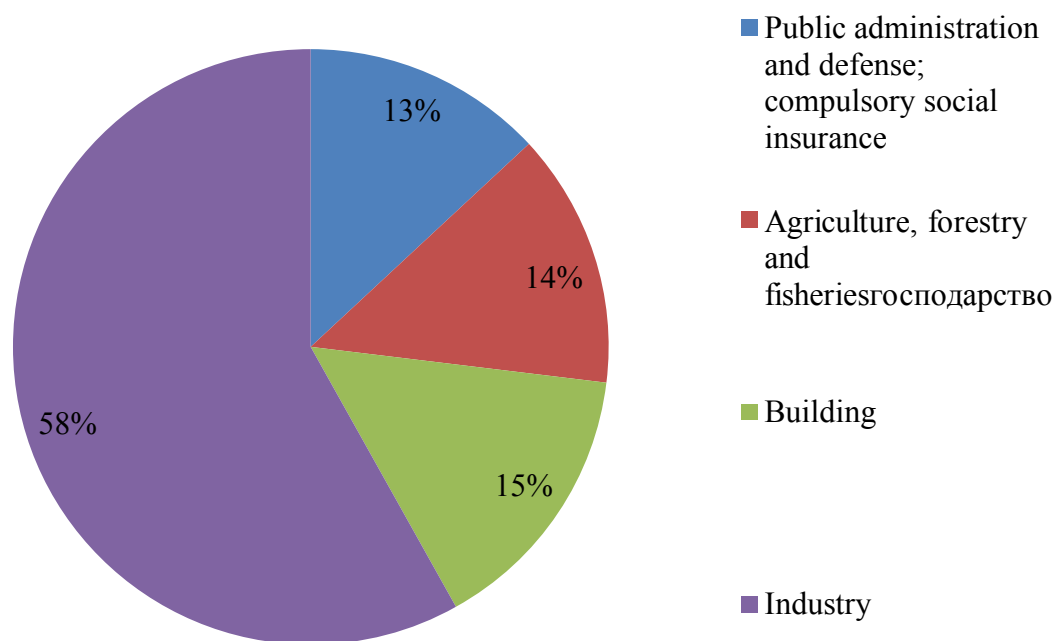
The fig. 1 below shows what Ukraine has improved its rankings on such positions as: Rule of Law Index, Digital Competitiveness Rating, Prosperity Index, Corruption Perception Rating, Investment Attractiveness Rating, Doing Business Ease of Doing, Global Innovation Rating, Global Freedom Index competitiveness, but has worsened in terms of democracy index. Perhaps one of the most interesting is Transparency International's Corruption Perception Rating, which is based on expert and business evaluations. 180 countries around the world are surveyed and public sector corruption is estimated. In 2018, the index indicated high levels of corruption in more than two-thirds of countries. The best indicators are in New Zealand and Denmark, the worst in Syria, South Sudan and Somalia. The average level of corruption in Western Europe. The worst regions are Sub-Saharan Africa, Eastern Europe and Central Asia. According to the published rating, Ukraine ranked 120th in 2019 (and in fact, in 2018). Last year, Ukraine ranked 130th. Five years ago, our country ranked 142nd. In determining the degree of investment security, it is advisable to determine the structure of investments in terms of types of economic activity, ie the direction of investment "Capital investment by type of economic activity" (Table 1).

**Table 1. Capital investment by type of economic activity for 2017-2019 years**

№	Types of economic activity	Years			Absolute deviation	
		2017	2018	2019	2018/ 2017	2019/ 2018
1.	Agriculture, forestry and fisheries	64243,3	66104,1	55254,2	1860,8	-10849,9
2.	Industry	143300,0	199896,0	231849,5	56596	31953,5
3.	Construction	52176,2	55993,9	59681,1	3817,7	3687,2
4.	Wholesale and retail trade; repair of motor vehicles and motorcycles	33664,8	51817,6	43510,4	18152,8	-8307,2
5.	Transport, warehousing, postal and courier activities	37943,5	50078,3	41371,9	12134,8	-8706,4
6.	Temporary accommodation and catering	2133,5	2675,1	2756,5	541,6	81,4
7.	Information and Telecommunications	18395,2	29884,9	20904,0	11489,7	-8980,9
8.	Financial and insurance activities	8055,3	10652,3	10887,7	2597	235,4
9.	Real estate transactions	22505,6	27556,8	24084,0	5051,2	-3472,8
10.	Professional, scientific and technical activities	7965,3	10798,2	11515,9	2832,9	717,7
11.	Administrative and support service activities	12747,3	11837,8	11171,4	-909,5	-666,4
12.	Public administration and defense; compulsory social insurance	32843,9	44597,8	52209,2	11753,9	7611,4
13.	Education	3492,5	4460,0	4851,3	967,5	391,3
14.	Health care and social assistance	6708,3	8138,8	9948,3	1430,5	1809,5
15.	Arts, sports, entertainment and recreation	1649,2	3663,2	3958,7	2014	295,5
16.	Provision of other services	637,6	571,6	494,5	-66	-77,1

Source: based on [2]

The table 1 below shows that over the 2017-2019 survey period, approximately 90% of all investments are from 8 of 16 economic activities: information and telecommunications, real estate, transportation, warehousing, postal and courier activities, wholesale and retail trade; repair of motor vehicles and motorcycles, public administration and defense; compulsory social insurance, agriculture, forestry and fisheries, construction, industry. In the process of ensuring the investment security of the state it is necessary to balance between the desire to increase the volume of attracted investments and the need to orient their inflow into mainly high-tech industries. The reorientation of investments from the raw material complex to the final sectors of the economy, in particular in the manufacturing and mechanical engineering sectors, will lead to the formation of a new territorial investment structure. Two-thirds of all investments are in the TOP-4 economy (Fig. 2).



**Fig.2. TOP-4 of the economy by capital investment in 2019 (%)**

*Source:* based authors development [3]

From the above figure shows TOP sectors of the economy in terms of capital investment include: public administration and defense; compulsory social insurance, agriculture, forestry and fisheries, construction, industry. In their ratio the largest share is: industry - 58%, construction - 15%, agriculture, forestry and fisheries - 14%, public administration and defense; compulsory social insurance - 13%. When considering the issue of investment security, it is necessary to consider capital investments by sources of financing - this will allow to determine at the expense of what funds the investments are made to a greater extent (Table 2). Table 2 indicates that during 2017-2019 the main source of financing of capital investments was the own funds of enterprises and organizations, which in 2017 amounted to UAH 310061.70 million, which is 69.14% as a percentage, in 2018 UAH 409585.50 million, ie 70.77%, and in 2019 this indicator amounted to UAH 397771.50 million. or 68.06% of the total.

**Table 2. Capital investments by sources of financing in 2017-2019 (million UAH)**

№	Sources of financing	Years			as a % of the total		
		2017	2018	2019	2017	2018	2019
1.	State budget funds	15295,2	22814,1	29536,7	3,41	3,94	5,05
2.	Local budget funds	41565,5	50355,5	56047,5	9,27	8,70	9,59
3.	Own funds of enterprises and organizations	310061,7	409585,5	397771,5	69,14	70,77	68,06
4.	Money from banks and other loans	29588,9	44825,4	40983,1	6,60	7,75	7,01
5.	Funds of foreign investors	6206,4	1795,5	3541,4	1,38	0,31	0,61
6.	Population funds for housing construction	32802,5	34645,7	32666,4	7,31	5,99	5,59
7.	Other sources of financing	12941,3	14704,7	23902,0	2,89	2,54	4,09
	<b>Total</b>	<b>448461,5</b>	<b>578726,4</b>	<b>584448,6</b>	<b>100</b>	<b>100</b>	<b>100</b>

*Source:* based authors development [4]

Other sources of financing remain the smallest source of financing during 2017-2019, ranging from 2-5%. The imbalance that has arisen in investment resources is that the dominance of own sources of financing of capital investments in our conditions is not so much an indication of the high level of financial capacity of economic entities, but rather the lack of developed basic and alternative mechanisms of transformation of national savings into national investments, that national investments. in turn, it limits the opportunities for an investment breakthrough, which jeopardizes the overall investment security of Ukraine.

Today there are a number of dangers and threats that have a negative impact on Ukraine's investment security [11; 12]. The main ones include:

- absence a clear investment strategy;
- corruption;
- shadowing and monopolizing the economic sectors;
- military aggression from Russia;
- limited access to financial resources;
- absence effective mechanisms that would transform the savings of the population into investments;
- lack of clear strategy for privatization of strategic enterprises;
- imperfect legislative and regulatory framework;
- high investment risks when investing in the Ukrainian economy according to the data of international rating agencies;
- political instability;
- instability of the banking system.

All of the above risks and threats lead to the following negative consequences, thereby reducing the sustainability and efficiency of the Ukrainian economy, namely:

- decrease investors' interest in investing in Ukrainian enterprises, which causes them to be underfunded, as well as financial health;

- decrease in investment activity in the middle of the country;
- orientation those sectors of the economy that are least risky, leading to under-financing of other sectors;
- environmental pollution directly depends on what technology the company uses in the manufacture of its products. That is, if the equipment and technologies are outdated, the latter cease to function normally, then the atmospheric emissions increase, leading to the possibility of an environmental disaster.

To address the above issues, as well as minimize the risks and threats that adversely affect Ukraine's investment security, the following steps should be taken to improve the latter:

- the de-shadowing and de-monopolization of Ukrainian industries;
- creation a clear investment strategy;
- creation proper conditions for investor interest;
- improvements regulatory framework;
- improving the investment insurance process;
- reorganization and improvement of the banking system of Ukraine;
- creation of market and economic conditions for investing reproduction of fixed assets, modernization and innovative accumulation of fixed capital;
- improvement of tax legislation on tax deductions;
- improvement of the real estate market;
- develop national and sectoral indicators of investment security;
- form comprehensive standards of investment security;
- stop Russian aggression.

### **Conclusions.**

Therefore, from the above study, it should be noted that investment security is an important factor for the effective functioning of the Ukrainian economy. Summarizing the above analytics, found that the main factors that reduce the level of investment security of the Ukrainian economy are insufficient gross accumulation; insufficient focus on investments in high-tech industries; reduction of the share of the value of the newly introduced fixed assets to the volume of capital investments; insufficient FDI in Ukraine, as well as their growth rate in comparison with the dynamics of economic growth; inability to start lending to the economy through the banking system; reducing the share of competitive markets.

Insufficient funding is a problem not only for the Ukrainian economy but also for the economies of other countries in the world. As Ukraine is now in the context of transformational changes, additional programs should be launched to ensure the investment security of Ukraine using new methods and instruments of economic direction. Quite often, analysts in their forecasts do not pay sufficient attention to any particular economic indicators, because at the time of the analysis indicators not found threatening field, indicators do not reach their critical values, but these conclusions are incorrect. If, analyzing certain indicators that affect the investment security of Ukraine, it is revealed that this indicator is close to its critical value, appropriate actions should be taken immediately to prevent the negative impact of this indicator on the entire system as a whole.



The main problems and threats that have a negative impact on the investment security of Ukraine are identified, and ways to minimize them are proposed. When developing a new investment strategy, it is necessary to take into account the above ways of minimizing risks and threats that may have a negative impact on key indicators of investment security.

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**SOCIALLY DANGEROUS CONSEQUENCES OF CRIMES AGAINST ENVIRONMENT:  
PROBLEMS OF LEGAL EVALUATION**

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**Abstract.** *Over extended period a human being negative influence on environment, notable increase of anthropogenic effect has been observed. Purpose of this article is analysis of ecological safety situation in several regions of Ukraine and assessment of socially dangerous consequences in crimes against environment. Dialectic, logic, normative and system analysis methods have been used in this research. A study of ecological safety situation in certain regions of Ukraine has been made. Legal drawbacks concerning possibility of applying of criminal responsibility stipulated by Art. 236 of the Criminal Code of Ukraine have been unmasked. It has been found that effective state regulation of ecological safety on regional level is impossible without studying and maximum applying of positive foreign experience in this sphere, development of measures to adapt state regulation of ecological safety in Ukraine to the European Union standards, mechanisms of ecological safety of countries that are well on way in this direction. To increase effectiveness of application of norms concerning criminal responsibility for crimes against environment it is reasonable to make interpretation of certain socially dangerous consequences in crimes against environment.*

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**Keywords:** *ecological safety, regions, criminal responsibility, environmental protection, socially dangerous consequences.*

**Introduction**

Execution of the Association Agreement between Ukraine and the European Union in 2014 substantially mainstreamed the issues related to establishment of cooperation in the area of environmental protection, optimization of conservation activity of each party (in particular, the field of environmental management), integration of environmental policy in other spheres of state functioning.

After proclamation of its independence Ukraine as a new state eventually revealed an unfortunate heritage – diverse range of environmental problems. The largest one is the aftermath of the Chernobyl disaster, consequences of which according to experts are of global significance and will keep its impact on the planet's environment for many decades.

Therefore, current generation (together with the coming) must take care and protect the environment in order to minimize the potential negative influence on our children and grandchildren from adverse (or even catastrophic) results of any environmental negligence at the local, regional or global levels, as well as widely implement preventive measures to avoid environmental crimes.

The analysis of certain crime indicators in the environmental area demonstrates that Ukraine is in the top-list of states with the highest level of plowed lands, water resources consumption, deforestation comparing to European countries. Approximately 15% of Ukrainian territory with population of more than 10 million people is currently in critical ecological condition, according to data presented in annual statistical digests "Environment of Ukraine". Emission of pollutants into the atmosphere has recently amounted up to more than 130 kg per each Ukrainian citizen – several times higher than in the developed countries of the world.

All of the abovementioned proves that any available legal prohibitions simply cannot guarantee that constitutional rights of citizens to a safe and healthy environment are fully exercised. Statistical data on the amount of environmental crimes in Ukraine indicate that its share in the overall crime structure is consistently insignificant and reaches approximately 0.3%. Out of all criminal proceedings in this category, considered by Ukrainian courts, almost 57% relate to investigation of illegal logging, 27% - illegal fishing, animal or other aquatic cropping, 11.5% - violation of the rules for the protection of mineral resources, 2.5% - illegal hunting. Only 2% account for crimes connected with the environmental pollution which may potentially put human life and health under extreme risk. Most of the articles contained in section VIII "Environmental Crimes" of the Criminal Code are not applicable in full extent due to the valuating concepts used to indicate the corpus delicti of the analyzed offence types [7].

Taking this into account, *the aim of this article* is to analyze the environmental safety level in selected Ukrainian regions and assess the socially dangerous consequences of crimes against environment.

### **Environmental safety of Ukrainian regions.**

Ukraine's progression towards European integration requires an active participation in the international community's activities aimed to prevent and reduce the negative effects of environmental threats to regional security, introduce a risk-based approach increasing the efficiency and effectiveness of the state system functioning to protect population and territories from any threats and avoid emergency situations, use of best foreign practices in the area of environmental safety.

The current environmental situation in some regions of Ukraine can be characterized with the word "crisis". Emissions of hazardous substances in the ecosystem exceed established standards, production management does not meet domestic and international standards of environmental protection, environmental turbulence adversely affects people's health, workers in particular – it eventually leads to disorganized labor market functioning. Ukraine also suffers from sharp decline in biodiversity, degradation of land resources, woodland destruction, and accumulation of an unprecedented waste amount, lack of water resources and low level of citizens' environmental awareness. The current system of control, according to environmental safety indicators in Ukraine, demonstrates its inefficiency, the methodology used to assess the environmental threats is outdated.

Each region is a complex socio-economic and environmental system – its functioning is characterized by an unstable balance shaped by the influence of a large number of political, economic, and environmental factors. A peculiar feature of this condition is the rapid emergence and development of economic and environmental crises stimulated by external disturbances because of the region's inability to mitigate relevant destabilizing effects. Given that Ukrainian economy is export-oriented with a predominant focus on the extraction and processing of mineral resources in large volumes, which in general leads to significant pollution and deterioration of the air, land, water resources, many regions may potentially slide into unstable state due to the abovementioned environmental influence. As A. Tkachuk [13] notes, in 2016–2018 clear trend for pollutant minimization has been traced. Take as an instance Donetsk region. If the data collected in 2018 and 2016 is compared, then the total volume decreased up to 191,2 thousands of tons. But in two regions – Ivano-Frankivsk and Kyiv – the trend is opposite (2018 compared to 2016-2017). Also researcher presents interesting information on emissions of air pollutants from stationary sources [13].

**Table 1. Stationary sources of ambient air contamination (thousands of tons)**

	2016	2017	2018
Ukraine	3078,1	2584,9	2508,3
Donetsk region	981,4	784,8	790,2
Dnipropetrovsk region	833,0	657,3	614,3
Ivano-Frankivsk region	196,7	198,3	221,4
Lviv region	103,1	109,1	106,7
Kharkiv region	100,2	45,0	44,7
Kyiv region	98,2	48,2	81,3
Mykolaiv region	13,9	14,2	13,1

*Source:* Data given in the Chart 1 is provided by [13].

Figures presented above confirm that, despite certain decline in production, the level of air pollution in large cities and industrial centers remains extremely high. As a result, almost 70% of Ukraine's population resides in territories with polluted air which condition does not comply with the hygiene standards. However, the issue of the risk degree in the face of the continuous long-term exposure to harmful environmental factors (with regard to population in large cities with various industrial profiles) remains open.

Another problem is with the land resources. Current processing algorithms and approaches used in Ukraine do not meet the requirements of rational resource management, and the state is close to critical. Water and wind erosion have affected about 57% of Ukraine's territory; more than 12% of the area is flooded. Based on numerous criteria, about 20% of the state's land is contaminated. Almost 23,000 cases of landslides are recorded annually. Abrasion destroys up to 60% of the coast of the seas (Azov and Black) and 41% of the Dnipro reservoirs. More than 150,000 hectares of land have been damaged as a result of mining and other activities. Karstification is intensifying each year both in underground and surface spots (almost 27 000 of cases recorded) [11]. Events occurring in the East of Ukraine have become a particular factor that multiplied the environmental problems. Due to military actions, destroyed infrastructure of environmentally hazardous enterprises, located in the temporarily occupied territories, seriously disturbed the ecological balance which led to dangerous environmental transformations, caused damage to health and put the safety of citizens' lives under risk.

The main current threats identified in some areas of Donetsk and Luhansk regions where state power bodies do not perform, their duties are: flooded mines and risks related to toxic mine waters (surface discharge, mixing with subsoil water, transfer to Siverskyi Donets river and the Sea of Azov; shutdown of treatment facilities and damage inflicted to toxic and radioactive waste storage facilities; ambient air and soil contamination by chemical products due to ammunition explosions; damage to the territories of the nature reserve fund; destruction of landscapes and vegetation due to the excessive use of military equipment and construction of defensive structures; destruction of large woodland areas as a result of fires and uncontrolled deforestation; mining as a key reason of land unusability.

Results of research launched by M. Naumova and D. Plekhatskyi to study the environmental condition in Ukrainian regions allowed authors to divide these into four groups – in particular, the first group included Kharkiv, Donetsk, Lviv regions; these territories are characterized with relative environmental balance between the pollution level and countermeasures to minimize the hazardous effect. Second group comprises Rivne, Luhansk, Volyn, Chernivtsi, Kyiv, Zaporizhia, Khmelnytskyi, Ivano-Frankivsk, Zakarpattia, Zhytomyr, and Kherson: measures applied to ensure adequate environmental protection simply cannot provide full coverage of the total pollution volume but situation is still not considered to be critical. Ternopil, Odessa, Mykolaiv, Vinnytsia and Cherkasy regions are in the third group; level of damage inflicted to ecosystem considerably exceeds the number of measures aimed to establish the environmental balance in the region; therefore, these require expansion. Fourth group includes regions on the verge of ecological crisis, striving for the prioritized intervention due to insufficient number of protective measures capable of stabilizing the regional environment [9, pp. 98-99].

In order to conclude it must be noted that regional differences in social and economic development process lead to uneven environmental footprint. For any developed state implementation of relevant environmental stimuli system is a crucial component of ecological safety. The most popular ones currently are compulsive (fee-based) and contractual models of such stimuli. The former is widely used in the USA, based on fines, orders on activity termination and other administrative measures. All accumulated funds are spent on environmental needs – it allows to reach balance in the «pollution – punishment - remedy» system [3, p. 148]. Accordingly, it is feasible to study the peculiarities of criminal liability for crimes against environment, namely to analyze the socially dangerous consequences.

### **Socially dangerous consequences in crimes against environment as a result of damage inflicted to environmental safety.**

Taking into account the extreme importance of environmental influence on development and existence of a healthy society, the Constitution of Ukraine guarantees the right of citizens to environmental safety, ensured by a complex of legal, economic, technological and humanitarian factors. The backbone standards of environmental behavior are enshrined by the state in legislative acts and become binding for implementation and observance by legal norms.

The need to enshrine legal protection of environment in domestic criminal legislation is also stipulated by commitments taken by Ukraine as a party of international legal relations aimed at protection of global environmental safety. These commitments arise, for example, from the Vienna Convention for the Protection of the Ozone Layer of March 22, 1985, Protocol concerning the

Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes to Convention on Long-Range Transboundary Air Pollution (1979) which was joined by Ukraine on March 3, 1989, Convention on the Conservation of Migratory Species of Wild Animals joined by Ukraine on March 19, 1999, Convention on Biological Diversity, ratified by the Law of Ukraine on November 29, 1994 etc.

Chapter VIII of the Special Part of Criminal Code of Ukraine contains provisions related to crimes against environment. Criminal law theory rightfully defines this phenomenon as «ecological» crime – the aggregate of crimes and persons committing it and violating the rules and legal norms aimed to protect the environment [2, p. 111]. This refers to illegal use of natural objects or any negative influence on them which causes damage to environmental safety.

Crimes against environment create real threat not only to nature but also to national security. These crimes may be characterized by the following basic features: 1) creating real and imminent threat to natural resources, human life and health; 2) present an aggregate of criminal manifestations with negative impact on environment and specific ecological areas; 3) are a result of irrational and uncontrolled use of natural resources; 4) are reflected as degraded environmental awareness.

It must be noted that there is a truly small number of provisions in the Special Part of the Criminal Code of Ukraine indicating the consequences clearly; sometimes it is absolutely impossible to envisage all of them in legal norms of criminal legislation. At the same time norms regulating the punishment for crimes against environment are one of the most complicated legal constructions – its dispositions usually stipulate a couple of alternative actions and consequences in the body of crime with additional classifying features, embrangling its practical application.

Generic object of crimes under Articles 236-254 of the Criminal Code of Ukraine is presented by social relations arising in the course of utilization of certain resource types, natural objects, maintaining order while affecting the environment in specific way, ensuring the environmental safety of population and territories in the process of infrastructure operation (industrial and other enterprises, installations, facilities and other types of manufacturing activity).

Having analyzed Chapter VIII of Special Part of the Criminal Code of Ukraine, it is possible to state that legislator outlines the following consequences:

- loss of human's life – Articles 236, 237, Article 238 (2), Article 239-1 (3), Article 240 (4), Article 241 (2), Article 245 (2), Article 252 (2) of the Criminal Code of Ukraine;
- loss of human's life or disease – Article 242 (2), Article 243 (2) of the Criminal Code of Ukraine;
- posing a threat to human life/health or environment – Article 239 (1, 2), Article 241 (1), Article 242 (1) of the Criminal Code of Ukraine;
- posing threat to existence of living sea growth or human life/health – Article 244 (1) of the Criminal Code of Ukraine;
- threat of extreme technological emergencies or environmental disasters – Article 253 (2) of the Criminal Code of Ukraine;
- threat to human life/health or living sea growth or obstructing the legal activities related to use of sea resources – Article 243 (1) of the Criminal Code of Ukraine;
- epizootic distribution – Article 251 of the Criminal Code of Ukraine;
- environmental pollution (vast territories) – Article 236 of the Criminal Code of Ukraine;

- mass diseases – Article 239 (2), Article 240 (4) of the Criminal Code of Ukraine;
- mass mortality of animals or plants – Article 239-1 (3), Article 240 (3), Article 242 (2), Article 243 (2) of the Criminal Code of Ukraine;
- mass animal mortality – Article 245 (2) of the Criminal Code of Ukraine;
- mass human fatality or disease – Article 253 (2) of the Criminal Code of Ukraine;
- continued reduction or loss of fertility by the soil, its decreased agricultural value, humus layer erosion, soil structure disturbance – Article 254 (1) of the Criminal Code of Ukraine;
- considerable damage – Article 244 (1), Article 246 (1), Article 248 (1), Article 249 (1),
- large-scale material damage – Article 239-1 (2) of the Criminal Code of Ukraine;
- grave consequences – Article 239-2 (3), Article 246 (4), Article 247, Article 254 (4) of the Criminal Code of Ukraine;
- other grave consequences – Articles 236, 237, Article 239 (2), Article 239-1 (3), Article 240 (4), Article 241 (2), Article 242 (2), Article 243 (2), Article 245 (2), Article 251, Article 252 (2), Article 253 (2) of the Criminal Code of Ukraine.

Concluding the abovementioned, it is possible to assume that the mandatory feature of two essential (Articles 236 and 237 of the Criminal Code of Ukraine), nine classifying (part 2 of Articles 238, 239, 240-243, 245, 253 of the Criminal Code of Ukraine) and one specially classifying aggravations (Article 239-1 (3) of the Criminal Code of Ukraine), according to the law, is loss of human life, four essential (Article 244 (1), Article 246 (1), Article 248 (1), Article 249 (1) of the Criminal Code of Ukraine) – considerable damage, four essential (Articles 236, 237, 247, 251) and nine qualifying (part 2 of Articles 238-243, 245, 252, 253 of the Criminal Code of Ukraine) – other grave consequences, one specially classifying (Article 239-2 (3) of the Criminal Code of Ukraine) – grave consequences, seven essential (Articles 239, 239-1, 240-244, 253 of the Criminal Code of Ukraine) – posing threat to human life and health [6, p. 47]. It must be stressed that Article 240-1 «Illegal extraction, sale, purchase, transfer, transportation, processing of amber» and Article 250 «Carrying out explosive works with violation of rules regarding fish protection» of the Criminal Code of Ukraine do not stipulate any socially dangerous consequences resulting from socially dangerous actions. If a socially dangerous consequence of environmental crime itself poses real threat (for example, causing any harm to human life or health, material (property) harm or harm to environmental objects), the law enforcement is able to determine the scale and characteristics of such consequences. Instead, in case of socially dangerous consequences presented in the form of a threat (danger) to inflict harm to the object of criminal defence there is only a possibility that such object may be harmed. Still certain doubts exist concerning whether it is reasonable to consider the consequences of threat (danger) posing if in practice there are certain difficulties in the process of identifying such consequences. To answer this question, at least in general terms, turn to the theoretical background. Criminal law theory does not present a unified opinion regarding this problem. Some scholars think that crimes with potential damage inflicted only to the object of criminal defence are identified as inchoate crimes [10].

It is known that these crimes are the ones where the completion moment is transferred to the stage of preparation or attempt. Therefore, any posed threat must not be considered as a socially dangerous consequence.

Other authors note that any threat of inflicting damage to the object of criminal defence is a fact and it requires mandatory identification as a mandatory feature of the crime objective aspect [1; 4] and offer to distinguish between «criminal harm» and «criminal consequence» [5]. In the latter case criminal consequence is an actual moment of crime completion and at the same time – objective form of criminal harm manifestation. Consequently, posing any threat itself may not be taken purely as socially dangerous consequence. The most grounded and complete opinion is expressed by the authors who claim that creating a threat of harm infliction to the object of criminal defence is a fact. But it also requires clarification. Creating a threat of harm infliction to a criminal defence object can only be recognized as a socially dangerous consequence when such a threat is real and imminent. In tortuous acts characterized with danger the presence of an abstract possibility to inflict real harm to object of criminal defence may not be a sufficient reason to hold a person criminally liable [12]. It should be noted that, despite the available theoretical evidence proving the existence of two types of socially dangerous consequences in the form of actual harm and the threat of causing such harm, in practice there is a problem of establishing the second type consequences within the framework of a specific criminal case. The solution to this problem will approximate theory and practice and streamline the process of criminal proceedings investigation not only for environmental crimes.

Let us analyze more thoroughly such criminal consequence as causing the human life loss which is defined by legislator as a major or additional consequence in environmental crimes. For all components of environmental crimes with human life loss as consequence it is characterized as negligence, i.e. person dies as a result of criminal negligence or criminal overconfidence.

However, loss of human life is a typical feature of a homicide by negligence (Article 119 of the Criminal Code of Ukraine). While applying the criminal law provisions, in case if any cross lining occurs between them, crime is classified with a special rule. But is this always appropriate? Yes, Article 236 of the Criminal Code of Ukraine mentions criminalization of human life loss caused by violation of ecological examination procedure, rules and guidelines of ecological safety in the course of activities related to designing, placement, construction, reconstruction, putting into operation, operational service and dissolution of enterprises, facilities, mobile items/means and other objects. In addition, the list of consequences of this crime includes environmental contamination of large areas or other grave consequences. The human life loss, as noted by the Plenum of the Supreme Court of Ukraine, means at least one death as a result of committing crimes with liability established under Articles 236, 237, Part 2 of Articles 238-243, 245, 253 of the Criminal Code of Ukraine, and other serious consequences include death or mass disease; significant deterioration of the environmental situation in a particular region (locality); extinction, mass mortality or serious illness of wildlife; inability to reproduce certain natural objects or use natural resources in a particular region for an extended period of time; genetic transformation of certain natural objects; particularly substantial damage to property, etc. [8].

Summarizing the issues discussed, it is worth to mention that in any case only harm inflicted to the main object of criminal defence may be taken as consequences of committing crimes against the environment – object is understood as social relations arising from the use of certain types of natural resources, natural objects, ensuring enforcement of laws in the process of environmental impact exerting, ensuring the ecological safety of the population and territories in the process of infrastructure operation (industrial and other enterprises, installations, facilities and other types of manufacturing activity).



### Conclusions.

Therefore, results of the research made give rightful grounds to argue that it is necessary to study and take as much as possible into account positive foreign experience for efficient execution of state regulation of ecological safety on regional level and to develop measures for adaptation of state regulation of ecological safety in Ukraine to the European Union standards, mechanisms of ecological safety of countries that are well on way in this direction.

Criminal responsibility for crimes against environment is one of the leading measures in the field of regulation of ecological safety. Socially dangerous consequences in crimes against environment are instantiated by adverse changes in environment that are reflected in causing or in threat of causing of physical, material or other damage to it stipulated by the relevant norm of Chapter VIII of Special part of the Criminal Code of Ukraine. Moreover, it is reasonable to make an interpretation of certain socially dangerous consequences in crimes against environment for improvement of the effectiveness of application of the norms on criminal responsibility for these crimes.

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**FINANCIAL AND ECONOMIC BUSINESS EDUCATION: CURRENT TRENDS AND INNOVATIONS OF ENTREPRENEURIAL UNIVERSITIES IN GLOBAL PROGRESS**

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**Abstract.** *The features and the content of obtaining financial and economic business education in an innovation-entrepreneurial university in the conditions of digital transformation of Ukrainian economy are investigated in the article. The components that determine competitiveness of higher education institutions of economic profile are analyzed. Modern original disciplines that should be included in educational master's programs are specified. It is substantiated by studies that vocational qualification according to the economic profile reflects the correlation of the employee's quality with the requirements of the post of economist. Using a competent approach, author's wording of general and professional competences is mastered by student in studying on economic educational programs. It is determined that among the acquired general economic competencies can be considered: ability to perform socio-economic diagnostics of phenomena, processes, enterprises, territories; ability to entrepreneurship, develop and manage projects, justify decisions, identify initiatives, work as a team and interpersonal skills. Basic competent qualitative characteristics that want to see a stakeholder in a young economics major who graduated from an innovation-entrepreneurship university are considered. Authors have expressed opinion that these competencies are: ability to solve team problems, ability to produce ideas, mastery of digital competencies, ability for self-criticism, spirit of entrepreneurship.*

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**Keywords:** *economic education, innovation-entrepreneurial university, professional competences, business world, and professional qualification.*

**Introduction.**

Transformational changes in society that have been observed recently in socio-economic life of Ukraine determine the need for emergence of fundamentally new requirements for professional training of future workforce in higher education institutions of economic profile. In this context, the problem of higher education becomes more relevant, as is the activation of individual, independent work of students in innovation-business universities through in-depth use of digital information and communication technologies and the preparation of individual for understanding the indisputable fact that there is a need for constant creative development and self-education throughout life. This is due to the fact that global change is dynamic, in part the digitization of all aspects of human life, including economic.

In addition, most of the professions that existed in XXI century will disappear as such and new ones that will emerge will require the employee to acquire newest competencies with digital skills. Freelancing will become more popular. Structural, substantive and procedural changes in higher economic education, already envisaged by the Laws of Ukraine “On Education” [1], “On Higher Education” [2] and the Concept of Education Development by 2025 [3], are aimed at improving the quality and efficiency of the educational process in high school and achieving better training for the specialists that the stakeholders need.

Higher education institutions (HEIs) of economic profile are responsible for the level of adherence to state standard of professional economic and business education, the formation of graduates of the appropriate volume and quality of knowledge, skills, competences required by labor market of the XXI century in the context of global progress.

The application of digital innovative high-performance information technology requires a well-designed educational and professional training program for economic specialists. The information society of XXI century sets before professional financial and economic business education tasks which consist not only in mastering the future specialists of necessary volumes of general and professional financial and economic knowledge, but also able to put them into practice, think critically, solve problems successfully, be able to communicate in a team, independently develop and improve their intellectual and cultural levels, personal creative qualities and traits, be creative and “digital”.

#### **Literature review.**

The names of foreign scientists A. Tojnby [4], G. Hofstede [5], C. Hayter [6] are associated with the study of general aspects of transformational change and the complex modernization of higher education in terms of its innovative-digital entrepreneurial development. Issues of formation of digital platforms in education, disclosure of the institutional content of their work and establishment of business universities at the stage of innovation of Ukrainian economy in the context of global progress, the possibility of its breakthrough development and study of prospects, directions and mechanisms of development of stem-education, business education in digital age researchers and economists, including N. Parkhomenko [7], I. Pasinovych [8], M. Chepeliuk [9], L. Tsymbal [10] and others.

D. Zagirniak [11], L. Korotkova, G. Lukianenko, L. Lukianov [12], O. Olshanska [13] were engaged in the implementation of modern concept of education development related to the formation of new generation educational programs in the context of increasing the autonomy of universities, professionally qualitative aspects of pragmatism of consumer behavior in higher education services, and professional standards. But a considerable number of problems, such as cognition of features and disclosure of the content of obtaining a financial-economic business education at an innovation-entrepreneurial university in the conditions of digital transformation of Ukrainian economy remain insufficiently disclosed.

The purpose of publication is to present main competence qualitative characteristics that a young business specialist who graduated from university of innovation and entrepreneurship who wants to see a stakeholder and to discover newest content of obtaining a financial and economic business education in terms of teaching students in modern original educational programs.

### **Research results.**

Globalization processes in the world, testify to the increasing competition between business universities, increasing requirements for improving the competitiveness of HEIs of economic profile, the level of educational services, research programs for training specialists in financial sector. This competition is related to labor and financial resources, creativity and entrepreneurial skills.

Each country seeks to enhance the competitive position of universities in global educational services market. The competitiveness of HEIs is determined by the effectiveness of their activities. It is also worth noting that in Europe, a new unifying term “frontier research” has been adopted – advanced science, that is, science that develops at universities and helps to develop and attract innovation. This is one of the most effective ways to solve the paradigm “society – science” [9, p. 111].

The result of increasing the competitiveness of HEIs is the recognition of the university in the world of educational and scientific space. High ratings are achieved by increasing the number of international partners, prioritizing research areas, increasing financial revenues through participation in international projects, branding HEIs that allows you to become recognized and improve your reputation. In this case, too low international rankings can adversely affect the university’s competitiveness. Due to low international ratings, HEIs may lose out on public funding. That is, international rankings are a complex and important tool for evaluating universities [5, p. 9]. So today, the actual formation of university spin-offs or innovation-entrepreneurial universities becomes relevant.

In addition to the basic principle of the unity of science and the educational process with the “way out” to attract innovation and new curricula, the driving force behind innovative and entrepreneurial universities is creativity. Creativity is a process by which the implementation of new concepts and new approaches in science, the educational process and in management of an entrepreneurial university (in strategic and tactical aspects) can be implemented. Creativity in the science of this type of university is an interdisciplinary and multidisciplinary approach to solving scientific problems. Creativity in the educational process of an innovation-entrepreneurial university should be understood new methods and techniques for stimulating the interest of students [5, p. 180; 4, p. 215].

Overseas researcher Hayter C. [Hayter] defines university spin-offs creating faculty teachers a firm, based on the results of intellectual activity and on the basis of their economic, financial, technical and technological researches. Given the embryonic nature of many university technologies, spin-offs are an alternative route to academic entrepreneurship, in particular the dissemination and commercialization of their research.

The problem with spin-off research is the lack of systematization of many years of empirical data. Rarely do you find information about sole proprietors, particularly in certain elite HEAs, who have been criticized for their inability to use or construct theories, integrate knowledge across multiple disciplines, or apply sampling methods.

Hayter C. [6] proposes to solve problems by commercializing university spin-off technologies with the assignment to this process of masters and graduate students of various specialties, including economics.

This commercialization offers an intermediate result based on the measurement of success that directly links spin-off activity and economic development [6, p. 18, 19]. Ukrainian researcher in the field of obtaining economic higher education Tsymbal L. believes that in order to ensure the innovative development of the educational services market, its system of state regulation should be focused on ensuring the competitiveness of national education system [10, p. 13]. In the educational paradigm proposed by domestic scientist I. Pasinovich, the aim of higher economic education is preparation of the person for self-realization, unlike the classical paradigm, the purpose of which is human resources of economy and society. The classical disciplinary organization of the content of economic education has been changed to interdisciplinary.

The transfer of ready knowledge and methods of solving financial and economic problems has been transformed into forming individual's ability to generate and apply new knowledge from business, entrepreneurship. In the new paradigm, teachers are partners of students in gaining economic professional knowledge. The classic paradigm is based on the concept of "lifelong learning" and new one is "lifelong learning". Therefore, the new paradigm shifts the emphasis from the process of learning to the end results and, in author's opinion, should create the basis of state policy in the system of obtaining a professional economic education [8, p. 9, 10].

In accordance with the requirements of labor market and demands of employers, there is a need today in the training of students of economic specialties in order to acquire competencies in the newest original educational programs at master's level with such disciplines as: "Business economics", "Business analytics", "Financial and economic security of business entities", "Investment strategy and portfolio analysis", "Financial instruments", "Smart entrepreneurship", "Innovation management", "Financial business management", "E-commerce", "Digital business", "Communication marketing", "Crypto-economy", "Business evaluation and project management". HEI should present to the applicants for master's program a structural and logical scheme of training them as specialists of highest qualification in economics in certain specialties and specializations that are in high demand in modern labor market of Ukraine and abroad.

Teaching staff, using a competent approach as one of the main foundations of student-centered learning and the concept of anthropocentrism, should answer the business education aspirant to the following questions: Where can a graduate work? What are the objective circumstances for you to study for proposed program? What kind of work will they be prepared for? What are the prospects for them? How do they get their first job in the specialty? [113, p. 430]. At the same time, to present to the entrant for masters program a number of competences and skills that he/she will possess as a result of obtaining higher education in the given educational program. In Table 1, an attempt was made to submit the employer-requested competencies and skills for workforce in economics, finance and business.

Each generation of economists develops original "recipes" to reduce imbalances in the labor market. Today, as the knowledge economy has gained recognition, issues relating to the interaction of higher education system and the labor market are vanguard.

The academic community complains of weak “signals” from the labor market regarding the qualitative and high-quality staff training.

HEIs are looking for new, more sophisticated forms of cooperation with employers. At the same time, employers criticize HEI for not properly targeting the needs of labor market, for indulging the interests of the person who chooses “fashionable” professions [11, p. 142]. Basic competence qualitative characteristics who wants to see a stakeholder in a young specialist in economics who graduated from university of innovation and entrepreneurship the following: ability to put knowledge into practice, ability to solve team problems, make individual decisions, care for quality, teamwork, information management skills, ability to adapt to new situations, ability to produce ideas, ability to organize and plan, master digital skills, thirst for success, ability to self-criticize, verbal and written communication in foreign languages, initiative, spirit of entrepreneurship, ability with experts in various related fields.

**Table 1. General and professional competences that a student masters in economic education programs\***

	<b>Block of humanities</b>	<b>Block of natural and general economic disciplines</b>	<b>Block of professional training in which acquired general economic competence</b>
<b>Expected competences that a student can master as a result of studying in the field of financial and economic business education provided by an innovative entrepreneurial university in the conditions of global progress</b>	<ol style="list-style-type: none"> <li>1. Ability to think abstractly.</li> <li>2. Knowledge of a foreign language.</li> <li>3. Ability to act on ethical considerations, socially responsible and with public awareness.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ability to conduct research, search and analyze information.</li> <li>2. Understanding the subject area and profession.</li> <li>3. Knowledge of information and communication technologies.</li> <li>4. Acquisition of creativity.</li> <li>5. Ability to identify, ask and solve problems.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ability to entrepreneurship, develop and manage projects, justify decisions, identify initiatives, work as a team and interpersonal skills.</li> <li>2. Have a modern methodology of economic science.</li> <li>3. To carry out socio-economic diagnostics of phenomena, processes, enterprises, territories.</li> <li>4. Formulate competitive advantages and identify factors of competitiveness.</li> <li>5. Possession of marketing strategies for building business models, attracting new economic agents and branding, tools for designing and managing economic development.</li> <li>6. To implement progressive experience of leading companies in the world in practice of managing Ukrainian enterprises.</li> <li>7. Promote optimization of financial flows and develop mechanism for strengthening the economic security of enterprises.</li> <li>8. Define the mission of the company, industry, production, develop a strategy for their development, taking into account the available resource potential.</li> </ol>

*Source:* development of authors.

The lack of effective interaction between these spheres of public life is explained by the behavior of a third party – a person who, when deciding on the choice of future profession, ignores the situation in labor market.

HEI, the state and employers cannot encourage an individual to choose the profession and qualification that will be required in labor market. Freedom to choose a profession is balanced by the utilitarianism of motivation based on the needs of employers in profession and qualifications.

The basis of professional qualification correspondence is the concepts of “profession” and “qualification”. In international practice, the terms “occupation” and “profession” are used. The hallmark of the profession of economy is the high level of qualification and professional training in the field of economy. By “profession defined”, scientists mean an activity or set of professional activities, access to which, or work under which, is governed by laws, regulations or administrative orders regarding professional qualification [12, p. 12–14]. According to the Classifier of Occupations DK 003: 2010, a profession is the ability of a person to perform similar jobs that require a certain qualification, and a qualification is the ability to perform the tasks and duties of a job [14].

Professional qualification according to the economic profile reflects correlation of qualities of the employee to the requirements of the post of economist. Mainly the development of new profession is a forced measure due to social, economic circumstances. Therefore, with the help of young people’s awareness of the vocational qualification structure of labor market, it is necessary to raise the level of rational choice of an entrant for education at an entrepreneurial university.

The rationality of choosing professional economic education person is determined by the demand of the employer of specialty and educational and qualification level, declared in the diploma. Therefore, the choice of the consumer of professional economic education services should be influenced by the employers, since their vocational and qualification needs should satisfy the acquired competences and qualities of graduates of educational institutions. Therefore, it is not feasible to solve the problem of rational choice by the person of future profession of economic orientation without mediocre and active participation of employers.

There is an obvious need to move from entrepreneurial universities from the rhetoric of change to the rhetoric of creative movements based on national values, educational context and innovative achievements. Main open questions relate to following priorities, such as ensuring the contribution of Ukraine’s HEIs to innovation, promoting excellence in the development of skills and competences, and addressing future gaps in them, support for effective and efficient tools for the joint work of business universities and all stakeholders, closing the gap, in terms of the availability of quality skilled labor, between student education and business needs in the context of digital economy [9, p. 113].

### **Conclusions.**

The development and implementation of innovative digital educational technologies requires new approaches to management, the involvement of the latest tools in traditional system of obtaining financial and economic business education, as this process is not limited to increasing the amount of knowledge, and envisages the achievement of a new quality of educational process by an entrepreneurial university, taking into account modern approaches to organizing the activity of subjects in the professional training of financiers and economists with innovative skills to work in the digital economy in the context of globalization.

Training of economists, accountants, financiers with higher education at an innovation-entrepreneurial university should be directed to the systematic increase of professional qualitative competences in a single complex organized educational process. At the same time, the ability to independently acquire financial and economic knowledge, to seek the necessary information, to critically analyze it, to actively act in the information and digital space should be considered as new basic professional economic quality of business education.

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**RURAL AREAS SPATIAL PLANNING BASED ON THE CONCEPTS OF EXPERIENCE ECONOMY AND ENVIRONMENTAL ECONOMICS**

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**Abstract.** *Visitors will keep in mind rural areas with their landscapes (nature, water basins, roads with bridges etc.), local peculiarities (cuisine, architecture, clothes, souvenirs, arts etc.) and polite people. In addition, the areas cleanliness is an important precondition for positive memories which form the basis of experience economy. Keeping the areas in a proper condition requires thorough spatial planning which involves the development of documentation indicating functional areas, interesting historical and cultural landmarks, transport networks, locations of enterprises and structures of various purposes etc. Rural areas spatial planning should aim at their harmonization with nature, in particular with a preference for so-called organic architecture. In accordance with the concepts of environmental economics, it is expedient to reasonably plan the activities that improve the environment. The method determining the list of measures to prevent rural areas pollution is suggested. The method is based on the combination of expert evaluations and computer algorithm of selection of the most effective measures, the costs of which will not exceed resources available for the rural community (relevant item of the local budget). Given is an example of documentation on rural area spatial planning, containing information about the main areas of local economy, local attractive sites, as well as a list of projects for short and long run.*

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**Keywords:** *environmental economics, environmental educating measures, experience economy, rural areas, spatial planning.*

### Introduction.

Rural territories development is changing due to modern economy trends. Firstly, there appear new activity types in commercial system. While earlier rural residents grew plant and animal products offering food at the market, during the last decades they also deal with tourism and recreation service rendering. F. Randelli et al. (2012) drew attention to several stages of rural tourism development accompanied with growth in tourist numbers [1]. Now there are more and more households combining traditional agricultural production and rendering hospitality services.

Secondly, consumers of goods and services value them for the experience they get. A new direction has appeared called *experience economy* [2]. Rural areas have an important advantage – they are close to nature and it attracts visitors. In addition, urban residents spending a holiday in the countryside get strong impression when participating in the local household routine. The appearance of rural houses also makes a positive impression on tourists. Original trend in architecture called *organic architecture* gains traction. It is based on a harmony between buildings and nature [3]. The best solution to stable and harmonic development of rural territories can imply designing and erecting eco-villages like Latvian Amatiems [4]. There are examples of similar villages in other countries. Thus, in Ukraine so called *family mansions* become popular [5]. However, it remains a very expensive solution for the majority of rural communities, particularly in Ukraine.

Thirdly, environmental impact increases due to use of different commodities leaving solid domestic waste (plastic packing, batteries, organic waste, etc) in rural area. Besides, rural area constantly generates “traditional” waste related to local way of life and householding. Currently the most widespread method to handle the solid domestic waste is to dispose it at a dumpsite [6]. Waste disposal demands not only financial costs but also space (land plots) [7]. The lack or poor coverage of public utilities across rural regions leads to environmental degradation [8]. It is important to plan environmental protection measures in *hromadas* (territorial communities).

Such prerequisites demand the spatial planning which would facilitate rational use of rural territories and funds of *hromadas* to prevent environmental pollution.

### Problem Statement.

A lot of researchers deal with spatial planning. They suggest slightly different approaches on the matter. Ye. Marunyak (2014) offers to use the terms “spatial planning” and “territorial planning” as synonyms defining them as “...the optimal space organization based on its features, characteristics and time parameters”, and to interpret a related term “landscape planning” more narrowly, as activity to improve, recover and form landscapes [9]. K.I. Lantitsou (2017) defines the aim of spatial planning as “...the sustainability of natural systems in order to be able to sustain and supply the anthropogenic systems, meeting the 'real' human needs” [10]. According to European Spatial Development Perspective (1999), “... the aim of spatial development policies is to work towards a balanced and sustainable development of the territory” [11]. Ukrainian law implies preparing spatial planning documents. The main type of documents, *a general layout*, is designed for a certain settlement as ordered by the local authority. Yet the general layout does not reflect the situation beyond it. This problem is to be solved through new type of documents, *a comprehensive plan of hromada space development*. According to the draft law “On amendments to the Land Code of Ukraine and other legislative acts of Ukraine regarding land-use planning” (2020), a comprehensive plan of *hromada* space development “defines the planning organization, functional aim of the territory, main principles

and directions of forming a civil service system, engineering and transport infrastructure, land improvement, civil protection of territory and the population, and protection of lands and other environmental elements” [12]. One should actively engage the public (not only the local body) in developing of comprehensive plan of hromada space development. Due to decentralization process in Ukraine, the public has become more active [13]. People more often initiate different projects. The prosperity of rural hromada depends on revenue not only from agricultural products but also from rendering different services to visitors. Rural territories make an impression due to nature (flora and fauna, water bodies, forests, valleys, etc), local cuisine, architecture, roads and bridges, historical and cultural memorials, souvenirs, crafted products etc. In addition, neat territories (clean, with land improvement) are more likely to leave the positive impressions that underlie the experience economy. Not only spatial planning but also reasonable measures to prevent environmental pollution facilitate rural territories reaching a proper state. Local residents shall be actively engaged in developing both the comprehensive plan of hromada space development but also in planning and holding events aimed at prevention of environmental pollution. At that, the financial capacity of the community to implement the proposed activities should be taken into account.

### **Research Questions.**

Professional design organizations shall deal with spatial planning documents (general layout of the settlement and comprehensive plan of hromada space development). To actively engage the public in spatial planning, it is proposed to introduce an intermediary stage – designing of the spatial development concept of a given rural territory. One should use the experience of hromadas which succeeded in it. For instance, positive results were gained by representatives of 30 amalgamated hromadas in Ukraine participating in the Integrated Spatial Planning for Amalgamated Hromadas training [14]. Considering the materials in this program (co-authored by V. Matviishyn [15]) will extent the opportunities of rural communities to actively engage their residents to generate offers on spatial planning, which will, particularly, enhance attractiveness of a given rural territory.

Special attention should be given to improvement of waste disposal system in the hromada, which will also make the rural territory more attractive. Public discussions on the methods for improving of this activity are useful. Discussions organized in different forms enable defining a list of measures and approximate cost of each of them. However, one should consider the limits of local budget. It implies choosing the set of measures which would be the most efficient with the present amount of funds. Thus, an expert assessment of efficiency of each measure should be conducted to be considered for further decision-making on allocating funds for the set of environmental measures. For reasonable decision-making, co-author of the method Ye. Matviyishyn [16] developed a computer algorithm forming such sets of the measures (their combinations from the pre-defined list) which can be the most efficient given the present amount of funds.

### **Purpose of the Study.**

The study was aimed at providing a combined approach to spatial planning of rural territories with engagement of the public, expert assessment and computer algorithm. The examples provided directly show the results of applying of such an approach considering the concepts of *experience economy* and *environmental economics*.

### Conceptual Models.

According to the experience economy, territorial community spatial planning documents reflect, among other things, the advantages of the territory for attracting visitors. Rural territory spatial planning model (particularly, with the opportunities of tourist attraction to sightseeing demonstrated) is formed as a map developed within Integrated Spatial Planning for Amalgamated Hromadas program.

Based on environmental economics principles, a sequence of actions to form the most efficient set of measures to prevent environmental pollution was developed. Such actions encompass the following: developing a poll questionnaire; receiving expert assessment on the efficiency of each measure; using the computer algorithm for generation of options of such a set of measures which, within limited budget, will provide for the highest total efficiency. Final decision can be made according to the options of set of measures generated through computer modelling.

### Research Methods.

Public discussions were the main method for developing a common view on territorial hromada spatial planning. It necessitated the use of *brainstorming* and *World café* methods. The use of such methods enabled quick and full exchange of ideas on the rational use of the hromada resources, particularly, on attracting tourists to sightseeing. The representatives of the public defined measures which can be taken to prevent environmental pollution. As a result, a list of 10 measures oriented on educating on solid domestic waste disposal was formed. Expert assessment method implied taking polls of respondents who assessed the efficiency of the offered environmental educating measures using a 10-point scale. The poll was conducted using a questionnaire (Tab. 1). In the last column entitled Notes the respondents could add their comments.

**Table 1. Polls for expert assessment of the environmental educating measures with the residents of the territorial community (hromada)**

No.	Measure	Points (1 to 10)	Notes
1	A series of open discussions related to development of sector for waste disposal in hromada		
2	Zero Waste workshops with pre-school and school children conducted in libraries		
3	Educating trips to recycling facilities		
4	Purchase of table games on environmental strategies and tactics for school children		
5	Practical meetings with private sector residents dedicated to rational organic waste disposal		
6	Flash mob on rational waste disposal		
7	Creating of educating videos on rational waste disposal		
8	Spreading hand-outs among the hromada, students and other target groups		
9	Round table with active representatives of the public dedicated to hromada waste management		
10	School for elderly on rational waste disposal		

*Source:* developed by authors

Hromada representatives of different ages (45 persons), scientists (15 persons) and representatives of local authorities (20 persons) acted as experts. Each measure was assessed with a final point from each of 80 experts. An approximate cost of each measure was defined by current prices for resources (premises lease, printing of materials, transport, etc). Computer algorithm to generate the most efficient options was developed using a VBA macro in MS Excel. Input data for the algorithm was: efficiency of each measure in points, cost of each measure in Ukrainian hryvnia (UAH), and total accessible amount to implement a set of measures, in UAH.

### **Findings.**

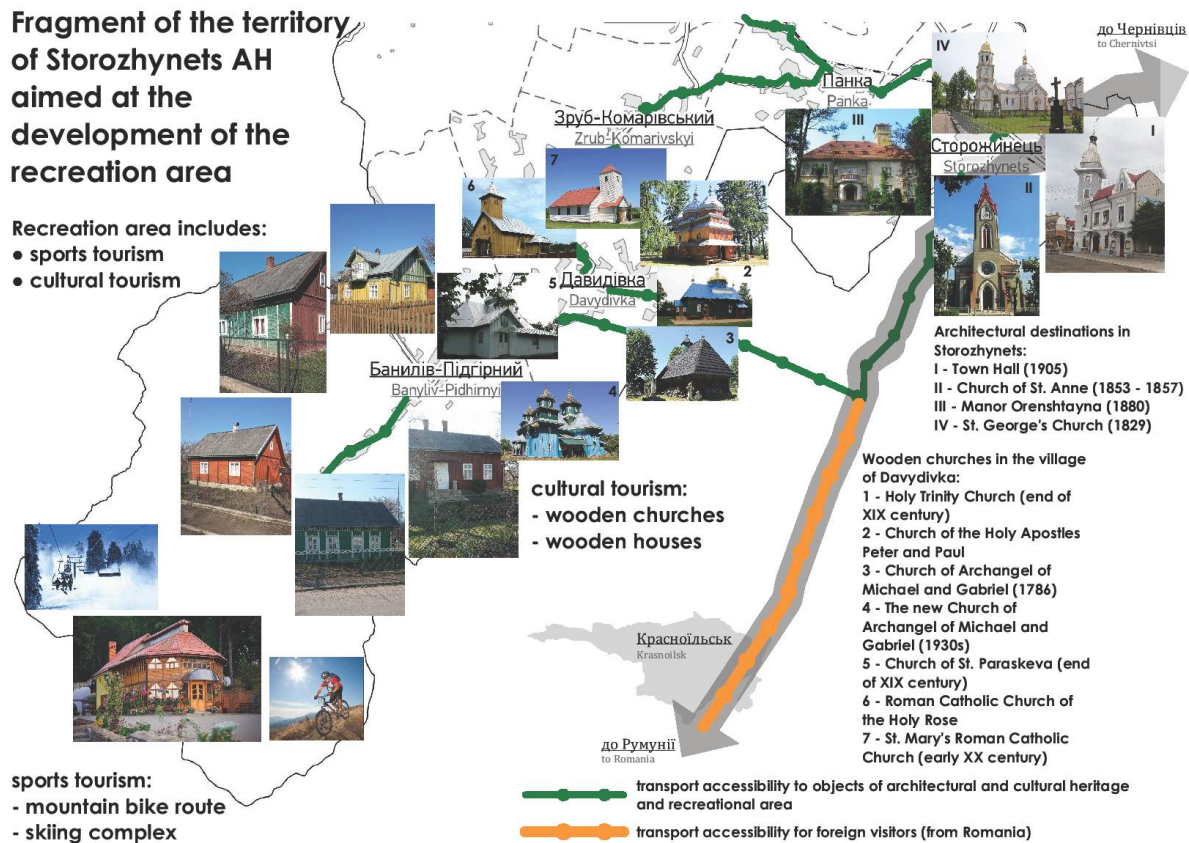
Principles of experience economy and environmental economics were taken into account due to active public engagement of Storozhynets amalgamated hromada (Chernivtsi Region, Ukraine) during work on the concept of spatial development. Thus, participants of the public hearing offered to use the advantages of the territory related to local architecture.

Particularly, the villages of this territorial hromada still have wooden residential houses and the village of Davydivka hosts seven wooden churches of the 18<sup>th</sup> and 19<sup>th</sup> centuries. In the administrative centre of the hromada, Storozhynets, the Town Council building is finished with chime tower.

The participants offered to make a sightseeing platform there, and a museum on the attic. Museum exhibits should reflect many ethnicities which resided here: Ukrainians, Romanians, Hebrews, Polish, and other nationalities, each of which left a trace in the history and culture of the region. Orenstein's mansion with an arboretum is situated within the hromada. In the west, the hromada territory borders with the Carpathian Mountains. It allows developing mountain tourism. An additional advantage of the hromada is the fact that it is located close to the border between Ukraine and Romania where international checkpoint (in Krasnoilsk Village of Chernivtsi Region) is to be open. It will open an opportunity for hosting more foreign visitors.

The described advantages are put on the relevant map of the hromada integrated spatial development (Fig. 1).

A clean territory is important to make a positive impression on the visitors. After a public discussion, it was offered to prevent environmental pollution by taking environmental educating measures (projects) as an important work stage. Environmental economics provisions imply the crucial significance of such measures efficiency. Expert assessment combined with a computer algorithm allowed obtaining several options of environmental educating measures. Fig. 2 provides with the results of computer model application.



**Fig. 1. One of the maps of the hromada integrated spatial development showing its tourism and sightseeing potential**  
(for Storozhynets amalgamated hromada, Chernivtsi Region, Ukraine)

Source: developed by authors

These options are provided in ascending order of total rating (B13:B24 range) provided that the total costs (M13:M24 range) do not exceed the set amount (maximum budget totals UAH 20 thousand).

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Number			Combinations					Start					
2	10			1024										
3														
4	Data													
5	Project	1	2	3	4	5	6	7	8	9	10			
6	Rating	620	624	595	522	565	467	536	504	504	419			
7	Cost, UAH	3000	500	3000	4000	2000	200	3500	5000	7000	1000			
8	Budget available, UAH	20000												
9														
10														
11	Total rating		Projects										Total budget	
12		1	2	3	4	5	6	7	8	9	10			
13		0	0	0	0	0	0	0	0	0	0	0	0,00€	
14		620	1	0	0	0	0	0	0	0	0	0	3 000,00€	
15		624	0	1	0	0	0	0	0	0	0	0	500,00€	
16		1244	1	1	0	0	0	0	0	0	0	0	3 500,00€	
17		1839	1	1	1	0	0	0	0	0	0	0	6 500,00€	
18		2361	1	1	1	1	0	0	0	0	0	0	10 500,00€	
19		2404	1	1	1	0	1	0	0	0	0	0	8 500,00€	
20		2926	1	1	1	1	1	0	0	0	0	0	12 500,00€	
21		3393	1	1	1	1	1	1	0	0	0	0	12 700,00€	
22		3462	1	1	1	1	1	0	1	0	0	0	16 000,00€	
23		3929	1	1	1	1	1	1	1	0	0	0	16 200,00€	
24		4348	1	1	1	1	1	1	1	0	0	1	17 200,00€	
25														

**Fig. 2. Screenshot of a computer model with generated options for environmental educating measures (projects) in ascending order of total assessment (rating)**  
(the budget is limited with UAH 20 thousand)

Source: developed by authors

Computer modelling allows obtaining the list of measures which would provide for the highest total efficiency within the limited budget (UAH 20 thousand). In the example above, the highest total assessment of the selected environmental educating measures is 4,348 points: row 24 provides for the relevant set of measures including eight out of ten projects (except for the 8<sup>th</sup> and the 9<sup>th</sup>). At that, the total implementation costs are UAH 17,200 (cell M24).

### Conclusions.

Example of Storozhynets amalgamated hromada (Chernivtsi Region, Ukraine) showed the application of the combined approach to spatial planning considering the provisions of the experience economy and environmental economics. It implies combining of expert assessment and computer modelling. Public discussions and polls (applied to design a concept of hromada spatial development) allow defining the advantages of the territory combining efforts pursuant to the experience economy, i.e., plan hromada development for visitors (among them, tourists) to have a positive impression. It is important to keep the territory clean. It implies a set of measures (among them, environmental educating projects) to prevent environmental pollution in line with environmental economics. Computer modelling allows selecting the projects out of the entire measures range to provide for the highest total efficiency within limited implementation costs.

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**THE STATE AND THREATS OF THE FINANCIAL SECURITY OF THE INSURANCE MARKET OF UKRAINE**

**Abstract.** *The article defines the concept of "financial security of the insurance market". The factors that influence the level of financial security, among which are: organizational, economic, personnel, political and legal. The analysis of the level of financial security of the insurance market of Ukraine during 2014-2018 was conducted by the degree of penetration and the share of insurance premiums of the three largest insurance companies. It is established that the financial security of the Ukrainian insurance market is at a dangerous level. Factor analysis of the factors affecting the profitability of the insurance market is conducted. On the basis of the conducted analysis, measures aimed at improving the level of financial security of the insurance market were proposed, namely: improvement of monitoring of the activity of insurers and the system of legal support, regulation, supervision and control over the activity of participants of the insurance market; amending legislative acts; development of requirements for the functioning of the system of internal control over the activity of insurers; improving the licensing procedure for insurers and enhancing the requirements for assessing their goodwill with a view to preventing the use of the insurance market to legalize proceeds of crime.*

**Keywords:** *financial security, insurance market, factor analysis, monitoring.*

**Introduction.**

The state of the insurance market is an important indicator that characterizes the economic development of any country. Insurance has a significant impact on the socio-economic development of society. The insurance market is a mechanism for protecting the tangible and intangible goods of society. Given the importance of insurance in the socio-economic development of the state, in the activities of economic entities and citizens, it is advisable to study in detail the status and problems of the development of the insurance market.

The current conditions of the insurance market are characterized by the following negative phenomena: lack of resources, capital outflow, accumulation of risks. In such circumstances, the study of the problems of ensuring the financial security of the insurance market is particularly relevant. The condition and problems of insurance market functioning have been investigated before. Determination of the level of financial security of the insurance market, its external and internal threats is devoted to the works of many domestic scientists, among which the works of I. Babets [1], O. Baranovsky [2], T. Hovorushko [3], O. Zhabinets [1], Y. Folders [6], O. Ruban [8] and others.

The purpose of the article is to investigate the concept of «financial security of the insurance market», to determine the level of financial security of the Ukrainian insurance market and to develop measures to ensure it.

### **The financial security of the insurance market and the factors that determine it.**

The insurance market is an integral part of the financial market of Ukraine. Its successful development depends on expansion of insurance services, increase of their competitiveness, increase of requirements to the order of formation of activity of insurance companies, greater integration of the country in international structures, participation of the insurance market in solving the most important problems of economic development. Emerging financial crises adversely affect the financial security level of the Ukrainian insurance market.

Monetary policy also has a significant impact on the state of the Ukrainian insurance market. Its impact is manifested in the growth of loss of insurers, the reduction in the number of contracts on classic insurance, a sharp decrease in the solvency of insurance companies. Financial security of the insurance market is an important component of the economic security of the state. The state of insurance market safety is the main criterion for evaluating the performance of insurance companies and state regulatory bodies. Consider the existing approaches to the concept of «financial security of the insurance market» (Table1).

**Table 1. Approaches to interpretation of the definition «financial security of the insurance market»**

Author	Definition of «financial security of the insurance market»
Baranovsky O [2]	The financial security of the insurance market as a whole and of the specific insurance organization, in particular, should be understood as providing the insurance companies with financial resources that would allow them, if necessary, to compensate for losses caused by the contracts of their clients and to ensure the effective functioning
Babets I, Zhabinets O [1]	Security of the insurance market is a state of the insurance system, which ensures the formation of stable demand for insurance services, financial reliability of insurance organizations and their guarantee of payments under concluded insurance contracts.
Ruban O [7]	Financial security is an integral characteristic of the successful functioning of an insurance company. It is based on liquidity, solvency, financial soundness and characterizes the financial position of an insurance company in the long term
Govorushko T [3]	The financial security of the insurance market as a whole and of the specific insurance organization, in particular, is such a level of provision of insurance companies with financial resources that would allow them, if necessary, to compensate for the losses caused by the contracts of their clients and ensure the effective functioning
Papka O [6]	The financial security of the insurer considers the state (conditions) of operation in which access to financial resources and markets is available, provides himself and the insurer with a certain level of protection against internal and external financial threats and the proper efficiency of financial indicators.

*The financial security of the insurance market* is its financial condition, which is determined by stability at all stages of financial relations and contributes to its continued development.

Security market threats are most often viewed from the point of view of their occurrence - external and internal. Internal threats arise from the imperfect financial policies of insurance companies. This leads to inefficiencies in financial management and weakens the financial reliability of insurers and the safety of their operations.

External threats are caused by external factors to insurance companies. These include: rapid development of the globalization process; high degree of concentration of financial resources in international insurance markets and integration in the reinsurance sector; the interpenetration of the domestic and foreign policies of states that are increasingly dependent on the world's insurance finances; increased competition and conflict between states in the insurance industry [1].

The financial security level of the insurance market is influenced by many objective and subjective, internal and external factors, including:

- organizational and legal – lack of a clear state policy in the sphere of insurance; incomplete and inconsistent regulatory framework; inadequate level of state regulation and control over the insurance market;
- economic – low solvency of individuals and legal entities; high inflation;
- personnel – insufficient skills of employees;
- political and legal – the creation of the insurance market occurred in parallel with the development of regulatory support [8].

It is advisable to point out the low efficiency of the insurance market and therefore its financial security. For the national economy, insurance is not yet a fundamental instrument of regulation. As the place and role of the insurance complex in the national economy are not defined, the insurance market in Ukraine does not play an appropriate role in providing insurance protection to the subjects of the national economy.

The insurance market is one of the essential elements of the market infrastructure and financial system of advanced market economies. Quite often, according to international ratings, the level of economic development of a country is determined by the level of insurance business organization, which in many countries is ahead of the industrial and banking sectors. In addition, in the course of their activities, insurance companies ensure the formation of effective market mechanisms for attracting investment resources into the national economy. In the current dynamic conditions of globalization and integration of Ukraine into the European and world community, there is an objective need to deepen the research of problems of ensuring the financial security of the insurance market in Ukraine and to find ways for their perspective directions of functioning.

#### **Assessment of the financial security level of the Ukrainian insurance market.**

The financial security of the insurance market according to methodological recommendations is determined by two indicators:

- the level of penetration of insurance - characterizes the ratio of total gross premiums to GDP;
- the share of premiums received by the three largest insurance companies in the total amount of premiums written (excluding life insurance). This is an indicator of the concentration of the insurance market in premiums.

Let's calculate the indicators of the financial security level of the Ukrainian insurance market according to the specified method (Table 2).

**Table 2. Financial security indicators of the Ukrainian insurance market during 2014-2018 years**

Indication	Standard	Normative value	Years				
			2014	2015	2016	2017	2018
1. The level of penetration of insurance, %	critical	1	1,69	1,50	1,48	1,46	1,39
	dangerous	2					
	unsatisfactory	4					
	satisfactory	6					
	optimal	8					
2. Share of premiums written by the three largest insurance companies in total premiums written (excluding life insurance), %	critical	30	15,6	14,7	18,9	21,33	15,03
	dangerous	20					
	unsatisfactory	15					
	satisfactory	12					
	optimal	10					
3. The level of security of the insurance market by the degree of penetration			dangerous	dangerous	dangerous	dangerous	dangerous
4. The level of security of the insurance market is the share of the premiums of the three largest insurance companies			dangerous	unsatisfactory	unsatisfactory	dangerous	unsatisfactory

*Source: made by data [4,5]*

The results obtained indicate a dangerous level of financial security for the Ukrainian insurance market. The main reasons for this level of financial security of the insurance market are its dependence on global economic events, political arrangements, state subsidy programs, political instability, population demographic structure, its income and other factors. The key to achieving the safe development of the insurance market is the state supervision of the activities of insurance organizations.

#### **Conducting factor analysis of the profitability of the insurance market.**

Correlation-regression analysis reveals factors that influence the level of financial security of the insurance market. When constructing a regression model, it is first necessary to determine the resultant index. The result of the insurance company is determined by the profit margin. The main purpose of the insurer's activity is to achieve the company's profitability and to search for reserves for improving the level of financial security. One of the most widely used methods of modeling the profit of an insurance company is the construction of multifactor regression models of the profit of the insurer. The use of correlation-regression analysis is the optimal method of modeling profit. It allows us to simulate the process of formation of any kind of profit, taking into account a set of the most significant factors of influence of the researcher, to analytically investigate the quality of the obtained model, the significance of the factors included in the model, to obtain an interval forecast of the level of profitability for the next period. The method allows to correct the number of factors included in the model depending on the amount of available actual data without losing the model of adequacy. This is a substantial argument for this simulation method.

The purpose of regression analysis is to determine the quantitative relationship between the dependent random variables. A correlation coefficient is used to determine the relationship between the variables and the resulting value. If the correlation coefficient in absolute value is close to 1,

then the linear model is used for the constructed dependence. In other cases, more complex nonlinear models (polynomial and exponential) are used. The correlation coefficient is close to 1. It is advisable to build a linear model.

Taking into account the results obtained, seven independent factors were selected for further consideration and inclusion in the model: payments reimbursed by reinsurers; assets of insurance companies; insurance reserves; net insurance premiums; level of net payments; the amount of reinsurance premiums and the amount of paid-up share capital.

Based on the actual data on the dynamics of the selected factors and the resulting indicator, a linear multivariate regression model was constructed using the built-in Regression tool of the MS Excel analysis package. The model was evaluated based on the results of the insurance market for 10 years – 2009-2018.

Correlation analysis is the degree of determination of the relationship between two random variables X and Y. A correlation coefficient is used as a measure of such a relationship. The correlation coefficient is estimated by sampling the volume of n related observation pairs (xi, yi) from the total set X and Y. Linear correlation coefficient is a parameter that characterizes the degree of linear relationship between two samples.

**Table 3. Dynamics of factors of influence on profit of insurers of Ukraine during 2009-2018 years**

Years	Profit of insurance companies, mln. UAH	Payments offset by reinsurers, mln UAH	Assets of insurance companies, mln UAH	Insurance reserves, mln. UAH	Net insurance Premiums, mln UAH	Net payout rate, %	Amount of paid-up share capital, mln. UAH	The amount of reinsurance premium, UAH million
	Y	X 1	X 2	X 3	X 4	X 5	X 6	X 7
2009	-957,1	967,9	41970,10	10141,30	12658,00	50	14876,00	242,1
2010	1235,4	508,6	45234,60	11371,80	1 327,70	44,2	14429,20	192,3
2011	4287,7	731,6	48122,70	11179,30	17970,00	26,2	14091,80	429,1
2012	6049,6	537,8	56224,70	12577,60	20277,50	24,5	14579,00	279,8
2013	5718,6	486,7	66387,50	14435,70	21551,40	21,2	15232,50	324
2014	3215	640,9	70261,20	15828,00	18592,80	26,3	15120,90	12,9
2015	-452,7	1345,80	60729,10	18376,30	22354,90	34	14474,80	38,1
2016	689,2	1233,20	56075,60	20936,70	26463,80	32,3	12 662	40,1
2017	234,7	1208,20	57381,00	22864,40	28494,40	36	12 831	46,1
2018	251	2 459,00	63 493,30	26 975,60	34 424,30	36,1	12 637	48,4

Source: made by data [4]

The correlation coefficient changes from  $-1$  to  $1$ . If the calculations yield a value greater than  $+1$  or less than  $-1$ , therefore, there is an error in the calculations. When the correlation coefficient is  $0$ , there is no linear relationship between the variables.

The correlation matrix reveals the relationship between different data (Table 4). As can see from Table 4, the largest relationship is observed between Y and X5 –  $0,82$ . Minor impact on insurers' profits is X4 ( $-0,18$ ). The relation between these quantities is inversely proportional (as evidenced by the negative value of the coefficient), but strong. Concerns about pairwise correlation between variables X4, X3 are of concern.

**Table 4. Correlation matrix of the relationship of profits of insurance companies with the main indicators of its performance**

	Y	X1	X2	X3	X4	X5	X6	X7
Y	1,00							
X1	-0,60	1,00						
X2	0,29	0,20	1,00					
X3	-0,41	0,83	0,54	1,00				
X4	-0,18	0,78	0,55	0,95	1,00			
X5	-0,82	0,27	-0,66	-0,04	-0,24	1,00		
X6	0,45	-0,72	0,01	-0,79	-0,78	-0,17	1,00	
X7	0,61	-0,54	-0,46	-0,73	-0,51	-0,23	0,44	1,00

Source: designed by the author

This indicates that the values have a correlation dependence. In our case, this multicollinearity will also have an effect on the variable Y. The dependence of the profits of insurance companies on the factors studied is represented as a formula:

$$Y = a_1 + a_2X_1 + a_3X_2 + a_4X_3 + a_5X_4 + a_6X_5 + a_7X_6 + a_8X_7, \quad (1)$$

Y – profit of insurance companies;

X<sub>1</sub> – payments are offset by reinsurers;

X<sub>2</sub> – insurance companies assets,

X<sub>3</sub> – insurance reserves;

X<sub>4</sub> – net insurance premiums,

X<sub>5</sub> – the level of net payments;

X<sub>6</sub> – the value of paid-up share capital;

X<sub>7</sub> – the amount of reinsurance premiums.

The econometric model of the net profit's dependence on gross profit and administrative expenses will look like this:

$$Y = 23768,18 - 1,17 \cdot X_1 + 0,49 \cdot X_2 - 1,77 \cdot X_3 + 0,8 \cdot X_4 + 167,59 \cdot X_5 - 3,0 \cdot X_6 + 2,87 \cdot X_7 \quad (2)$$

Model analysis showed that Y's increase by 1.17 points is due to a decrease of X<sub>1</sub> by 1 point. Also, the Y's increase by 0.49 points occurs as X<sub>2</sub> grows by 1 point. Also, the Y's decrease by 1.77 points Y occurs when X<sub>3</sub> increases by 1 point.

The dependence of Y on X<sub>1</sub> is resistant and characterized by high density (plural correlation coefficient – 0,82). The model's adequacy assessment was evaluated on the basis of the Fisher test (table 5). Fisher's calculated criterion is greater than the tabulated value at given significance levels, which indicates the model's adequacy.

**Table 5. Adequacy assessment of the model of dependence of insurance companies' profit**

The source of variation	The number of degrees of freedom	The sum of squares	The average sum of squares	Fisher's F-criterion	The significance of Fisher's F-criterion
Regression	7	58313921	8330560	8,98	0,10
Remainder	2	1854028	927013,9		
The total	9	60167949			

The above calculation confirms the model's adequacy, which emphasizes the obtained significance level of the Fisher's criterion (approaching zero). The constructed model is statistically reliable, important both overall and by individual regression coefficients. Indeed, the calculated value of the Fisher's F-criterion  $F = 8.98$  exceeds the critical value found for the significance level  $\alpha = 0.05$  and the number of degrees of freedom  $k_1 = 6$ ,  $k_2 = 38$  ( $F_{kr} = 0.123041571$ ). Therefore, with 90% confidence ( $(1 - \alpha = 1 - 0,10) \times 100$ ) it can be stated that the found dependencies between Y and all factors of the equation are significant, important, reliable.

The step-by-step correlation and regression analysis made it possible to choose from the whole variety of candidate factors the ones that have the most significant impact on the absolute rate of profit of insurance companies – Y. The results of the statistical research and the constructed regression model made it possible to conclude that the obtained equation can be used for the purposes of factor economic analysis and forecasting.

The conducted analysis of the Ukraine's insurance market functioning showed a downward trend in the number of insurance companies, an increase in gross and net premiums and payments during the 2014-2018, which can be considered a positive phenomenon. It is found that the reduction in the number of insurance companies is related to the implementation of requirements to increase insurance reserves. Not all insurers can provide savings the foreseen amounts and, therefore, are forced to leave the market. However, this fact can be considered positive, since reliable, competitive, solvent insurers, capable of providing quality services and making payments remain on the market.

#### **Recommendations for improving the financial security of the insurance market.**

Despite of the positive trends in the functioning of the insurance market, its financial security level causes concern. The assessment of the security level of the insurance market by the share of insurance premiums of the three largest insurance companies and by the degree of penetration showed a low security level. This requires the development of measures to ensure it. To improve the financial security of insurers, the following measures should be taken:

- to improve monitoring of insurers' activities and strengthen control over insurers' compliance with solvency requirements, financial stability, the amount of net assets, share capital and persons holding a significant proportion of insurers' capital;
- to amend the legislative acts in order to satisfy the claims of insurers among other creditors and to exclude from the liquidation mass of the insurance company insurance reserves for all types of insurance;
- to develop requirements for the functioning of the internal control system over the activities of insurers and improve the analysis of statistical information on insurance and reporting of insurers and insurance intermediaries; to guarantee the protection of the legal rights of citizens who own insurance policies to receive insurance payments;
- to promote concentration of the insurance market by amending the legislation on the procedure for the formation and raising of requirements for the size of authorized capital, guarantee fund and free reserves of insurance companies.

In addition, it is necessary to improve the procedure for licensing the activities of insurers, to increase the requirements for formation sources of authorized capital and financial position of the founders (participants) insurers and persons having a significant part of the authorized capital of

insurers, as well as to assess their business reputation. These measures are necessary to prevent the use of the insurance market for the legalization of proceeds of crime.

Increasing the level of financial security of insurance companies will be the development and implementation of appropriate compensation schemes. In this connection, it is necessary to clearly define the procedure for making compensation payments, in particular to determine the day on which the policyholder is entitled to receive such payments.

Another direction that will contribute to improving the financial security of the insurance sector is to ameliorate the system of legal support, regulation, supervision and control over the activity of insurance market participants. First of all, it is necessary to ensure the formation of effective state regulation and supervision in the field of insurance, taking into account the principles and standards recommended by the International Association of Insurance Supervisors and to ensure the further adaptation of the Ukrainian legislation in the field of insurance to the legislation of the European Union.

To do this, it is necessary to introduce in the insurance market a system of supervision, which provides the maximum accounting in the activities of insurers such parameters as the level of risk, the adequacy of assessment by the insurer of the real level of risk, the quality of the internal management and control system for risks, appropriate accounting and financial reporting of deficiencies in the activities of insurers in the early stages of their development.

### **Conclusions.**

According to the results of the study of the current state of financial security of the Ukrainian insurance market, the following conclusions can be drawn:

- the financial security of the insurance market should be understood to be its financial condition, which is determined by the stability at all stages of financial relations and contributes to its continued development.
- the financial security threats to the insurance market are mainly classified into internal and external. Internal threats are mainly caused by weak financial and economic policies of insurance market participants; errors, wrongful actions of structural units and individual specialists; lack of control over the storage of financial information; mistakes in financial management. External threats caused by insurance companies' external factors: rapid development of the globalization process; high degree of financial resources concentration in international insurance markets; increased competition and conflict between states in the insurance market.
- analysis of the insurance market security level can show that its level is low. The growth rate of insurance penetration is a positive trend, because the more its meaning, the higher level of insurance market financial security. The growth rate of the three largest insurance companies' insurance premiums share in the total amount of insurance premiums (excluding life insurance) contrary suggests reducing of the insurance financial security level.
- the analysis of the insurance companies' profits relationship with the main indicators of its activity: payments, offset by reinsurers; assets of insurance companies; insurance reserves; net insurance premiums; level of net payments; the amount of reinsurance premiums and the amount of paid-up share capital. It is found that the greatest inverse relation of insurers profit exists with the level of net payments.



- the positive trends in the development of the insurance market are an increase in the amount of insurance premiums and insurance payments, an increase in the level of capitalization of the insurance market by increasing the size and others.

- insurance companies take the following measures to ensure financial security against internal threats, namely: ensuring their own information security, establishing a clear scheme of action of insurance units and chief specialists and monitoring their keeping; deepening the financial analysis of clients before concluding an insurance contract and fraud preventing using the latest technologies (use of anti-ratings information, publications on financial frauds, etc.); creation, maintenance and use of «black lists» of unscrupulous clients; carrying out work in the direction of increasing the insurance culture of the population; development of a general strategy of insurance organization activity and establishment of financial management priorities aimed at achieving a secure level of its activity; constant forecasting of possible threats to an insurance company activity; ensuring the balance of the insurance bag, the tariff, investment and reinsurance policies of the insurer; substantiation and realization of the most rational forms, methods and ways of creation, improvement and development of the financial security system of an insurance organization; ensuring continuous control and management of financial security; compliance with the appropriate level of an employees training of the insurance company in compliance with all established rules aimed at ensuring financial security.

- in order to increase the insurers productive activity and to ensure the financial security of the insurance market, it is advisable to: restore confidence in the insurance industry among the general public; develop an effective system for protecting the rights of consumers of insurance services; to bring the provisions of current legislation in line with the requirements of the European Union.

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## **RESEARCH OF THE INTERCONNECTIONS OF THE COMPONENTS OF STRATEGIC POTENTIAL OF THE ENTERPRISE AND FUNCTIONAL STRATEGIES**

**Abstract.** *This article shows strategic potential of the enterprise in combination of target, structural and competitive approaches. The role of the strategic potential of the enterprise in forming a set of functional strategies developed at the level of individual management departments and services was considered. It is emphasized that successful implementation of functional strategies ensures the effectiveness of the overall strategy of company development. The mechanism of the relationship between the functional areas of the enterprise, the components of the strategic potential, functional strategies, the overall (economic) strategy and the goal determination was built. According to the strategic problems to be solved at mining enterprises, the functional components of strategic potential have been formed. A number of functional and complex strategies for solving strategic problems of mining enterprises was identified. The indicator to determine the effectiveness of a functional strategy at the enterprise taking into account the individual parameters of its evaluation was proposed.*

**Keywords:** *strategic potential of the enterprise, functional zones, functional strategies, complex strategies.*

### **Introduction.**

The practice of activity of Ukrainian enterprises over the last decade shows that when using the concept of strategic management, not enough of the efficiency reserves are taken into account. These reserves may be both hidden and visible. Owing to the neglect of such reserves, opportunities to achieve effective results are often lost in the strategic perspective of any line of business. Sustainable positions in a competitive environment are determined by the potential of the enterprise.

Strategic potential (SP) forms the basis for development of a set of functional strategies, that is, in B. Karlof's view, the "untapped whole of management" [1, p. 83] of modern enterprises. Functional strategies developed at the level of individual management functional departments and services belong to the strategic "framework" of any organization that ensures viability and effectiveness of the implementation of the overall (economic) strategy.

Taking this into consideration, under current conditions there are not enough researches about interconnection and mutual interference of functional components of strategic potential and versatile functional strategies of the enterprise, the effectiveness of which influence the results of operations and long-term perspectives.

#### **Analysis of modern scientific research.**

Questions of formation of strategic resources, influence of individual functional subsystems of the enterprise on the corresponding components of the potential are investigated in scientific works of many foreign scientists who created and developed the theory and practice of strategic management. The greatest contribution to the development of the theory and practice of strategic management has the scientific works of I. Ansoff [2], A.A. Thompson, A. Strickland [3] and others. Domestic scientists have developed the methodology of strategic management in the direction of adaptation to modern conditions of functioning of Ukrainian enterprises in the period of formation and development of market relations. The works of Z.Ye. Shershnyova [4] I.A. Ignatyeva [5] and others should be noted.

In the works of A. A. Thompson and A. J. Strickland [3], Z.Ye. Shershneva [4] attention is paid to the role of functional strategies in enterprises. Considering the content of functional strategies, Thompson and Strickland point out that these strategies need to be as many as there are core activities in the corporation [3, p. 82]. In the work [4, p. 350] Z.Ye. Shershnyova defines a "strategic set" of functional strategies within the organizational structure of each functional subsystem at the enterprise. In the same work, the substantive characteristics of the main varieties of functional strategies are presented in detail.

A number of important methodological approaches to formation, evaluation and management of strategic potential at industrial enterprises should be noted, I. Ansoff in his scientific work "Strategic Management" [2, p. 164] has already researched a set of components in forming the company potential for selection of a strategy. Production capacity and its competences are an important component in this work. It was determined that the system of components and competencies are production oriented and responsive to a certain jet strategy.

Recently, the issues of forming the strategic potential of the enterprise (hereinafter SPE) and its management in the researches of Ukrainian scientists I.A. Ignatyeva [5], A. Azarova [6], M.V. Novikova [7], N.V. Kasyanova [8] and others were researched. The scientific works of these authors thoroughly covered the issues of determining the category of "SPE, its characteristics, classification of components, approaches to evaluation, the impact of external factors.

I.A. Ignatyeva [4, p. 24-27] proposed a methodological tool for formation of a balanced strategic potential, which enables to study its condition and predict the trends of possible structural changes. In the works of A.O. Azarova [6] and M.V. Novikova [7] investigate models of the process of diagnosis and evaluation based on the fuzzy modeling method.

N.V. Kasyanova considers the mechanism of interconnection of strategic and operational potentials of the enterprise [8, p.89], where it divides the functional components of these potentials into operational and strategic parts. The possible expediency of such a distribution should be noted. For example, production belongs to operational capacity, whereas related innovation is a part of the strategic component.

It should be noted that in most works, attention is paid to the formation of SPE in the development and selection of the overall strategy of enterprise. However, the diversity of scientific approaches requires their generalization and further development of theoretical propositions and methodological tools in the context of considering the components of the SPE and developing appropriate functional strategies and substantiating their effectiveness.

The purpose of this study is to determine the role of components of the strategic potential of the enterprise in the development of effective functional strategies that ensure successful implementation of the overall strategy and its long-term perspective.

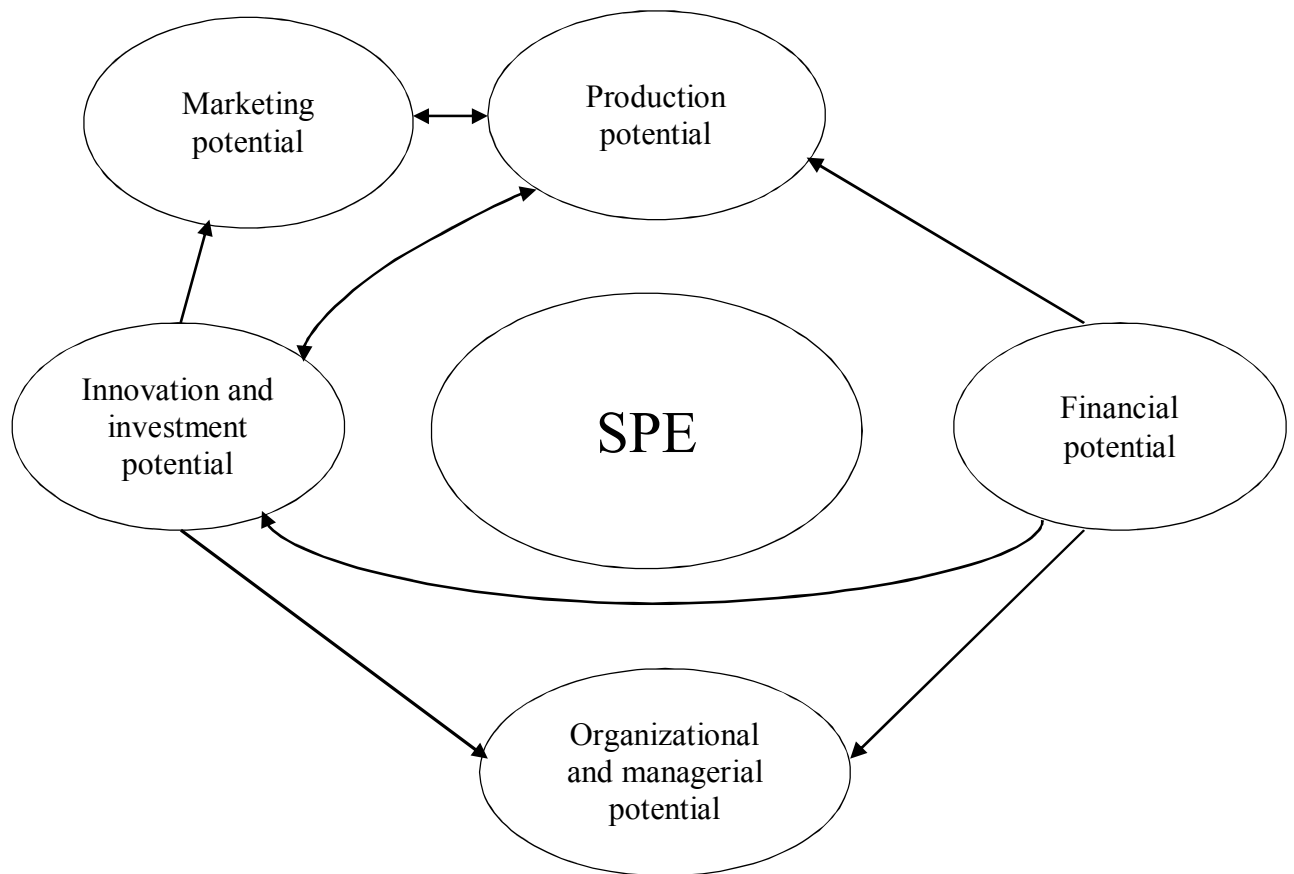
#### **Statement of basic materials.**

The study examines the activities of industrial enterprises of Kryviy Rih, in particular, iron ore mining and processing enterprises (MPE). The iron ore industry is one of the priority areas of the national economy, and its resources in Ukraine are the largest in the world, numbering almost 12 billion tonnes, which exceeds 16% of the world's explored reserves [3]. Increasing the efficiency of mining enterprises is hampered by the presence of a range of problems that have accumulated over the long term intensive exploitation of iron ore deposits and are associated with a number of features and specific conditions of technical, environmental, organizational and managerial character. Studies have shown that timely resolution of problems depends on the effectiveness of implementation of a company development strategy, in particular, in the functional areas of activity [8].

SPE allows the use of external and internal capabilities of the company to implement strategies in the functional areas to achieve targeted results in each area. To create an effective SPE that meets current needs, it is necessary to provide an NGN management process that allows to influence its formation, structure and use in accordance with established goals.

In this study, the strategic potential of the enterprise is considered when combining target, structural and competitive approaches. SPE is an integral indicator that expresses the ability of the enterprise to achieve its strategic goals for all development prospects, taking into account the impact of various environmental factors, and includes components for functional areas of activity in assessing synergies.

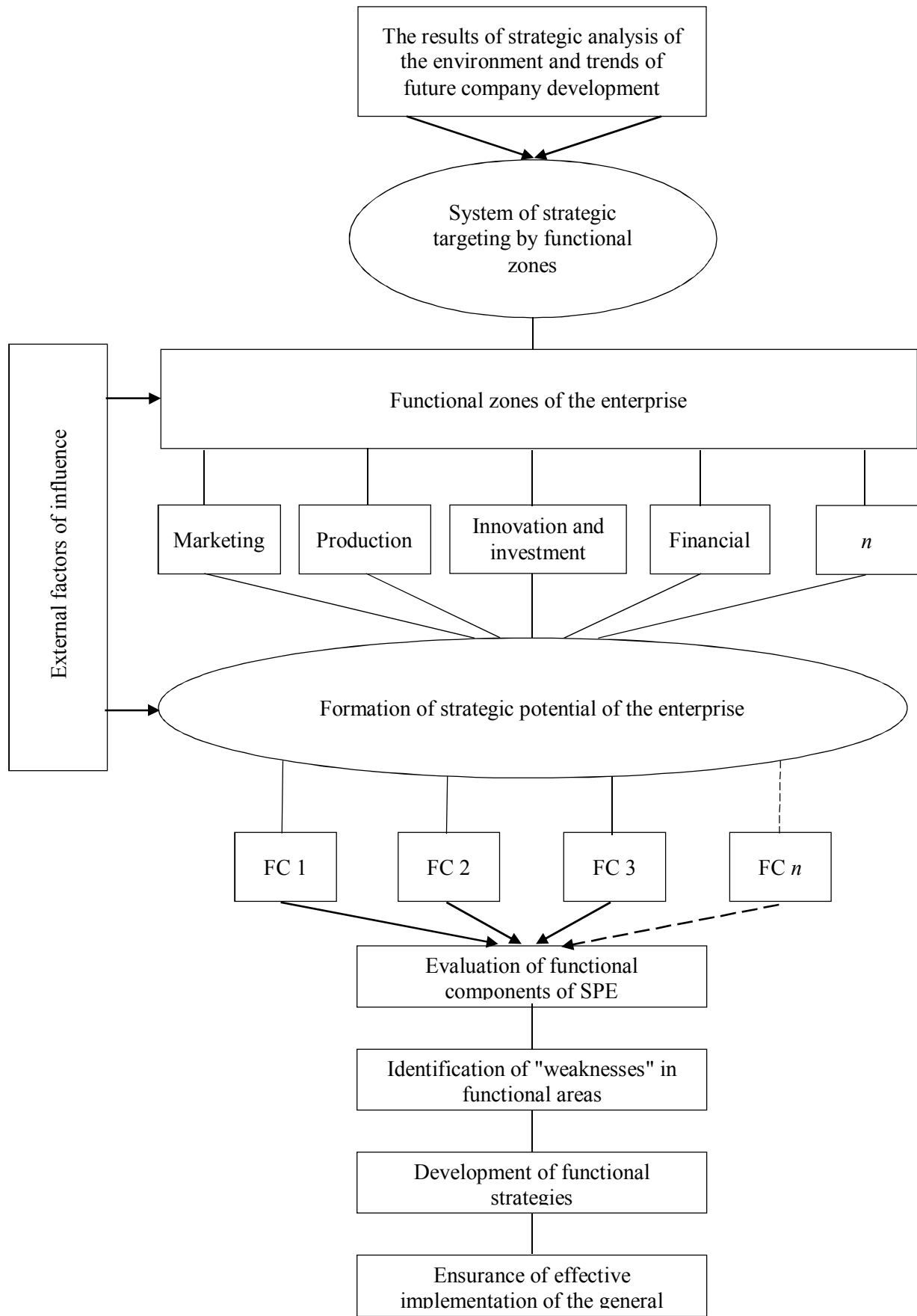
Recent studies of the condition of functioning of the enterprises of iron ore industry show that the main strategic problems constitutes in raising the technical level of production (introduction of modern equipment and technologies), innovation-investment sphere, organizational-management sphere and expansion of market segmentation (marketing sphere) [10-11]. According to these key strategic spheres of activity and formation of potential capabilities of the enterprise it is possible to determine the components of the strategic potential of the mining enterprise by functional zones: production potential; innovation and investment potential; financial potential; organizational and managerial potential; marketing potential (Fig. 1).



**Fig. 1. The interconnections of the main functional components of strategic potential of the mining enterprise**

According to the results of the evaluation, it is advisable to determine the total indicator of each component of the strategic potential of the enterprise. The production potential also includes the provision of environmental measures, as well as measures for reconstruction and technical re-equipment of production processes. Innovative investment potential includes the provision of innovative measures planned at the enterprise prior to implementation in the strategic period, first of all, the volume of investment resources of the relevant sphere [12]. Financial potential is characterized by strategic possibilities of growth of own capital, capital structure.

According to the parameters determined according to each functional area, it is possible to mark individual "weaknesses" of the enterprise, which should be used later in setting strategic goals for individual functional zones to solve these problems in the strategies for the planned strategic period. For example, production potential can be estimated by such parameters as capacity utilization ratio, return on assets, return on fixed assets, depreciation coefficient and fund upgrades. In this way, the relationship between the purpose-setting system, the functional zones of the enterprise activity, the components of the SPE, the functional strategies, the general (economic) strategy (Fig. 2) was built. An important role is played by the study of the influence of external macro- and microfactors on the components of the strategic potential of the enterprise. The factors of direct and secondary impact are considered and the degree of their influence is determined by the peculiarities of the individual evaluation parameters and the internal elements of the SPE components.



FC<sub>1</sub>, FC<sub>2</sub>, FC<sub>3</sub>, FC<sub>n</sub> – functional components SPE

**Fig. 2. Mechanism of influence of functional components of SPE on efficiency of implementation of the general strategy**

Functional strategies have a significant number of directions in the relevant areas of the enterprise. The feature of all types of lower-level hierarchy strategies, which functional strategies belong to, is their subordination to the content and purpose of the adopted overall company development strategy. Each of these functional zones has its own evaluation criteria according to the specificity and role in ensuring the future effective life of the enterprise.

Therefore, it is necessary to ensure the quality of preparation of functional strategies, their direct correlation with the overall strategy of the enterprise, as well as their specific direction, namely to eliminate the identified “weaknesses” in the strategic potential of the study. Thus, the potential shapes the quality of strategy implementation and the future efficiency of the enterprise in this activity area. It is known that in order to ensure effective results of production and economic activity for a long-term period, an enterprise should investigate and analyze not only the influence of various factors of the external environment, but also the state of internal elements and their correspondence with external factors.

**Table 1. Formation of functional strategies for solving current issues of mining enterprises**

<i>Issue</i>	<i>Directions of decision</i>	<i>Functional strategy</i>	<i>Comprehensive strategy</i>
1. High competition in domestic and world markets of iron ore	Marketing	Marketing (search for new market segments)	Strategy of support of competitive position
2. Insufficient competitiveness of commodity iron ore and iron ore concentrate	Production Marketing Innovations	Production (technical and technological) Marketing (analysis of consumer requirements and requests) Innovations and investment (introduction of innovative developments)	Strategy for improving the competitiveness of commodity products
3. Sufficiently high degree of wear of the active part of fixed assets	Production Marketing Innovations	Production (modernization and technical re-equipment) Marketing (marketing research on equipment upgrades) Investment (raising investment resources for equipment modernization and upgrades)	-
4. High energy intensity of ore production	Production Innovations	Production (technical and technological) Innovative investment (introduction of innovations for reduction of energy intensity)	-
5. Negative impact of industrial activity on the environment	Production Innovations Investments	Production (modernization of technologies) Innovations and investment (implementation of innovations in environmental measures and realization of corresponding investment costs)	Environmental protection strategy

It is advisable to distribute the solution of the problems in the directions, in which the corresponding functional strategies are formed: marketing, production, innovations, investments. These strategies may have some variety concerning task directions. The analysis of the state of mining enterprises revealed a number of problems, which are reflected in the established strategic goals and can be allocated according to the respective functional and integrated strategies (Table 1).

Complex strategies are formed by combining functional (sometimes competitive) strategies to achieve complex goals through the efforts of most structural units at the enterprise. Modern problems of mining enterprises can be solved by implementing such complex strategies: strategy of support of competitive position, strategy for improving the competitiveness of commodity products, environmental protection strategy, strategy of improving organizational and managerial processes.

When determining the effectiveness of implementation of a functional strategy (FS<sub>n</sub>), the influence of the main external and internal factors on the parameters under study should be taken into account.

Evaluation of the effectiveness of functional strategy (FC<sub>n</sub>) can be derived by the following formula:

$$FC_n = \sum_{i=1}^n z_i \cdot x_i \quad (1)$$

where  $x_i$  – value of  $i$  parameter of functional strategy evaluation;  $z_i$  – coefficient that takes into account the degree of influence of  $i$  parameter on the result of implementation of the functional strategy;  $n$  – number of evaluation parameters of the functional strategy.

Ensuring a favourable SPE for functional components not only improves the effectiveness of implementation of the functional strategy and determines the priority of a department in allocation of finance, but also explores the synergistic component. The combination of functional strategies implemented in the "strategic set" for the long term period allows to obtain a synergistic effect, which is an additional contribution to the results of the enterprise.

### Conclusions.

SPE allows the use of external and internal capabilities of the company to implement strategies in the functional areas to achieve targeted results in each area. According to the results of the study of modern problems of iron ore mining and processing enterprises the components of SPE, which can be estimated by individual parameters, reflecting its level of application in functional strategies were identified. In accordance with the system of strategic targeting and taking into account the environmental factors, a mechanism of influence of the components of SPE has been formed due to implementation of functional strategies on the effectiveness of the overall strategy of the enterprise. On the basis of the components of SPE, a set of functional and complex strategies for solving current issues of MPE and an indicator for evaluating the effectiveness of a functional strategy was proposed.



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## INCREASING INVESTMENT ATTRACTIVENESS OF THE FORESTRY COMPLEX OF UKRAINE AS A GUARANTEE FOR SUSTAINABLE DEVELOPMENT

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**Abstract.** *Within the article, the importance of increasing investment attractiveness of the forestry complex as a factor of sustainable development and conservation of the ecosystem is investigated. A methodical toolkit for evaluating the process of forming investment attractiveness of the forestry complex is proposed. The importance of improving workflow management and motivation of the personnel of the enterprises. It has been proved that the growth of investment attractiveness can be achieved provided proper tax climate is created, state guarantees are developed, timber export is reviewed, cooperation with foreign companies is established. Attention is drawn to the fact that the investors' decisions to invest in the economy of a particular country are significantly influenced by the following ratings: The European Business Association's Investment Attractiveness Index; Doing Business; Index of economics freedom; Global Economic Forum Competitiveness Index. The proposed method of estimation of the process of formation of investment attractiveness of the forest complex is expedient due to the set of factors and indicators, which should be supplemented by carrying out an analysis to check their collinearity according to the Farrar-Glober algorithm. The article states that the growth of the forestry complex is directly dependent on the efficiency of work motivation, recognition of personal contribution to the overall success.*

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**Keywords:** *forestry complex, enterprises, agriculture, investment attractiveness, sustainable development, workflow management, labor motivation, ecologic function.*

### Introduction.

Development of social relations, transformation and reformation of the domestic economy, including the forestry complex, requires the introduction of new-type social and economic relations, as well as a revision of the production management system. Improving the productivity of employees is a key criterion for the success of organizational and economic reforms.

The forestry complex is at the epicenter of special attention, different scenarios and mechanisms for its reform are proposed.

This concerns the transformation of the management system, improvement of regulatory tools to influence timber markets, and the review of the relationship between the forestry and forestry segments of the industry. Investment deficits are a major hindrance to real reforms in the forestry sector. As a result, the worked-out and obsolete equipment at the vast majority of forestry enterprises is replaced in an untimely and incomplete manner, and the quality of products is not improved [1].

Proper labor management at the enterprises of the forestry complex determines the activity efficiency and is a complex and costly process, which requires systematic support, clear regulation and proper control by senior management and the state, which will increase investment attractiveness and sustainable development of the industry enterprises.

In order to carry out efficient production activities at forestry enterprises, the matter of mobilization and efficient use of investment resources is urgent, that cannot be done without increasing the level of investment attractiveness of both the forestry complex and the entire Ukrainian economy.

#### **Actual scientific research and matters analysis.**

V. Bondar [1], Bhirsma P. Subedi [2], Dankevych [4], O. Dzyubenko [5], O. Fedorchak [6], M. Stupen [14] and others devoted their papers to the problems of effective activity, investment attractiveness and stimulation of sustainable development, methodology and practice of the enterprises management of the forestry complex, however, this issue remains relevant and debatable.

The study of Bruno Kanieski da Silva, Frederick W. Cubbage, Luiz Carlos Rodriguez Estraviz, and Christopher N. Singleton prove that financial attractiveness is not enough to entice investors; it also is necessary to have an attractive. Developing countries have made political and economic changes to create a favorable business environment for foreign investments [3].

Yousefpour R., Jacobsen J. B., Thorsen B. J. have come to the conclusion that forest managers base their decisions on different sets of information and in ways quite different from those assumed. This is a crucial issue as the success of decision making in adaptive forest management depends on managers being aware of changes with regard to state and development of the forest and knowledgeable about available management strategies. Most likely, attention to risk analysis in forestry would grow even more in the coming years, as climatic changes and uncertainties will manifest themselves into concrete management challenges, knowledge shortages and decision support needs [20].

Teyo Ritteri, Tara Peltola and Lina A. Leskinen argue that most of the problems of branches and complexes of the national economy in the context of the state of their activity and sustainability are reflected in the state of enterprises [11].

E. Hansen, C. Claudi Rasmussen and E. Nibakk found that a stronger customer orientation for forestry companies takes place during the crisis, as this leads to increased innovation and improved product development [7].

#### **Methodology.**

Fundamental provisions of the economic theory, outlined in scientific works of domestic and foreign scientists on investing, personnel management, improving the efficiency of the forestry complex of Ukraine are theoretical and methodological basis for writing the article.

In order to solve certain problems, general and special methods were used in the research process, including analysis, synthesis, induction, deduction (to determine the nature and role of the forestry complex in the course of economic processes in Ukraine); abstract-logical (to form conclusions and proposals for improving the activities of enterprises of the forestry complex).

*Purpose of the article is to study of the enterprises activities of the forestry complex in terms of the activity efficiency and investment attractiveness, as a key component of achieving sustainable development, preservation of the ecosystem, taking into consideration priorities of increasing the efficiency of utilization of the forest resource potential.*

### Results.

One aspect of sustainable development is a caring attitude towards natural resource ecosystems; an important part in this process is taken by the forest complex, which increases the level of provision of the state and population with forest products and improves the environment state by increasing the volume of forest plantations.

Let's analyze the activities and investment volumes of the forestry complex in Ukraine. In 2017, the number of forestry entities in Ukraine decreased by 130 units, but in 2018 their number increased by 51 units and amounted to 3422 units. Due to the sale of forest resources and limitation of forest protection processes, the volume of sold products (goods, services) by enterprises of the forestry complex of Ukraine during 2016-2018 tended to increase, while the share of investment in forestry and logging in total investment in agriculture, forestry and fisheries has been shrinking since 2016 (from 2.6% in 2015 to 1.5% in 2018) (Table 1) [12, 13].

**Table 1. Capital investments in agriculture and forestry of Ukraine in 2010-2018**

Years	2010		2011		2012		2013		2014		2015		2016		2017		2018	
		%		%		%		%		%		%		%		%		%
Agriculture, forestry and fishery	11062.6	100	16466.0	100	18883.7	100	18587.4	100	18795.7	100	30154.7	100	50484.0	100	64243.3	100	66104.1	100
Forestry and timber cutting	177.8	1,6	283.1	1,7	281.4	1,5	383.4	2,1	381.0	2,1	788.5	2,6	777.1	1,5	768.9	1,2	980.3	1,5

Source: compiled by authors based on [12, 13]

Forestry enterprises operate at full capacity and have high performance, which in turn affects wages. As the level of wages is higher than the level in Ukraine, it is possible that in the presence of jobs at such enterprises, economically active population will leave to other areas in search of work less.

Forestry complex, as a holistic system and subsystem of the national economy of Ukraine, is aimed at providing three groups of tasks aimed at sustainable development of the country:

1) ensuring social functions of reproduction, conservation and multiplication of forests and forest lands of Ukraine as natural resources - its national wealth;

2) carrying out production and economic functions for the purpose of rational use of forest resources, production of industrial goods, consumer goods, provision of services to the population;

3) ensuring the ecological function of forests and forest resources, enhancing soil protection, water conservation and climate change mitigation.

In order to resolve them, appropriate functional links between the forestry system and other subsystems must be established. Based on the research results, the interconnections between the forestry and other sectors of economy are generalized (Table 2).

Analysis of the interconnection of the forestry with other sectors of the economy shows that they have a causal nature, which influences the activities of forestry enterprises, especially state-owned ones, which are the basis of forestry, and are established and operate within the structure of the state forest resources agency. They are independent economic entities. At the same time, each enterprise, although an independent economic unit, is at the same time an element of higher-level economic systems - a particular industry or the economy of the state as a whole.

The leading role in the allocation of enterprises of the forestry complex belongs to the raw material factor; transport is also of great importance. Forest harvesting is mainly carried out in the areas of raw materials.

**Table 2. Interconnection of the forestry with other branches of economy and their impact on sustainable development**

Branch structure	Interconnection of the forestry with other branches of economy	Impact on sustainable development
Heavy industry, mechanical engineering	Technical reconstruction of forestry production	+
Fuel industry	Satisfies needs for fuel and lubricants	+
Chemical industry	Provides mineral fertilizers to feed forests	+
Agriculture	Opportunities for mutually consistent rational use of land and forest funds to increase the efficiency of both industries, sharing labor and logistical resources	+
Transport	Consistent consumer of a large amount of timber; road and transportation companies make extensive use of protective and water-protecting properties of the forest in their production process; forest resources, mainly timber, occupy a significant place in rail freight	+
Construction industry	Ensures construction of fire-fighting facilities;	+
Pulp and paper industry	Uses wood and its wastes for the production of paper, cardboard, as well as fibrous materials, which are used as semi-finished products for the production of artificial fibers, plastics, cellophane, varnishes, explosives	+
Pharmaceutical, chemical, food industry	Consume useful by-products: saplings, juices and herbs, bark, nuts, mushrooms, berries, medicinal plants, bee products	+

Source: compiled by authors

Low investment attractiveness of the domestic forestry complex does not allow to reach the proper level of capitalization and increase the share of products with high added value in the forest processing units of state forestry enterprises, and this affects adversely the ability of these entities to invest in the reproduction of forest resource potential [5].

The speed of reproduction processes in forests, provision of positive qualitative changes in nature conservation activities, and therefore the achievement of a balanced level of the forestland use are directly dependent on the volume and efficiency of investments.

Insufficient level of investment attractiveness in the forestry complex caused the outflow of investments to the neighboring countries, where they use Ukrainian untreated timber and export finished products to Ukraine. The country loses significant profits that could be obtained by attracting investors by converting wood at its enterprises to chipboard or furniture, which would then be exported abroad, because the production of furniture made of chipboard is 40 times more efficient than the export of raw materials.

Reduced exports of unprocessed timber and an increase in timber production will have a positive impact both on the development of the national economy and regions. Attraction of investments will help increase tax revenues to the budgets of all levels, improve the use of infrastructure potential, develop labor potential, and increase the standard of living of the population [4].

Instead, countries with developed forestry complex export deep-processed forestry products, primarily furniture, cardboard and paper. These issues are also closely related to the problems of ecology and balanced development, environmental regulation of forest business [14].

According to the results of the research, it is established that among the main problems of the forestry complex of Ukraine are: imperfect regulatory framework; problems of forest management of different forms of ownership; imperfect economic mechanisms to stimulate forestry development; low level of investment attractiveness; low rates of implementation of environmental technologies; high anthropogenic load on forest ecosystems; imperfect tax base; growing demand in the domestic timber market; unauthorized felling of forests, self-seizure of forests; inadequate legal status of forest protection [9].

Among the most well-known ratings, which significantly influence the decision of investors to invest in the economy of a country, are the following: The Investment Attractiveness Index of the European Business Association [16]; The Doing Business rating) [17]; The Economic Freedom Index [9]; The Global Competitiveness Index of the Economic Forum [18, 19].

Investment attractiveness of a particular country, industry according to the ratings is determined by the following factors: registration of new business, availability of electricity, availability of credits, protection of investor rights, fulfillment of contractual obligations; freedom to start a business and freedom to trade; fiscal freedom; government intervention in the activities of private enterprises; freedom of investment, absence of corruption, freedom of the labor market, etc. [6]. In addition, economic and political stability are important factors for increasing investment attractiveness.

Against this background, it is advisable to present the process of forming the investment attractiveness of the forestry complex as a system  $S_{III P}$ , which is described in the following way:

$$S_{III P} = \langle F, I, R^{FF}, R^{FI}, P \rangle \quad (1)$$

where  $F$  - host of factors,

$I$  - host of indicators;

$R^{FF} \subset F \times F$  - host of casual relationships between factors;

$R^{FI} \subset F \times I$  - host of parametrical links between factors and indicators;

$P$ - host of procedures for the assessment of factors interconnections (grouping, clustering, correlation, regression and others);

The host of factors  $F = \{f_1, f_2, \dots, f_i, \dots, f_n\}$  of the impact on investment attractiveness of the forestry complex can be defined as some features of the system, that can be evaluated qualitatively or non-parametrically.

It is advisable to divide the host of factors into subsets that characterize:

-  $F^C$  – factors of long-term impact;

-  $F^U$  – factors of short-term impact;

-  $F^E$  – stochastic factors that cannot be influenced within the system frames.

Definition of the host of associative interconnections between factors and their indicators can be presented as follows:

$$R^{FI} : F \times I \rightarrow [0,1] \quad (2)$$

Under this elementary correlation for the relevant factor and a set of the indicators  $f_i R^{FI} i_j$ , the compliance factor is matched, weight of the relevant indicator  $w_{ij} \in [0,1]$ . The higher the value of the coefficient, the more accurate the indicator  $i_j$  characterizes the factor  $f_i$ .

In order to eliminate the interconnection between the indicators, variations in the use of different measurement scales in addition to determining the standardized values of the indicators (formula 1), an analysis should be performed by checking their collinearity by the Farrar-Glauber algorithm, which will allow the construction of an adequate econometric model when determining the form of a link within a given factor.

In modern conditions, determining motivational factors for enterprises of the forestry complex, which enhance the incentives for workers to productive work, are: providing equal employment and job growth opportunities on the basis of performance criteria; reconciliation of the remuneration level with its results and recognition of personal contribution to the overall success. This implies a fair distribution of income according to the degree of productivity gains; providing opportunities for professional development, realization of employees' abilities, development of training programs, advanced training and retraining.

To create effective staff motivation, we propose to formulate clear goals and milestones; for support managers at various levels to support employee initiatives to improve work organization; strengthen the discipline of work; establish an effective corporate culture; provide empathy for managers (interest in personal problems of employees, desire to help); create favorable working conditions; establish effective team interaction; develop conflict management skills; form a sense of involvement in employees.

Development of the forestry complex also requires the implementation of projects to increase the forest resource potential, the introduction of modern technologies of woodworking and electronic accounting of trees.

Since forestry enterprises are predominantly state-owned, it is possible to use state guarantees as a powerful tool for increasing investment attractiveness of forestry production.

Simplifying leasing arrangements can be an important factor in increasing investment in the forestry and wood working, that will speed up the process of updating the fleet of production equipment and forestry equipment and ensure a gradual decrease in the level of physical operation of fixed assets of state forestry enterprises [1].

Considering that Polesie, Carpathian and Transcarpathian regions, which have the largest areas of forests, are in close proximity to the borders of the European Union, there is every chance to establish effective cooperation and, in the medium term, establish large timber companies in Ukraine, to get rid of the timber feeder brand and enter the global value-added forestry chains.

### **Conclusions.**

Therefore, increasing investment attractiveness of the Ukraine's forestry complex is a key to ensuring sustainable development. With the need to save all kinds of resources and optimize costs, the improvement of labor organization, as a factor of competitiveness and investment attractiveness, is becoming increasingly important. Measures on the labor inflow improvement at forestry enterprises should be complex, take into consideration peculiarities of working conditions, as well as the modernization, reconstruction and technical re-equipment of fixed assets.

Stabilization and growth of forestry production, profits of producers are directly dependent on the efficiency of work motivation in the primary sector of the economy, in particular the combination of its tangible and intangible assets, as a result, the development of human skills and capabilities as the ultimate goal of social progress and its impact on production is ensured. Priorities of the modern system of work motivation of forestry enterprises are improvement and increase of the level of remuneration, stimulation of young people for living and production activity in rural territories, state support in providing a favorable investment climate, providing preferential loans, consulting services and promoting the development of forestry enterprises, involving managers to participate in professional exhibitions, fairs, international conferences and more.

It is found that significant growth of investment attractiveness of forestry enterprises can be achieved by maximizing profits while creating the appropriate tax climate, developing a system of state guarantees, revising the timetable for export of timber, establishing cooperation with foreign companies.

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## INNOVATIVE APPROACHES TO MANAGING THE DEVELOPMENT OF SOCIAL PARTNERSHIP

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**Abstract.** *In the modern world, social partnership is one of the most important factors in the organization of a market economy and one of the essential aspects for interaction between people in the process of production and social life. The article systematizes and describes modern concepts of social partnership in different countries. The purpose of the article is to synthesize theoretical foundations and evaluate the implementation of the social partnership ideology of foreign countries as a factor of the stability of economic life in Ukraine based on innovative approaches to managing the development of social partnership. It is proved that innovative management of the social partnership development is the driving force of increasing the competitiveness of both employees and the enterprise as a whole. The main difference between this study is the construction of a model of organizational changes necessary for the development of social partnership, taking into account the innovation factor. This concept allows you to implement the process of managing the development of social partnership with maximum efficiency for all actors in the process. The study confirms that it is necessary to build the consciousness of top management and employees to shape the infrastructure of social partnership and bring an innovative, scientific and methodological basis to it.*

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**Keywords:** *innovative approaches, social partnership, stability of economic, competitiveness.*

### Introduction.

In the modern world, social partnership is one of the most important factors in the organization of a market economy and one of the essential aspects of the interaction between people in the production process and social life.

In Ukraine, the formation and development of a social partnership system occurs simultaneously with the formation of a market economy, a rule-of-law state, civil society and their institutions. Therefore, at the present stage of development of the domestic economy, it is relevant to identify the peculiarities of the formation of a social partnership in Ukraine, to identify the shortcomings of functioning and to develop directions for its further improvement. Actualization of the problem is also due to the impossibility of simply copying the experience of advanced countries in the development of social partnership in Ukraine. Therefore, it is important to study and use in domestic practice the best practices of forming a social partnership system in developed countries and taking into account all its advantages when building one's own.

### **Literature Review.**

Social and foreign scientists pay much attention to social partnership issues in their scientific works. For example, scientists Pavlov V. I. and Kolosok A.M. (2009) considers theoretical and methodological aspects of the formation of social partnership in Ukraine and countries of the world, defines trends of development and improvement, especially at the regional level [4]. Akulina O. V. (2007) believes that the system of social partnership is based on the recognition of the need for a common position of the participants in the dialogue, when the communication and activities of entities aimed at achieving a common social-significant goal through the cooperation efforts [1]. Ermakova Y.A. (2016) considers social partnership from the point of view of the interaction of power and business, that is, as a special social and economic institution of market regulation.

At the same time, the problems of formation and functioning of the social partnership system, its significance and peculiarities of development in Ukraine remain insufficiently studied.

*The purpose of the article* is to synthesize theoretical foundations and evaluate the implementation of the social partnership ideology of foreign countries as a factor of the stability of economic life in Ukraine based on innovative approaches to managing the development of social partnership.

### **Materials and Method.**

Methods of research used in the process of writing the article include the use of general scientific and empirical techniques of economic science, based on a systematic approach. Also, in the process of work used such general research methods, as generalization and comparison, and the method of analogy.

### **Results and Discussion.**

Social partnership is a system of relationships between employees, labor collectives, trade unions - on the one hand, employers and their associations - on the other, and the state and local governments - on the third, their representatives and jointly established bodies for regulating social and labor relations, which (interrelations) consist in mutual consultations, negotiations and procedures on mutually agreed principles in order to respect the rights and interests of employees, employers and government.

From a legal point of view, social partnership is considered in three aspects: as a system of social relations, as a principle of interaction between subjects of collective labor relations, and as a legal institution. Acts of social partnership - collective bargaining and agreements - are the result of social partnership.

For the first time, the term “partnership”, in relation to social relations between workers and employers, was used by the English philosopher John Stuart Mill, bringing in his study *Basics of Political Economy and Some Aspects of Their Application to Social Philosophy* (1848), that the development of social relations will occur by combining workers with capitalists and through the union of workers among themselves.

In the first half of the twentieth century. under conditions of increasing production concentration, complication of economic relations, aggravation of social problems, militarization of the world economy - the expansion of economic functions of the state occurred. The state actively began to intervene in the regulation of economic and social relations. In many countries of Western Europe and the United States - in twentieth century 40s-50s - under the pressure of left forces and

trade unions, social legislation was developed. State social policy included programs of achieving a high standard of living of the population by creating a state system of education, health care, housing construction, social protection programs, regulating the minimum wage, and this like.

Later they were supplemented by demographic, environmental and other programs. A system of minimum standards of social security of citizens guaranteed by the state was developed and approved. The result of this state activity was a fairly clear fixation of that part of the social labor relationships (minimum wage, average workweek, holidays, social assistance, etc.) in which the United States was the guarantor. At the same time, the state defined a sphere where social and labor issues could become the subject of negotiations between employees and owners of capital (issues of labor remuneration, employment, social security, a minimum guaranteed by the state).

The idea of social partnership was put into practice in Germany in the 60s of the twentieth century, where did “conciliation actions” take place, in which, with the participation of the government, representatives of business associations and trade union leaders made decisions in matters of the country's economic policy. Tripartite commissions with the participation of the government, employers and trade unions became an instrument of such interaction, social partnership agreements were concluded annually and employers' activities were regulated (timely payment and salary indexation, creation of new jobs, safety precautions) and hired employees (adherence to technological discipline, etc.).

In countries with developed market economies, the social partnership ideology has penetrated deeply into social and labor relations, although its models in different countries differ in their organizational and legal mechanisms.

There are three main models of social partnership in the world. The first model is characterized by a high level of centralization of the contractual process. It is applied in Northern Europe - Belgium, Denmark, the Netherlands, Norway, Finland, Sweden, Austria. The international legal principle of “ILO tripartism” is embodied in these countries. All decisions on social and labor relations are made with the active participation of the authorities and all social partners. Decrees that are produced become the basis for industries and enterprises. The second model is most typical for the countries of Central Europe - Italy, Germany, Switzerland, as well as for England and Ireland. In these countries, permanent social partnership bodies are not established at the national level. Governments periodically consult with national trade union and employer associations. Joint decisions are almost not taken; sometimes national agreements are made on individual issues of social policy. The main negotiations take place mainly at the regional and sectoral levels.

The third model is typical for countries in which the negotiation process takes place at the level of enterprises and institutions, namely: in France, Spain, Portugal, Greece, as well as the USA and Japan. The organization of owners (employers) does not interfere in social and labor relations [3]. Social partnership models in different countries differ in the organizational mechanism, norms and rules for regulating social and labor relations, the degree of centralization of the procedure, and the state's participation in social dialogue. However, it is common to all that most issues arising in the social and labor sphere are resolved at a basic level. The most perfect mechanism for the participation of enterprise employees in making decisions related to their vital interests is in Germany [5], where the cooperation of social partners has gone a long way of evolutionary development.

The core form of social partnership in Germany is the production council, which is created at the enterprise and is a consolidated body of representation of workers and employees. Through production councils, workers defend their interests to the employer.

A characteristic feature of the regulation of social and labor relations in Germany is the distribution of functions between enterprise councils and trade unions. The task of the trade unions is to conduct tariff negotiations and implement policies to improve living standards. In the process of negotiations, framework tariff agreements on salaries, official salaries and remuneration for labor, agreements on the protection of workers during rationalization of production, agreements to resolve conflicts by peaceful means are concluded. The task of production councils is to protect the interests of labor collectives in negotiations with employers. They are involved and may require decisions on the following issues: labor regulations at enterprises and the behavior of workers and employees; the establishment of a normalized working schedule; forced reduction of the operating mode. This is especially important when there is a threat of massive layoffs. The production council in this case has the right to take initiative steps; terms of salary payment; installation of systems and forms of remuneration. These include: the possibility of introducing rates of piece rates; hourly and lump sum bonus wages; surcharges to the basic wage; rewards for innovation proposals; advance payment; old-age pensions, which are not implemented by other institutions, the introduction and use of new technical means of monitoring the behavior and labor of workers and employees [5]. Thus, social and labor relations are based on innovations and rationalization of the structure of the economy.

In Central and Eastern Europe, Hungary was the pioneer of tripartism, creating a body - the All-Hungarian Union for Harmonization of Interests. In 1990, he was reorganized into the Council for the Coordination of Interests; the functions of its members were expanded. If earlier the work of this structure was determined mainly by the government, then after 1990 all three parties (government, employer, trade unions) act as equal partners [1].

Now the actions of the Hungarian government aimed at linking the main function of the council, which is to harmonize the interests of the government, trade unions and employers on such fundamental issues as the formation of labor policy (employment, wages, social issues, education), legal regulation of relations between workers and by employers. It is noteworthy that in Hungary, as in other countries, there is no separate law regulating tripartite cooperation. It is based on decisions of the government and agreement of the parties. The duties of the government to harmonize interests are defined by the labor code of Hungary, and the Law on Employment provides for significant legal rights of the council to harmonize interests. The social partnership mechanism in Hungary, as in the countries of Western Europe and Asia, is an effective means of regulating labor relations, preventing strikes and other forms of open opposition.

Important elements of Irish social partnership include: voluntarist relations; adversarialism; centralisation; institutionalisation; and collectivism [7]. Ireland's system of industrial relations is, first, premised on voluntarism, in that the main protagonists regulate employment conditions through voluntary rather than legislative arrangements. A second feature of Irish industrial relations is that relations between unions and employers tend to be viewed as adversarial (or antagonistic), with an acknowledgement that underlying conflicts of interest are best mediated through State-sponsored supports, such as the Labour Court [9].

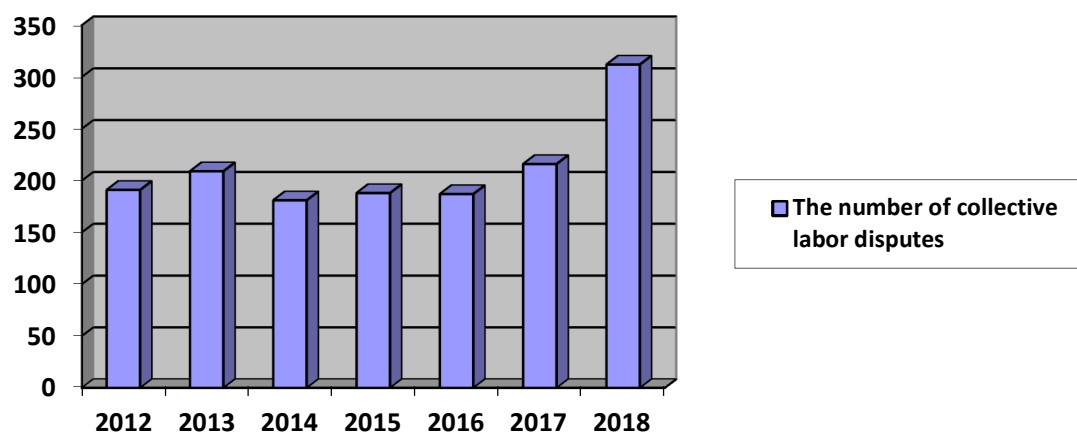
Thirdly, voluntary social partnership in Ireland is very much a centralised and institutionalised arrangement at the national level, with a series of uninterrupted national agreements over 20 years covering wages, taxation and welfare provision [10].

After examining the issues of social partnership in different countries, the authors note that its development is stimulated by innovations by ensuring that society perceives the role of scientific and technological progress.

In Ukraine, the institute of social partnership is formed in accordance with world tendencies, special attention is paid to the issues of economic efficiency and legal solution of collective labor conflicts, which are aimed at minimizing economic losses of enterprises, institutions and organizations that may result from collective labor disputes.

The relations of social partners in the labor sphere in Ukraine should be characterized as the predominance of formal social partnership procedures that do not have weighty real economic consequences.

Since 2016 there has been a positive dynamic in the work of National Mediation and Reconciliation Service. Thus, during 2018 NMRC contributed to solving 312 collective labor disputes (conflicts), which is by 44.5% more than in 2017, (3 in the national, 3 in the sectoral, 5 in the territorial, 301 in the production levels ), the direct participants of which became almost 1,5 million employees of 6835 business entities (2018).



**Fig. 1 The dynamics of disputes in the social and labor sphere of Ukraine in 2012-2018**

*Source:* developed by the authors

Such urgent Ukrainian problems as corruption; tax, administrative and criminal pressure, violation of laws, forced redistribution of property make it clear that Ukrainian society needs to move to a new stage of social and labor relations, and this is a social partnership [2].

Studies show that social and labor relations should be flexible, adapt quickly to the necessary changes.

Social partnership at enterprises is carried out in the following forms:

- collective negotiations on the drafting of collective agreements;
- ensuring the guarantees of workers' labor rights and improving labor legislation;
- participation of employees in the management of the enterprise;
- participation of employees and employers in the resolution of labor disputes.

Researchers and participants in socio-economic and labor relations continue to note the ineffectiveness of the system of social partnership, formality and non-fulfillment of collective agreements. One-sided monopolization of the labor market by the employer is clearly manifested, accompanied by an increase in social insecurity of workers and social tension in society, the emergence of new forms of labor disputes. Thus, the existing system of social partnership, which is designed to protect workers, is not sufficiently effective in terms of the implementation of innovative and socio-economic areas.

The authors conduct a comparative analysis of the elements of social partnership models of Ukrainian and foreign enterprises (table 1).

**Table 1. Comparative characteristics of the elements of social partnership models of Ukrainian and foreign enterprises**

Elements of the formation of a social partnership model	Ukraine	Germany	USA	Hungary
Social levels partnerships	Tripartism	Tripartism	Bipartism	Tripartism
Subjects social partnerships	Workers (labor collectives and professional unions) employers and government	Professional unions, employers and government	Employees and employers	Employees and employers and government
Normative base labor decisions disputes	Labor Code	Labor Code	Federal laws and state laws	Labor Code
Interaction professional unions	Trade unions have wide enough powers but addicted to enterprise management	Distribution of functions between enterprise councils and trade unions	The role of trade unions organizations going down	Government, employer, trade unions act as equal partners.
Solution methods labor disputes	Customized labor disputes: commission on labor disputes judicial order; collective: conciliatory labor commission arbitration	Conversation, mediation (dispute resolution with the participation production tips), arbitration method	Reconciliation, conversation, mediation, arbitration method	Reconciliation, arbitration, mediation
Retirement age	Retirement: for women at 58.5 years old, for men at 60 years old.	Gradual transition from 65 to 67 years as the retirement age. Currently, the formal retirement age is 65 years and 6 months.	Retirement at 65 years old	Retirement at 64 years old
Staff training	Formal training	Combination formal and informal approach to training the staff	An approach informal training. Trends continuous training	Formal training

It can be concluded by evaluating in a comparative description, the Ukrainian model of social partnership, that the model reflects the general international principles and patterns of social partnership, but at the same time has its own distinctive features. It is based on international experience and legal norms in the sphere of social and labor relations.

New ideas, new technologies and new approaches to management, the training of skilled workers and the involvement of employers in the process are a prerequisite for the productive development of social partnership. All this requires innovation in management.

Modern society is characterized by an increase in demand for highly educated and highly skilled workers, due to the increasing role of man in production and the need for constant innovation and constant training. In connection with this, the role of social partnership also changes: the situation of confrontation between employees and employers becomes unacceptable.

Considering the element of the model of social partnership "staff training", social partnership is characterized by four dimensions: anticipation and identification of skills needs, mobilising of resources, involvement in information, support and guidance as well as validation and recognition of skills, competences and qualifications. The main findings of the country reports are condensed in the matrix presented in Table 2 [11].

**Table 2. Social partners' assessment of employee training in four selected dimensions**

Country	Ukraine	Germany	USA
Anticipation and identification of skills needs	1	3	3
Mobilising resources	1	2	2
Information, support and guidance	2	2	2↑
Recognition and validation of competences	1	2↑	3

*Prominence of issues shown on a scale from 1 to 3*

*1 = low; 2 = intermediate; 3 = strong.*

*↑ indicates positive trend*

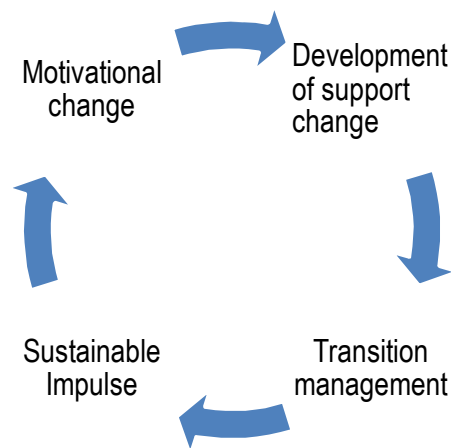
*Source: grouped by the authors*

Table 2 shows almost all countries display some fields in which they are somewhat closer or further away from what may be considered an optimal outcome (in terms of the system as such or social partners' satisfaction with its implementation), and there is no single country that performs well in all selected fields jointly. For example, while the anticipation and identification of skills needs works quite well in two out of the three countries, there is still room for considerable improvement in Ukraine. Mobilising resources works well in two out of the three countries, but there are also Ukraine with substantial scope for improvement. In the field of information, support and guidance, no country has reached an optimal state. The recognition and validation of competences and qualifications has an optimal assessment in only one of the surveyed countries, while there is still scope for better outcomes in two countries.

To improve the system of social partnership in enterprises, the authors propose a model of organizational change. Organizational change is not always easy, but the benefits are huge in terms of implementing partnerships.

The authors proposed several stages of organizational changes that are necessary for the development of social partnership in enterprises (Fig.2).





**Fig.2 Model of organizational changes necessary for the development of social partnership**  
*Source:* developed by the authors

Considering the first block of organizational changes, the authors denote that one of the key strategies is a strategy that based on self-interest. Employees of the organization and the leaders of the organization as a whole need to make sure that the development of the partnership will have something important for them, otherwise the development of social partnership can be perceived as simple extra burden. The strategy of the enterprise should include the following aspects:

- understanding the opportunities and values of partnerships.
- designation of the current position of the organization and where it may be in the future (visions are a powerful motivator).
- a developed partnership plan.

At the same stage, it is advisable to pay attention to the element of the social partnership model “staff training”. With the right approach, training can be one of the essential factors of motivation for change. Thus, the introduction of some changes in management enhances the development of personnel, which includes issues of innovative flexibility as a strategic priority for achieving the targets of enterprises. The change management phase is often ignored by supervision, which can have devastating consequences for successful change.

From the side of the state and state institutions, the ways of introducing social partnership at enterprises should be to take measures to motivate employers to use the principles of responsible partnership at the micro level. Thus, in Ukraine it is necessary to introduce the international legal principle of "tripartism" and in the management of motivation: the state, employer, workers. In the “Development of support change” phase, an enterprise strategy should include the following:

- the top management of the organization should provide an understanding of social partnerships at all levels of management.
- • the top management of the organization must recognize that partnerships can change the existing hierarchy of power.
- the top management of the organization should involve all managers of the enterprise in the management and implementation of social partnership thinking.
- the top management of the organization should involve all managers of the enterprise in the management and implementation of innovative approaches to the development of social partnership.

The “Transition management” phase occurs when an enterprise actually moves from the current state to the future. This establishes a partnership. At this stage, the strategy includes the following aspects:

- Continuous learning and repetition of new policies and procedures.
- Professional development.
- Permanent fixation of all achievements.
- Adjustment of plans based on feedback.
- Development of work plans that emphasize partnership development.
- The “Sustainable Impulse” phase is often the most difficult step in managing change. At this stage, the strategy includes the following aspects:
  - Providing support, often in the form of resources, along with professional development and coaching.
  - Affirmations and fixing success.
  - Reward success and change.

Forms of social partnership in enterprise are: consultation, negotiation, information sharing, the search for compromise solutions and control over their implementation. The legal framework of social partnership defines the complex of legal norms governing the status, rights and relations between social partners.

The idea of social partnership and its development in Ukraine attract more and more attention from representatives of very different social groups, since the experience of industrially developed countries indicates the need for cooperation between the employee, the employer and the state itself.

At the same time, there are a number of problems: collective agreements do not provide sufficient social protection of workers and an adequate level of their competitiveness in the labor market; the process of formation and regulation of collective-contractual relations involves an insufficient number of employees, virtually no rules on the continuing professional development of workers and additional social guarantees. It should be noted that the indicator of upgrading the number of employees several times falls behind this indicator in the developed countries, which leads to the "aging" of knowledge, which reduces the competitiveness of the whole enterprise.

### **Conclusions.**

So, foreign and national experience convinces us that social partnership is an important condition for the successful implementation of socio-economic and labor reforms. At the same time, it is necessary to form the consciousness of the workers in the direction of an active position in the negotiation process, to persistently form the infrastructure of social partnership, to bring the innovative, scientific and methodological base under it, using the proposed model of organizational change.

The realization of social partnership ideology in Ukraine will enable: for the state – to increase the effectiveness of regulation of socio-economic relations; for the business – to create a favorable image and get competitive advantages and sustainability of their own development; employees – to improve the quality of their life and socio-psychological climate at the enterprise.

Thus, in the short term, all parties to social and labor relations in Ukraine will have to occupy a niche in the regulation of the national labor market in order to socialize it: the state should create a mechanism to encourage (primarily economic) parties to solve social and labor problems by means of social partnership; entrepreneurs must understand the social aspect of the success of their business, and therefore take into account other, besides enrichment, goals of entrepreneurial activity.

The authors see the direction of further research in improving the management of the development of social partnership in Ukraine with the use of an innovative, scientific and methodological basis.

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## Section 2. Business Regulation and Sustainable Development Management

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### FINANCIAL ANALYSIS IMPLICATIONS FROM CORPORATE MANAGEMENT BASIS

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**Abstract.** *Annual financial corporate reports carry great information potential and weight. Analysis of financial reports is one of the parts of business analysis which is conducted in goal to determine financial and economic strength of the company and explore ways and possibilities for further development and growth. Besides basic understanding of how company operates, analysis of financial reports can be instrumental in process of making quality business decisions, not just inside the company but also on financial markets. Analysis of financial reports is mandatory tool in process of evaluation of the company and represents how seriously it approaches to strategic planning and long-term positioning on the market. For purpose of this paper was used content analysis method and case study on example of Crnogorski Telekom A.D. Podgorica*

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**Key words:** *financial statements, analysis of financial statements, decision making.*

#### Introduction.

Financial analysis enables analysis of past results and activities and prediction of future ones. The evaluation process can be performed using more complex or simpler methods, but all of these methods require knowledge of financial perimeters arising from a company's financial statements. Notwithstanding the indisputable usefulness of financial statements for their users, there

are also important functioning elements of a company that cannot be identified on the basis of such reports and are very important (sometimes crucial) for evaluation of a company's value [1-2].

For example [5]: a company's management quality, quality and motivation of employees, product, i.e. service quality, demand for products or services of a company, age of receivables and their collectibility, size of customer base, company's strategic plans, business arrangements with other companies, etc. By collecting and reviewing the aforementioned data and data published in financial statements it is possible to obtain a more realistic and complete picture of the validity of current business results and company's perspectives, and thus create conditions for a better and more precise assessment of its value. It is also important to note that the book value of a company is in most cases lower than its real value. Corporate governance is a relatively new term for describing activities that pertain to monitoring, i.e. control of a company's management. The term corporate governance is interpreted differently and is most often related to the role of the board of directors whose function is monitoring the company's management. Corporate governance therefore represents a level at which strategic decisions are made for the company [17]. It is important to note that the corporate governance regulations in recent years have been tightened in many ways due to some historically unfortunate events followed by accounting scandals, inaccurate financial reporting and the crisis in the financial markets. One of the important segments [15] of financial reporting in a company is the role of the company's board of directors. The financial statements are usually approved by the board of directors of the company. The Board of Directors sometimes also appoints a subcommittee in charge of monitoring financial reporting, all with the aim of ensuring the highest quality of financial statements. Most companies also conduct internal audits to minimize the risk of fraud and financial misstatement.

#### **Implications of Analysis Effect in the Context of Managerial Decision-making.**

Financial analysis, i.e. financial statement analysis or ratio analysis implies confrontation of certain positions from the balance sheet, income statement and cash flow statement in order to obtain comparable and useful data. The balance sheet is a systematic representation of assets and liabilities of a company at a particular dock. On the other hand, income statement shows the income and expenses of a company over a period of time, usually one year. Therefore, balance sheet is a representation of the financial position of a company at a particular point, whereas income statement describes the profitability of a company over time [7].

Financial analysis can help a company to look at and understand its past, evaluate the present and predict the future. It also provides the company with accurate and precise information that are used as informational basis for making business decisions [19]. Financial statement analysis [14] is a major instrument in making a credit facility decision, as it interprets past results in order to predict future business ability and debt repayment ability.

„Financial analysis is art of transforming data from financial statements into information useful for decision-making“. Analysis of financial indexes (ratios) includes two types of comparison. The first involves comparison of the present with the past ratio and the expected future ratio of the same company. This is internal comparison. In contrast, there are external comparisons that involve comparison of a company's ratio with the same or similar company from that industry or industry average. These comparisons should not be used as a goal, but merely as a guide [7.]

With the help of financial analysis [4] the financial position of a company is assessed. It is carried out on the basis of accounting data from financial statements (balance sheet, income statement, cash flow statement), so the analysis itself depends on the accounting data quality.

By putting certain positions from the financial statements in relation, the corresponding indicator, i.e. ratio number is obtained. There are different classifications of ratio numbers. They are usually classified into five groups: Liquidity indicators; Activity indicators; Financial structure indicators; Profitability indicators; Market value indicators.

#### **Financial Analysis on the Example of Telecommunications Company “Crnogorski Telekom JSC”.**

In the last ten years (from 2010 to the present day), the telecommunications sector has been recording unprecedented and unexpected growth and development thanks to technological innovations and development, above all, of mobile communications and the Internet. This is why this sector is one of the most capital intensive sectors in the economy. The constant need for new investments, upgrading of network and services and a highly competitive market are creating constant pressure both to telecommunications operators and users of telecommunications services. Due to the rise in competition, prices of telecommunications services are constantly decreasing and it is getting more difficult for operators to increase their revenue from their services. In order to make a profit and justify huge investments, they are forced to reduce their business costs, above all costs of network maintenance. Business in market conditions with the increasing competition forces the companies to constantly and thoroughly analyze business conditions and results in order to eventually correct the perceived weaknesses and unwanted financial flows, overcome difficulties and use favorable business opportunities [3].

As in the previous part of the paper we discussed different types of financial coefficients (ratios), through this analysis we shall try to capture those that are most significant in the field of corporate governance and quality decision-making at that hierarchical level.

The first in a series of indicators is the liquidity ratio that is calculated when short-term assets and short-term liabilities are put in relation. This ratio measures [10] the ability of a company to pay its arrears timely. From our example, we can conclude that liquidity was highest in 2015 with an amount of 1.70, which means that the company had EUR 1.70 of current assets on each euro of liability. This indicator decreased in the following years - at the end of 2018 it was 1.18.

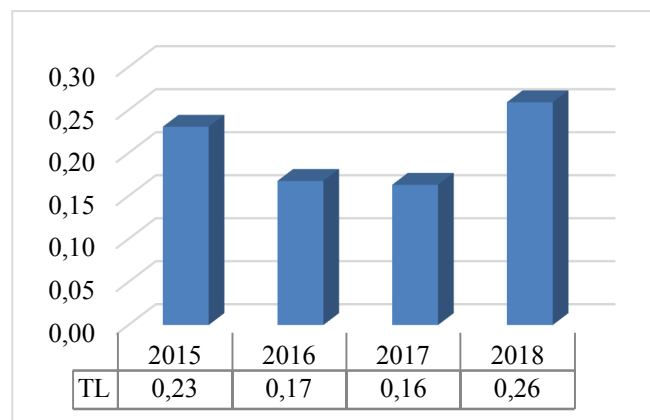


**Fig. 1. Current ratio**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

Current liquidity ratio puts current assets and current liabilities of a company in relation. Current assets [8] are assets shown in the balance sheet whose maturity is up to one year, i.e. the

turnover of these assets is made within one year. On the other hand, current liabilities are obligations with a maturity of up to one year. The higher the ratio, the higher the company’s liquidity i.e. ability to meet its short-term liabilities. The next indicator used for assessment of a company’s liquidity is cash ratio. On the example of our company that we are analyzing, cash ratio is shown in Figure 2.

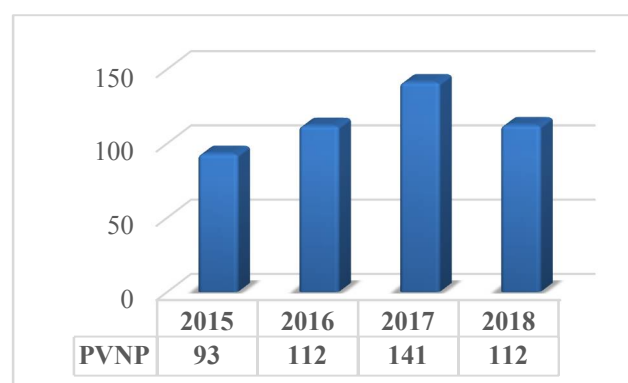


**Fig. 2. Cash ratio**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

Cash ratio is a conservative method of assessment of a company’s liquidity that involves putting only cash and short-term liabilities in relation. This indicator (Ou & Penman, 1989) shows a company’s ability to meet its obligations in times of crisis, especially for companies with lower inventory turnover. In our example of “Crnogorski Telekom”, the cash ratio is highest in 2018, amounting to 0.26, which means that for each euro of current liabilities, the company has 0.26 euro in cash.

The average number of days of collection of receivables [11] shows us how fast a company collects its receivables from customers. This is essentially a period in which a company lends interest free to its customers. In our example, as we can see in Figure 3, we can see that there is an upward trend in the number of days of collection of receivables in the period from 2015 to 2017, while a slight decline was recorded in 2018.

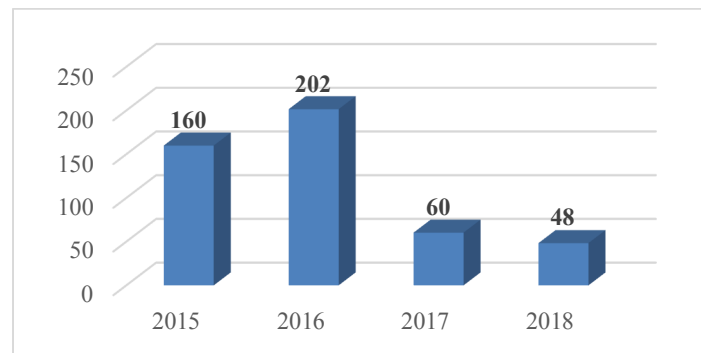


**Fig. 3 Days sales out**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

The average number of days of paying liabilities to suppliers [11] shows us in how many days a company pays its obligations. This is also the number of days your suppliers credit you

without interest. From our example in Figure 4, we can see that there is a downward trend in the number of days for payment of liabilities.

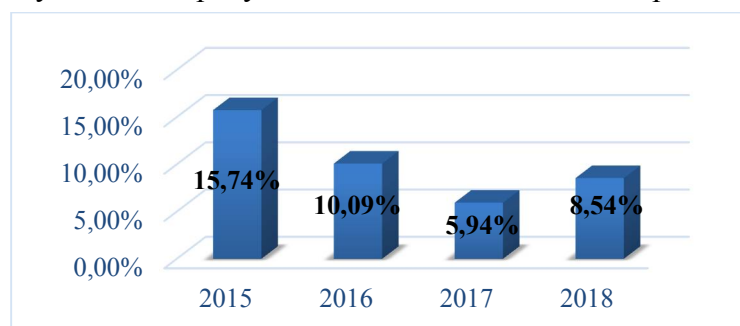


**Fig. 4 Days payables out**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

The interest of a company that should be present with these indicators is that we have a decrease in the number of days for collection of receivables, and on the other hand we have an increase in the number of days for payment of liabilities.

Another group of indicators that is very important and used in financial analysis includes profitability indicators. These indicators [12] determine the earning capacity of a company and measure the performance of its management. Net profit margin is one of the most important indicators in determining profitability. It is the part of the profit that is freely available to us. Figure 5 shows the profitability of the company “Telekom” over the observed period.



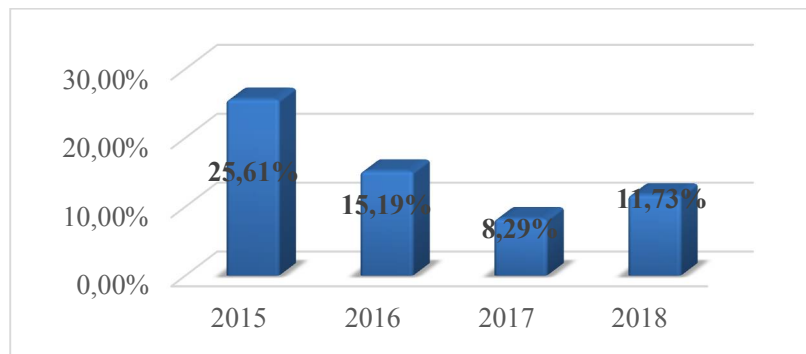
**Fig. 5 Profitability**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

There is a downward trend in the profitability of the company “Crnogorski Telekom” over the observed period, with an indication of a slight increase in 2018. The decrease [16] of the profitability is caused by the decline in wholesale revenue which is partially offset by the increase in retail revenues. What is characteristic for this type of activity in the observed period is that two more operators have positioned themselves on the market and are increasing their market share every day, and it is certainly something that both management and managerial structure should pay special attention to in order to ensure business sustainability.

Return on equity (ROE) is another profitability indicator that is significant because it helps us see to which extent [11] did the company succeed in creating a new value for its shareholders (owners) with the existing capital. This value is determined by the amount of net profit and the amount of equity.

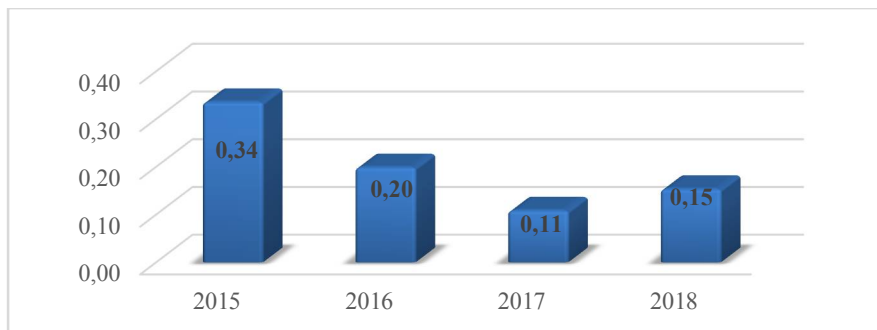




**Fig. 6 Return on equity**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

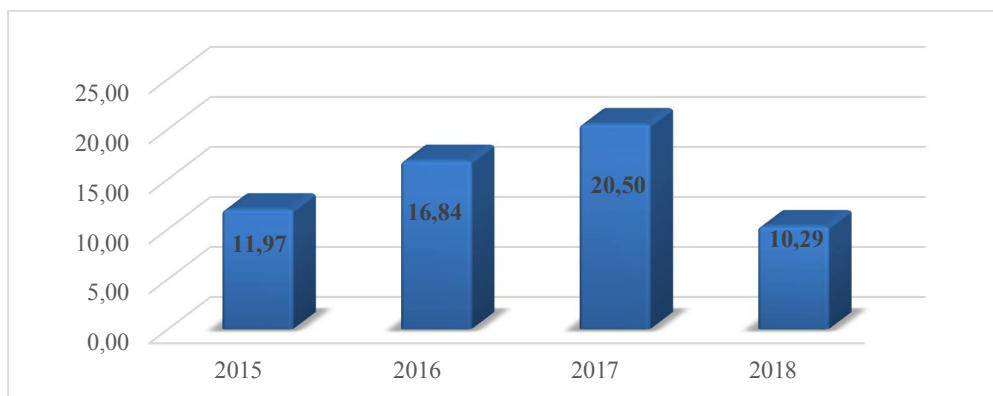
Earnings per share (EPS) is an indicator that tells us (Adewuyi, 2016) how much money can shareholders expect, assuming that companies pay out full net profit in the form of dividends. This value is determined by the amount of net profit and the number of shares a company has issued.



**Fig. 7 Earnings per share**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

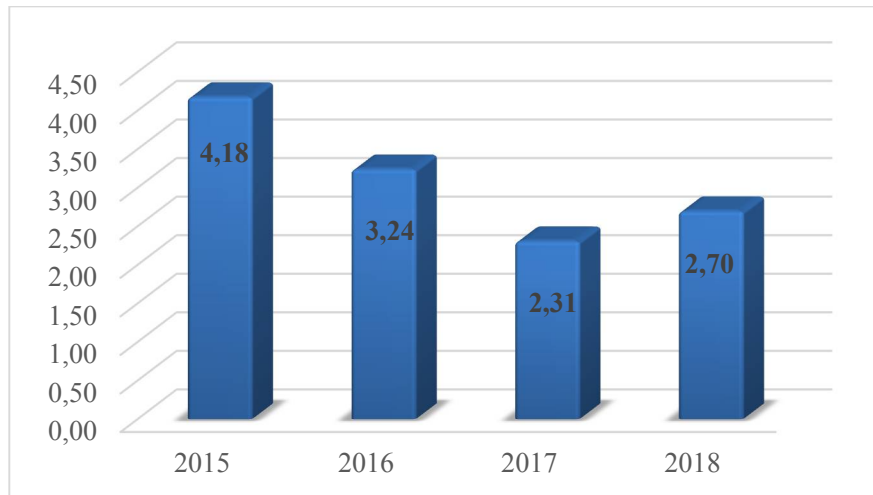
Price/earning ratio (P/E ratio) is (Bodie, Kane, & Marcus, 2009) is important when it comes to determining a company’s value. It puts price per share and earnings per share in relation, and is often used in investment analysis as an indicator of price movements in stock prices, i.e. returns in the future. It is considered that P/E ratio should represent a company’s growth rate if “properly” valued. In the literature, P/E Ratio is often interpreted [6] as a “profit multiplier”. This name was given to it in order to show how many times was the company’s profit expressed in the stock price. The following figure shows the P/E ratio of the company “Crnogorski Telekom JSC”.



**Fig. 8 Price/earnings ratio (P/E Ratio)**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

Last but not least, an indicator that has become indispensable in the financial analysis and credit rating of a company is the Z score indicator. Altman's Z score [17] is a model for assessing the probability of a company's bankruptcy and is a multivariate and discriminatory model, which means that it includes financial indicators and probability of bankruptcy in the analysis. Altman's Z-Score model analyzes the company's liquidity, financial structure and profitability, so that it can assess both the current and future financial position of the company. The following figure presents the Z score of Crnogorski Telekom.



**Fig. 9. Z score**

*Sources:* Crnogorski Telekom financial reports in 2015, 2016, 2017 & 2018

The Z score is calculated as follows.  $Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5$  where  $X1$  = working capital/total assets,  $X2$  = retained earnings/total assets,  $X3$  = earnings before interest and taxes/total assets,  $X4$  = market value equity/book value of total liabilities,  $X5$  = sales/total assets, and  $Z$  = overall index [2]. According to the model, a Z-score of a business entity lower than 1.81 indicates a high risk of bankruptcy proceedings, while a value above 2.99 indicates that it is a financially stable business entity. Values within the interval from 1.81 to 2.99 represent the so-called "Gray zone".

### **Conclusions.**

The authors of this paper analyzed some of the key financial indicators related to the business of Crnogorski Telekom in the period from 2015 to 2018 on the basis of information obtained from the regular annual financial statements. The results obtained from the analysis are of crucial importance for the management structure of the company from the perspective of making quality strategic plans related to the business in the future. The information obtained through the financial analysis indicates a negative trend of key indicators in the areas of liquidity, activity and profitability, and accordingly the current business policy must be reviewed and a number of new strategies must be adopted to preserve the telecommunications market share and ensure sustainable growth and development in the long term.

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## **GREEN COMPETITION: DEVELOPMENT OF REGULATORY INCENTIVES IN ENERGY SECTOR**

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**Abstract.** *The Kyoto protocol pushed a start of renewable energy policy (REP) development and implementation in mid-2000-s. By 2017, such a policy had been implemented by 126 countries that let stop rising the CO<sub>2</sub> emission by these countries, on the one hand, and provide competition between renewable and conventional electricity generating companies, on the other hand. However, the most popular REP remedy – feed-in tariffs – restricted a competition within renewable energy segment and provided an allocative inefficiency in the economies involved. That reveals the need to arrive at more competition friendly REP models. Current research provides a comparative analysis of different REP models to find the best one in both terms of competition and ecology. It proves that Renewable Portfolio Standards Model and the Model of Energy Auctions are much more effective in competition promotion, while the latter is better for renewable energy sector development. Recommendations on certain REP remedies are developed.*

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**Keywords:** *green competition, regulatory incentives, energy sector.*

### **Introduction.**

Rapid growth of the global economy in the second part of XX century has resulted with substantial deterioration of an ecology. Since the era of industrialization, atmospheric CH<sub>4</sub> concentration has increased 150%, and it is still on the rise [1]. The situation with CO<sub>2</sub> concentration is even worse. Since 1960-s CO<sub>2</sub> emission has increased four times [2]. Conversely, industrial activity decrease due to COVID-19 pandemic has brought a sudden drop in carbon emissions. For instance, in China, emissions fell 25% over the first quarter of 2020 [3]. That means a correctness of Kyoto protocol vector of dealing with a problem of pollution.

As a dominant share of the fossil fuel consumption accrues to electricity generation, providing of the renewable energy policy (hereinafter – REP) becomes an important step of Kyoto protocol implementation. REP refers to the means by which a government induces development of renewable electricity generation instead of conventional ones to decrease environmental damage of the sector. Its establishment and implementation by more than 100 countries in the mid-2000-s lets restrain an increase of carbon emission. The average growth index of the global carbon emission was 2.9% per year in 2000-2010. In 2010-2018, it decreased more than three times (0.9% per year) [2]. This is a reason, why a REP becomes a symbol of sustainable development.

Without underestimating REP, we would like to focus on some failures in its effectiveness in terms of reaching sustainable development objectives: economic, social and ecological, which vary from one REP remedy to other. Many researchers deal with this problem. Among them are Timilsina G.R. and Shah K.U. [4], Sühlsen K. and Hisschemöller M. [5], Shi W. [6], Hua Y., Oliphant M. and Hu E.J. [8] and others, who delve into different failures. This paper focuses on the failures in the effectiveness of competitive mechanism of electricity market. For instance, the feed-in tariffs, which were the most popular remedy at the start of REP implementation, turned out to be rather effective in the context of environmentalization, while they brought forth the weakening of price competition in the renewable segment of electricity market and deterioration of structural and institutional conditions of competition development in the entire electricity market. The other remedies and REP models seems to be more procompetitive, however their focus on creation of special institutional conditions to stimulate renewable energy development results in the inconsistency between REP and competition policy of governments. Today the problem is made clear, asking for REP revision to provide competition development.

This main objective of this paper is to provide comparative analysis of different REP models to find the best one in both terms of competition and ecology, as well as development of recommendations on certain REP remedies implementation within the chosen model. To reach it the first section provides comparison of the basic REP models under criteria of their favourableness to (a) long-run expansion of renewable energy segment and that way environmental improvement; (b) development of competition within electricity market, providing efficient operation of market mechanism. It determines the best REP model in both terms. The second section develops the recommendations on certain REP remedies implementation within the chosen model to stimulate green competition. The last section concludes, outlining the most optimal configuration of a REP under the determined risks and objectives.

### **Comparative analysis of REP models in terms of competition and ecology.**

Global REP review says for existing of at least five main REP models (feed-in tariffs model, model of direct investment support, net metering model, renewable portfolio standards model, model of energy auction) and the variety of their combinations. Let's explore them one by one.

Feed-in tariffs model was among the first REP models. It is rather easy-to-use. It fixes purchasing prices for power generated from renewables at the level, which is much higher than purchasing prices for power generated from conventional energy sources. Such a high tariff is temporary one. The model provides decrease of the feed-in tariff over the time, approaching the latter to the conventional one. In Ukraine, there was the 10-time difference at the early stage of this model implementation, while now the feed-in tariffs are only 3-times higher than the average conventional one [8-9]. The main task of such dynamics of the feed-in tariff is to stimulate investing into renewable energy development even at the early stages of this regulatory incentive implementation: the earlier investment is made; the larger profit will be earned. In this context Ukrainian version of a feed-in tariff appears to be rather effective. It has provided a rapid growth of renewable energy capacities since 2009, when the feed-in tariff model started.

Early in the year of 2009 Ukrainian power system included 0.08 GW of renewable energy capacities (0.2% of total power capacity in Ukraine), at the end of year of 2019 – 4.7 GW, while in 2020 this figure is expected to be 7.4 GW (13.4% of total power capacity in Ukraine) [10, p.20]. Other countries experience is almost the same.

The price to be paid for such a rapid growth of renewables is a restriction of competition within electricity market. As an electricity is a homogeneous product, there is a dominance of price competition in the market. Fixing of the feed-in tariff eliminated price competition within the renewable segment of the electricity market, while providing a scope of institutional preferences for green players, like load or payment priority, restricted intermodal competition as well. Hence, green producers of electricity appeared to be sheltered from the competition of conventional electricity producers. Moreover, providing this kind of REP restricted a competition within the conventional segment of the market, making the entering into the latter unattractive for potential competitors. So, instead of the wide and diversified electricity market directed by a competition, the countries, which implemented feed-in tariffs model, got the variety of the market segments that are strictly separated one from each other with legal institutes. The competition within those segments is absent or at least poor to provide allocative efficiency of the market.

Model of direct investment support provides a total or partial state financing of building of renewable power generation capacities. For example, it was used in China. Obviously, a state financing is not the most competitive way to stimulate renewables' development, because the other market players are beyond of such a state aid. It provides a lack of a level playing field, which results with allocative inefficiency and ruins the market mechanism.

In the context of replacing less environmentally acceptable thermal electricity generation capacities with the green ones this model is not largely successful. It does not provide any incentives for private investors. May be the little one exists, if a private investment is a mandatory requirement to obtain a state one. However, it is not very effective, as the chance for a bigger return on such an investment comparing to alternative ways of capital use is highly doubtful. So, in democratic countries with a small public sector or in the countries with a big budget gap this model does not work. In other countries, it is outclassed by the competition with other REP models.

Net metering model is a system whereby electricity produced in excess of the customer's load is sold back to the interconnecting utility at the retail electricity rates. Usually it serves as a mechanism for reducing bills and (possibly) making money for the small customers [11]. Even this definition let us see that this model is not aimed to development of renewables on an industrial scale. Its chance to become an effective answer to the challenges of climatic changes is looming, notwithstanding its ability to attract the scope of micro capitals of population into renewables' development. Usually this model is used as an ancillary one, combining with other REP models.

This model impact onto competition development is also neutral. On the one hand, it makes households' demand on electricity more elastic due to substitutability of green electricity from the own capacities with the electricity from the grid. In that context the market power of big producers decreases.

On the other hand, this model segments the market, increasing the concentration of its industrial segment. Consumers in the latter cannot rely upon the unstable stream of the rests of green electricity. They are coerced to buy an electricity from conventional electricity producers that increases the market power of the latter and restricts the vertical competition inside the sector.

The next model is a renewable portfolio standards model. It covers at least two main components. The first one is a providing of strict quotas of green electricity to be bought by power providers. Another one is an issue of tradeable green certificates to acknowledge green origin of the electricity bought. Green certificates are awarded to a generator for each megawatt hour of renewable energy produced and fed into the electrical grid [12]. The certificates are transferred from the green electricity producers to power providers depend on the volume of electricity bought. At year end each power provider must collect some number of the green certificates to meet the quota.

This model is one of the most competitive. It provides the only one restriction – mandatory quota of green electricity. All the rest is managed by the market mechanism. Approaching the market structure to the requested by the REP idea, it actually does not influence on market equilibrium. One could argue that the equilibrium price on electricity increases, but we believe that literally the extra payment is not an increase in price. Actually it is the price of another good – green certificate as some kind of securities. It circulates within not the same product market, but within adjacent financial one according to the market rules and under competition. So, this model looks like the most competitive one. However, we have to keep in mind, that not all the kind of market competition benefit social welfare. If the structure of the market of green certificates is poor, the allocative efficiency is restricted within a market, sector and economy at large.

This model is not too popular globally. It is used in the USA, Australia, United Kingdom, India, Norway, Republic of Korea. The problem is that it does not provide self-sustainable and long-run incentives for renewable energy segment development. It works as a stick rather than carrot, providing compliance with quotas, but nothing more. Moreover, the quotas are set manually and usually are a stake in the political bargaining. That means that each next period the REP may make a step back from the ideals of sustainable development.

Hence, under this model the market mechanism of competition provides a short-run efficiency in terms of meeting the eco-quotas, but in the long-run the sustainable development becomes a hostage of the balance of political forces within society.

The last of the models, which are listed in the beginning of the paper, is a model of energy auctions. In some way it combines the pros and cons of all the previous models. In the course of countries' departure from the dominance of the feed-in tariffs model the popularity of the model of energy auctions starts to rise. The model of energy auctions provides no short-run incentives to renewables' development, which largely have been already made by the models of renewable portfolio standards or feed-in tariffs, but the long-run ones. It acts through regular auctions (usually Dutch ones) whereby the government issues a call for tenders to install a certain capacity of renewable energy-based electricity [13, p.6]. To win the auction investors should bid the lowest future price for 1 kWh of green energy generated by certain capacity.

That is some kind of Demsetz competition, which results not in the creation of a monopolist, but in the set of quasi-feed-in tariff. Such a tariff is set under competition and usually is lower than the classic feed-in tariff. Actually, this is the advantage the model. Another one is a positive economic profit obtained by investors due to the tariff fixing over the time, which attracts investments into the sector. Statistics says about decrease of the cost of electricity generation from renewable energy sources over the time. Levelised cost of electricity generation by windfarms decreased more than three times over the last decade, while the same indicator for solar PV decreased more than eight times [14]. That means simultaneous meeting requirements of competitive and environmental policies.

Among the downsides of the model of energy auctions are:

- narrow price competition within the period of quasi-feed-in tariff validity, which depends on (a) the intensity of Demsetz competition under the auction and (b) concrete institutional framework of national electricity market operating, firstly the terms of electricity procurement under quasi-feed-in tariff;
- manual determination of the country's need for green capacities. It is similar to the problem of manual set of quotas under renewable portfolio standards model, but its impact on competition is less distortive. Business response to each government call for additional renewable power generation capacities provides cumulative increase in the gross green capacity of the country. When the quasi-feed-in tariff expires, green producers will compete with conventional ones on equal ground, disseminating positive environmental effects. In renewable portfolio standards model investors' interest is a function of the long-run value of green certificates. The risk of its decrease in future due to decrease of eco-quotas deters investors from autonomous investments and constrains advanced growth of the green electricity segment.

Concluding the results of comparative analysis of different REP models, we would like to put the finger on the clear benefits of the model of energy auctions in the context of the balance "ecology – competition". This balance can be disrupted by friction effects due to ineffective implementation of the model, asking for such institutional parameters of the model implementation, which let keep the balance. As this model is based on the long-run market-oriented incentives to energy sector environmentalization, it is very important to preserve this ideology, while developing these institutional parameters.

### **Looking for institutional framework for competition development under REP model of energy auctions.**

To use entire procompetitive potential of the model of energy auctions there is a need to set preventers of restrictions of competition at both stages of the model implementation:

I stage – auctioning;

II stage – period of quasi-feed-in tariff validity.

On the one hand, the auction, as well as any other bidding procedure, is an embodiment of competitive mechanism. On the other hand, there are many evidences of cheating under auctions to eliminate competition. The most popular way to do this is a collusion. For this very reason REP model of energy auctions need for institutional vehicles to make a collusion impossible. They vary from country to country, including:



- automatic auction performance that removes the human factor and the risk of corruption fostered by the latter;
- combination of absolute confidentiality of a bid (in terms of price and capacity) at the step of its applying with its public disclosure after bid opening under the auction. The first let eliminate or at least minimize the risk of collusion of investors, while the second – help a civil society to check the integrity of the auction and the results of the letter. Among the evidences of the collusion, which can be revealed due to such a procedure, are rotation of the winners, deliberately unacceptable prices, causeless similarity of bid documentation, etc.;
- confidentiality of tendered quota of green capacity. It substantially complicates the collusion. If the bidders do not know the total capacity, they cannot share it effectively. Their bids will illustrate their private interests, not collective one. However, there is also a negative effect of such a confidentiality on competition – the risk of regulatory capture. In countries, where regulatory capture is widespread, confidentiality of tendered quota of green capacity can be asymmetric – cartel participants know it and use for maximization of quasi-feed-in tariff, while the civil society has no effective instruments to counteract it;
- requirement of market surplus under the auction (demand factor  $>1$ ). It is some modification of the previous vehicle. If the demand factor is confidential, it provides the uncertainty about the actual tendered capacity that does not let share it effectively among potential colluders. Brazilian practice witness about the efficiency of such a vehicle [15, p.3]. When the confidentiality is broken due to regulatory capture or other institutional failures, its impact onto competition becomes opposite. Another option is a public demand factor. In Ukraine demand factor is public, definite and equal to 1.2 [16, p.9]. It is less effective in terms of informational asymmetry exploitation, because lets the bidders (cartelists) make an auxiliary proposal, which is inferior to the shared ones. However, price bids under this requirement are expected to be less than ceiling price to take a place in the upper part of the election list.

Obviously, all these vehicles are effective only in the case of strict prohibition of cartels, their persecution and successful work of competition agencies against cartels.

Another way to stimulate a long-run competition in the market with help of the green capacity auction considers prevention of unilateral market monopolization. The latter is possible, if all the auctions (or the most of them) are won by the same bidder. So, the ways to prevent it are:

- applying of the maximum share of an annual green capacity quota, which may be gained by one bidder. In Ukraine it is equal to 25% [16, p.9], in California – 50% [17];
- prohibition to take part in the next round of the auction for the winner of the previous one, etc.

Applying of above mentioned institutional protectors of a competition development lets increase competition at the stage of auctioning and get the lowest possible quasi-feed-in tariff for the next 10-20 years, depending on the period of certain REP remedy validity. However, they are not enough to maintain intensive competition over the whole period of quasi-feed-in tariff validity. Actually, restrictions of competition within this period are a social price to be paid by society for renewables development. The exclusive rights obtained by the winner of the green

capacity auction are those very regulatory incentives to attract investments into the sector. Among them, are:

- the tariff that is higher than the equilibrium market price of electricity;
- complete buyout of electricity generated by green farms regardless demand and often against other market participants. In spring of 2020 this problem was actualized by a rapid decrease of demand on electricity due to hard stop of industrial output under quarantine against pandemic of COVID-19. It coincided with a seasonal dip of the electricity output curve, obliging the dispatcher to stop thermal and nuclear electricity generation (to minimize them at the lowest safe output) and to pay fines to green producers for undershoot;
- release of balance responsibility.

If the first two positions of the above mention list, being interdependent within a demand curve, cannot be eliminated without destruction the quintessence of this regulatory incentive, the third one is an institute to be give up on. The schedules of green electricity output must be a function of demand dynamics.

Ukrainian legislation, as well as some European ones, envisages a gradual establishment of balance responsibility for green electricity producers. Since next year green electricity producers will pay for imbalances, which are more than 5% (for different kinds of renewables this threshold may be higher), a growing piece of the imbalance settlement price (+10% each year). Since 2030 they will pay the full imbalance settlement price [18, p.XVII]. In Turkey, renewable energy sources can choose, whether they want to be entitled for receiving a higher feed-in tariff but act as balance responsible party or prefer to deliver at a standard feed-in tariff without balance responsibility [19, p.15]. Providing a balance responsibility for green electricity producers let not only decrease a financial burden on a system operator and consequently on consumers, but more to the point – provide a level playing field in the post-auction electricity market. Preserving a bigger margin for green electricity producers such a step at least equalizes conditions of access to the market, asking each electricity producer for reaction on market conjuncture, and allocates the burden of responsibility for energy security between green and conventional electricity producers on an even basis.

### **Conclusions.**

Stimulating of green electricity generation development is an important kind of state policy because of climate changes and other environmental risks induced by human impact onto the planet. Implementing REP, we should keep in mind the need for balance between environmental, economic and social objectives of sustainable development. Renewables today are still an unreliable source of electricity, while electricity storage, which can address the challenge, is still too weak and expensive. So, even from the perspective of energy security it is important to keep the balance between conventional and green electricity generating segments, providing the competition between them. Existing incentives for renewables development sometimes are too aggressive. They provide a lack of a level playing field within the market and heavy capital flow from the conventional segment of electricity market to the green one. It works against both energy security and effectiveness of electricity market mechanism. The latter stops on each regulatory barrier of renewables' support, demonstrating its weakness.

To cope with this dilemma, needs not only choose the model of energy auctions or any other REP model that in certain market conditions will be the best response of the state to the convergence of both competition and environmental challenges in the electricity sector, but also to provide favorable institutional framework to implement the model effectively, for instance: competitive procedure to obtain a quasi-feed-in tariff, rule of balancing of public access to sensitive competitive information to decrease the probability of supply cartelization, equalizing of institutional conditions of all participants' access to the market and operating within it, except the narrow field of regulatory incentive work (for example, higher margin), etc. In such a case the market regulator will once again become a first-best decision in the electricity market that is adjacent one with the natural monopoly. It will help to minimize the risk of ineffective regulation and regulatory capture, preserving enough regulatory incentives for renewables' development and environmental protection.

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**OBJECTIVES AND TASKS DEVELOPMENT OF COMMUNAL HEAT POWER  
ENGINEERING OF THE REGION**

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**Abstract.** *Communal heat power engineering is one of the defining components of housing and communal services. The heat energy sub-sector of housing and communal services is strategically important for the functioning of the economic system of Ukraine and ensuring the constitutional rights of its citizens. The supply of heat energy to consumers is carried out by heat-generating, heat-transporting and heat-supplying organizations, which are united into the city and district subsystems. The programs and strategies analyzed can be divided into two levels: State and local (regional), objectives and tasks of which complement each other. The state programs for the development of communal heat power engineering include general provisions and development objectives, and regional more detailed. But both state and regional programs, strategies do not have clear objectives and tasks development of communal heat power engineering, they are of the nature of the focus on development and improvement of communal heat power engineering in general. As a result, clarified the objectives and tasks of communal heat power engineering development at the regional level.*

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**Keywords:** *communal heat power engineering, housing and communal services, programs development, objectives and tasks, region.*

**Introduction.**

Territory of Ukraine is heterogeneous in terms of natural environment and resources, number and structure of population, historical and geographical conditions, different levels of economic development and its structure. Dnipropetrovsk region is characterized by various complex development of national economy branches and is one of the most developed in Ukraine. At the same time, this region is one of the largest consumers of energy resources.

Housing and communal sector is the main energy consumer in regions, which includes many energy off-takers. In particular, municipal district heating, which combines district heating suppliers, interconnected into local and regional subsystems. Present situation with energy saving and efficiency of using fuel and energy resources in municipal district heating system (both in the region and across the country), is considered critical at all management levels. Low competitiveness of municipal DH companies slows down its independent development and modernization. At the same time, by January 2020 population payment debt for heating and hot water supply had been estimated 3294.7 million UAH in the region, for natural gas supply and distribution - 2726.9 million UAH, for electricity supply and distribution - 467.9 million UAH [1], which is more than 20% of bills to be charged. So, significant part of household sector needs financial support for consumed fuel and energy resources.

### **Problem Statement.**

It means that regional approach should solve the problem of municipal DH management within socio-economic system of the region by achieving balance between economic (development of companies producing, transferring and using heat), social (population solvency, life comfort) and environmental (alternative “green” energy resources) subsystems. Goals and tasks for further DH development of the region should be adapted in accordance with these subsystems.

### **Purpose of the Study.**

Purpose of the study is to clarify goals and tasks of municipal district heating development, in order to achieve balance in economic efficiency, compliance with social standards and environmental safety.

### **Materials and Methods.**

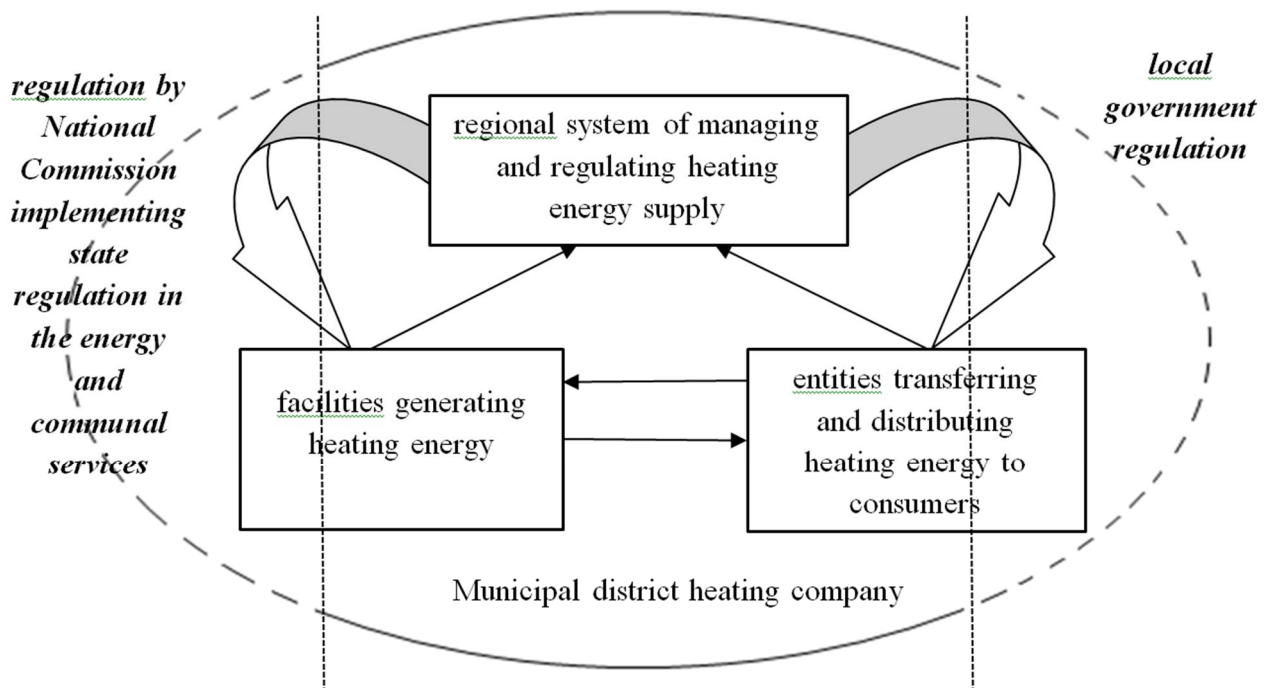
Theoretical background of the research is based on key principles and concepts in the field of program-targeted management and strategic planning, system analysis of socio-economic problems. In the process of tasks solving we have used in this work logical and system approaches, general scientific and special methods, in particular: general scientific methods of analysis and synthesis, specific methods of research: abstract-logical method (at structure substantiating and clarifying goals and tasks of management system of DH development, specifying goals for further DH development in the region); methods of system analysis and synthesis (during tasks analysis of DH development in the region). Information basement of the research is legislative and regulatory acts, statistics of the State Statistics Committee.

### **Results and Discussion.**

Municipal district heating is important component of fuel and energy complex of the country, which combines heating suppliers, interconnected into local and regional subsystems, whose activity is regulated by state bodies at national and regional levels. [2] The municipal district heating system includes:

- facilities generating heating energy (CHP, TPP, NPP, cogeneration units, district heating boilers, industrial-heating boilers of individual enterprises, apartment heating generators, secondary energy resources, non-traditional renewable sources of energy);
- entities transferring and distributing heating energy to consumers (main heating systems, heating supply stations, city distribution systems, in particular, distribution systems for residential houses);
- system of managing and regulating heating energy supply [3]

Heating energy is supplied to consumers by heating generating, heating transferring and heating supplying companies, which are currently subordinated to different departments. Interconnection between municipal district heating components at regional level is presented in Figure 1.



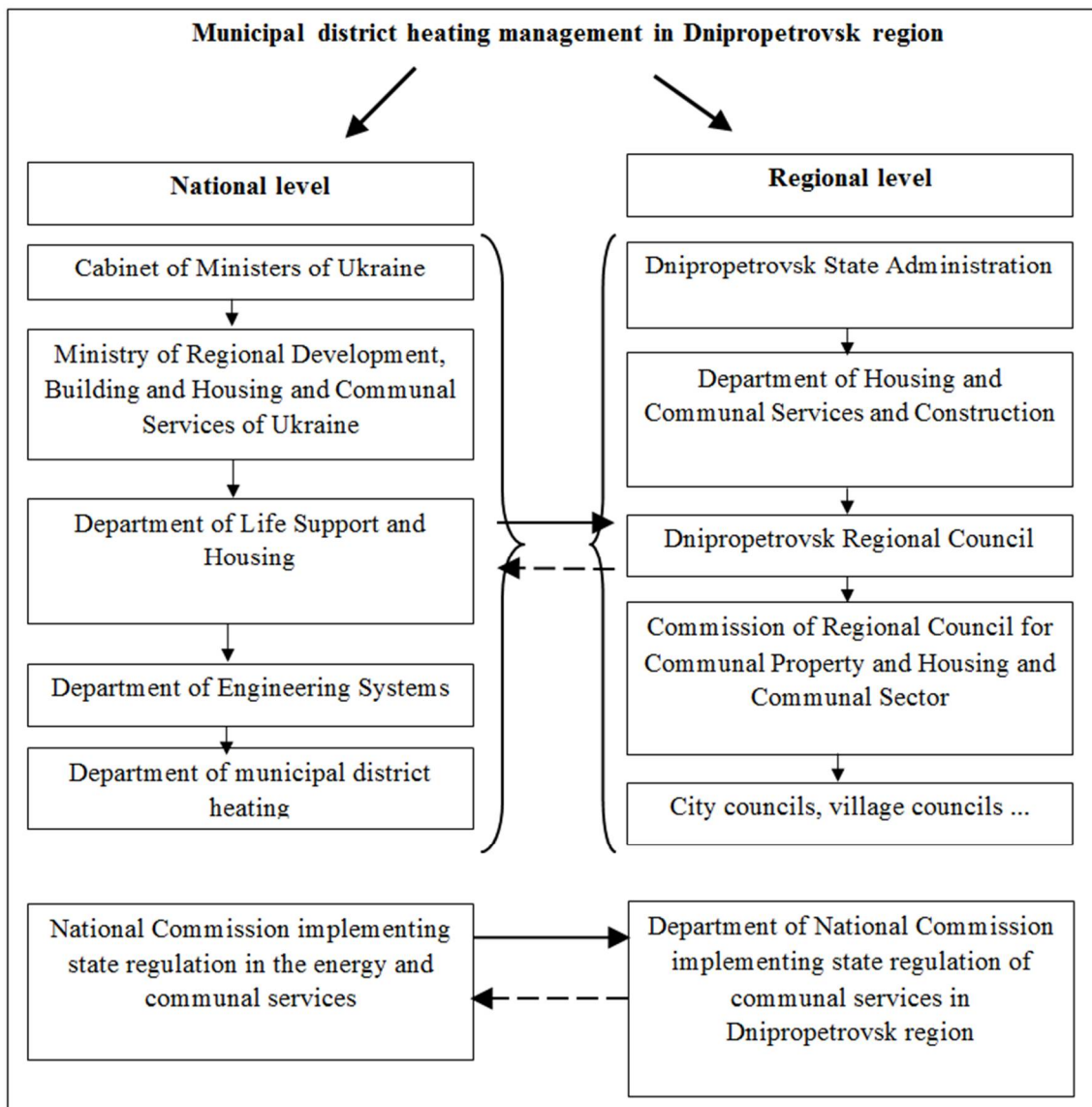
**Fig. 1. Interconnection between municipal district heating components at regional level**

System of managing and regulating heating energy supply is presented in the form of public administration. Tariffs for heating and hot water supply are set by local government, tariffs for heating energy of CHP and TPP are set by the National Commission implementing state regulation in the energy and communal services [4]. The management in the field of heating supply is carried out by:

- at national level - Cabinet of Ministers of Ukraine, central executive bodies within their powers;
- at local level - local state administrations.

Structure of municipal district heating management in Dnipropetrovsk region is presented in Figure 2. As we can see, DH management is divided into two components: state administration and local (regional) management, but the second is subordinated to the first.

Functional filling of management structure is implemented in accordance with relevant legislative acts at national [5-10] and local [11-13] levels. State regulation considers general information about DH management, and regional regulation is directed to allocate peculiarities of each region for DH management.



**Fig. 2. Structure of municipal district heating management in Dnipropetrovsk region**

Main tasks in the field of heating energy at national level are the following:

- creating favourable conditions for market relations development in specific sectors of housing and communal complex;
- creation of effective integral system of state regulation of economic entities activity in the field of housing utilities, introduction of consistent approach to carry out regulation in this sphere;
- creation of bodies system entrusted with powers to regulate heating supply and allocation of their functions;
- development of tariff setting system that would stimulate participants of heating energy market (heating off-takers and producers) to save heating energy resources, encourage investment of personal and external funds, to increase economic efficiency;
- definition of criteria to estimate economic justification of tariffs for heating supply services at the stage of their establishment and introduction, to carry out permanent energy audit of housing and communal services. [14]



Main instrument for regional regulation of municipal district heating is regional programs. Regional programs considering specific conditions of the region, should provide mechanisms and conditions for municipal DH modernization. Tables 1 and 2 summarize main goals and tasks in accordance with laws and programs relating to municipal DH.

As we can see, only Law of Ukraine “On heat supply” covers social component in municipal district heating activity – “ensuring reliability of heating supply as necessary element of human security” [5]. Other national documents are focused on technical and organizational issues. Regional level of municipal DH system management considers the category of “services quality” only as means of achieving other goals (development of local self-government, financing, activities intensification, etc.).

**Table 1. Main goals and tasks of municipal district heating  
(regional level)**

<b>Document title</b>	<b>Goals and tasks</b>
State Regional Development Strategy for 2020 [15]	<ul style="list-style-type: none"> <li>– reduction of losses of fuel and energy resources through implementation of organizational, technical, technological and other measures, including updating of fixed assets, modernization of production facilities, introduction of energy efficient technologies;</li> <li>– optimizing structure of regional energy balance by replacing natural gas with energy from renewable energy sources and alternative fuels, especially in social sector.</li> <li>– improving quality of housing and communal services for all segments of population, creating competitive environment in services market;</li> <li>– reconstruction and complete overhaul of water, sewer and heating systems.</li> </ul>
Development Strategy of Dnipropetrovsk Region for 2020 [16]	<ul style="list-style-type: none"> <li>– implementation of energy-saving technologies on municipal property (reduction of heat losses, introduction of cogeneration technologies, using electric heating storage, heating pumps, etc.);</li> <li>– demonopolization of housing and communal services market.</li> <li>– promoting development of condominium associations and housing associations and improving services quality;</li> <li>– developing system of incentives to reduce natural gas consumption.</li> </ul>

Issues of financing and “green” initiatives in energy sector, and especially in communal sector, might be divided into separate groups. At the same time, housing and communal services should ensure sufficient level of life comfort for all segments of population.

Life comfort level is directly projected into categories of “standard of living” and “comfortable life” and, consequently, to “regional human development” [18]. That is, main goal of regional programs and strategies for municipal district heating development should be to ensure social component of its activity.

**Table 2. Main goals and tasks of municipal district heating  
(national level)**

Document title	Goals and tasks
Law of Ukraine “About heat supply” [5]	<ul style="list-style-type: none"> <li>– ensuring reliability of heat supply as necessary element of human security;</li> <li>– creation of mechanisms for functioning of efficient heating energy market;</li> <li>– reduction of harmful effects on our environment;</li> <li>– creating conditions for attracting investment in the development and technical upgrading of heating supply systems.</li> </ul>
Law of Ukraine “On Housing and Communal Services” [17]	<ul style="list-style-type: none"> <li>– ensuring permanent supply of heat transfer with guaranteed level of safety, volume, temperature and pressure;</li> <li>– regulation of heating energy quality parameters in accordance with normative acts in the field of standardization;</li> <li>– heat supply for district heating needs should be carried out during the heating period;</li> <li>– adhere to the price of heating supply service – heating energy tariff for off-takers is defined as sum of tariffs for production, transferring and supply of heating energy;</li> <li>– heating energy supply service is carried out in accordance with terms of contract, which is concluded considering peculiarities defined by this Law and rules requirements for heating supply services, approved by Cabinet of Ministers of Ukraine, unless otherwise provided by law.</li> </ul>
Concept of State Target Program for Modernization and Development of Ukraine’s Heat Supply Systems for 2012 - 2022 [14]	<ul style="list-style-type: none"> <li>– designing schemes of development for heating supply systems and defining optimal correlation of centralized, decentralized, autonomous and individual heating based on certain heating capacity;</li> <li>– optimization and reconstruction of heating systems considering developed schemes of heating supply, energy plans and program of buildings heating modernization;</li> <li>– introduction of 100% accounting of heating energy transfer;</li> <li>– establishment of differentiated norms of energy consumption for heating energy transferring in accordance with international standards;</li> <li>– conversion of district heating system to two-pipe district heating systems with arrangement of individual heating stations;</li> <li>– reduction of accidents and losses in the system by progressive program realization of transferring to pre-insulated pipes in the systems;</li> <li>– introduction of stimulating state regulation of monopoly market in heating energy transfer;</li> <li>– providing state support for heating energy transferring companies by financing and implementing anti-crisis resource-saving measures for suppliers.</li> </ul>

Economic, technical, organizational and other issues should be directed towards achievement of main (social) goal. The overall main objective of municipal district heating development at the regional level can be defined as relevant and permanent ensuring compliance with high sanitary standards of life of all segments of population at reasonable income price. That is, standard compliance with comfortable living should not have negative affect on well-being of population.

### Conclusions.

The main objective of municipal district heating development at regional level (relevant and permanent ensuring compliance with high sanitary standards of life of all segments of population at reasonable income price) has been specified and requires further modernization of regional programs and strategies for this industry development. Modified regional programs should subordinate economic and technical issues to achieve leading social goal and be balanced with “green” energy initiatives. Further studies may be aimed at clarifying criteria of life comfort and acceptability of price services, defining limits of balance between social comfort and “greening” rate of municipal energy, specifying economic and technical issues of achieving the main goal, etc.

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**SOCIAL SOLIDARITY ECONOMY AS A VECTOR OF SUSTAINABLE DEVELOPMENT CONCEPT**

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***Abstract.** The article discusses the model of social and solidarity economy as an alternative vector for realizing of sustainable development concept. Basically the principle of social and solid economy and mechanics of practical and interventional changes are at the stage of active transformation with the addition of turbulent changes in the international system of international economies. Solidarity social economy is the most developed model in modern system of international economic relations. The fundamental principles of the model of solidarity and social economy is the preventive nature of transferring the population as much as possible to the inclusive market in the minds of the steel economy. The form of the latest economic minds for the self-care of the population, the shared fate of all members of the suspension in the goal of the national income is to be shared with the social security system. The practical implementation of this model is effective for the minds of stability, transparency of the political and economic processes, thorough legislative base, effective state regulation and control. At the same time, the model of social and solidarity economy is marked out by an effective method of reaching global goals of stable development. It is indicated that the specific regional forms of realizing the given concept, as well as problems, interfere with the stable positive effects.*

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**Keywords:** *socializing, solidarity, general welfare, sustainability.*

**Introduction.**

The idea of a social solidarity economy (SSE) is gaining ground worldwide. Considerable attention is given to certain aspects of socialization of economic systems, implementation of their basic models, concept of sustainable development in the works of such Ukrainian and foreign scientists as A. Kolot, D. Lukyanenko, O. Pryazhnykova, A. Filienko, Grzela J., Halonen M., Sachs J. etc. Within the framework of the SSE it's possible to realize and protect the rights of the individual, the entity in the conditions of increased vulnerability of rights and freedoms related to globalization, economic liberalization, financial shocks, food crises, etc. A distinctive feature of the SSE is the ability to realize the political and cultural identity of individual countries and regions of the world in the context of a single vector socio-economic policy for sustainable development. Most successfully, the principles of the SSE are implemented through the mutual cooperation of political forces and other participants in the social movement, which creates international networks and allows to achieve global effects in the context of sustainable development. The development and activities of individual SSE actors are now having a real impact on addressing such socio-economic problems of a global nature as poverty reduction, building a robust social protection system, universal access to quality social services, overcoming unemployment and securing effective employment, etc.

### **Purpose of the study.**

The purpose of the study is to determine the essence, principles and mechanisms of functioning of the model of social solidarity economy, which is recognized as one of the vectors for the implementation of the concept of sustainable development.

### **Literature Review.**

Socialization of economic processes and implementation of the concept of social solidarity economy is an effective method of sustainable economic development. A significant contribution to the development of conceptual approaches and paradigm of socialization of economic systems and models is related to the scientific works of such scientists as A.Filipenko [2], A.Poruchnyk [6], O.Kravchuk [5], J.Sachs [9], Grzela J. [3].

In particular, A.Filipenko [2] found the essence of the concept of solidarity at the macro level in creating the necessary and sufficient prerequisites for the realization of the essential forces of the individual, in particular free access to resources for the purpose of business development. Some aspects of socialization of economic state policy were considered in Pryazhnikova's works [8]. The solidarity principle of participation of state, private enterprises and individuals is determined by the basic condition for effective realization of the concept of social economy and general welfare.

Questions of the socialization of the state governance system, creation of the social economy on this basis are the main objects of research by A. Kolot [5], D. Lukjianenko [6]. The corporate level of implementation of the concept of social solidarity economy, the main methods, principles, principles and effects, in particular in the EU countries, are analyzed and evaluated by J.Monzon [7], M.Halonen [4].

### **Results.**

Under the influence of the current challenges of the world economy, traditional forms of social economy, focused on cooperative, mutual associations, public organizations and foundations, are actively transforming. New forms of SSE are being developed, in particular trade organizations that bring together producers and consumers both nationally and internationally; alternative food networks involved in collective provision; women's self-help groups, non-governmental and donor organizations involved in women's empowerment; NGOs and forest protection groups; "new generation cooperatives" distributed in India; informal employee associations.

The increased attention and widespread practice of implementing the principles of the SSE is explained by the active involvement of not only governments and legal entities of economic relations, but also ordinary citizens in these processes. The main motivating factor for the activity of workers and producers is the desire to obtain social guarantees from the state and to protect their own rights and property interests. A characteristic feature of the present is the conscious fulfillment of the role of consumer, investor, entrepreneur, citizen, that is, the realization of social consciousness. This stimulates the emergence of new hybrid forms of SSE, in particular the expansion of alternative food networks, the organization of urban agriculture, the implementation of complementary currency and investment schemes, the use of alternative energy sources, the organization of social services within individual communities, etc [2].

The effectiveness of the practical implementation of the forms of SSE is indisputable, but it differs considerably depending on the general state and development of the individual country.

Typically, a low level of literacy and education, a lack of social capital, a low level of competency, a lack of normal working conditions and simply well-established communication networks between individual counterparties and participants in these processes can significantly reduce the effectiveness of the SSE in general.

Another ambiguous feature of the SSE is the evaluation of the effectiveness of its forms. In particular, such parameters of performance appraisal as job creation, employment, social development assistance often contradict such parameters as economic development, growth and productivity, sustainable development.

Public and private sector cooperation is crucial to the successful implementation of the principle of solidarity in the social economy as a vector of sustainable development. State policy, which provides a favorable environment for the implementation of the basic principles of a solidarity social economy, is an extremely important condition for its effective implementation. The potential of the SSE concept can be successfully realized only if the environment is favorable, there is adequate legal framework, state support programs and participation, purposeful actions of the state socially oriented economic policy of sustainable development. Public assistance helps to overcome the weaknesses of the SSE, which are manifested in the conditions of free market competition, to achieve economic efficiency while maintaining a sustainable social effect in the process of functioning and development.

The key instruments of public policy aimed at disseminating the principles and practices of the SSE are lending, investment, infrastructure development, procurement, subsidies, preferential taxation, trade facilitation, facilitating the exchange of statistical and market information, technical assistance, sophisticated labor market regulation mechanisms, formation of labor market regulation mechanisms, education and other social services, social assistance and social protection for the poor.

In addition, the state and local governments play a crucial role in education and science. It is the lack of educational background, foreign language skills, negotiation skills, legal illiteracy that are the main obstacles to the spread of solidarity in the social economy and in the socio-economic development that is often observed in developing countries.

The involvement of local authorities in lobbying for SSE ideas is extremely important. Targeted assistance and funding programs are a significant contribution to the socio-economic development of the regions [5].

The legislative initiative, which has become quite active recently on the issue of SSE in majority of countries of the world, is a steady basis for the growth in the number of forms of SSE and the scope of their activities. However, in addition to the legislative initiative, public policy should be aimed at developing a resource base and other necessary conditions conducive to the development of various forms of SSE. Otherwise, in the absence of an education system, funding and subsidy mechanisms, stable guarantees to actively attract investment, even with a perfect legislative framework, it will be impossible to form a solidarity-based social economy [1].

The reform of the institutional structure of state power towards the socialization of the economy on the basis of solidarity is being actively pursued both in the industrialized countries of Europe, which are leading in the dissemination of the ideas of the SSE, and are characteristic of the countries, which become only involved in these processes (Latin America, Eastern Europe, etc.).

New socially-oriented institutions and economic entities are being actively introduced, primarily aimed at overcoming unemployment, assisting the homeless and the disabled. The state provides legal assistance and financial assistance to such entities.

Considering innovations in the reform of the SSE system, it is important to focus not only on institutional innovation, but also on finding the latest mechanisms and sources of funding for initiatives in the field of socio-economic sustainable development. Limited access to resources, credit lines and financial resources usually is a major impediment to the implementation of socially-oriented economic initiatives. An effective tool in this case is development banks, which allow small producers, cooperatives and associations to access loans at favorable rates and preferential repayment terms. The main source of attracting finance to these banks are the deductions from the profits of companies, the recalculation of tax charges and employers' insurance contributions to social services [6].

Such measures in the field of SSE are a coherent system of socially-oriented economic policies of the state aimed at improving the general welfare, forming a sustainable system of livelihoods, achieving stable indicators of economic growth, production and consumption, overcoming the consequences of unstable development and social inequality. Social integration, equality, sustainability of economic development are the main prerogatives of public policy based on the principles of the SSE, the main vector of realization of the sustainable development concept.

Considering the social, environmental, democratic and productive orientation of the SSE concept, the main obstacles (negative consequences) to transformational change include: increasing unstable employment in the context of overall rising unemployment; externalization of social and environmental costs in the traditional economic model in order to maximize profits and generate excessive competitive advantages; the commodification of life and environment, which not only determines the forms of social protection but also weakens the pressure of state regulation and increases the effectiveness of these measures and their impact on social and environmental spheres; delocalisation undermines the processes of local economic development by generating income, resources (including human) and capital by large taxpayers, cities, and financial centers; the sharp expansion of the financial sector through productive investments contributes to deepening inequality, exacerbating the economic crisis and limiting the volume and sources of credit.

The main problems of implementation of this concept are, at present, budget constraints, lack of quality human resources, problems in the sphere of coordination and management. Common to the national policy of individual countries are overcoming such obstacles as: building institutional capacity, implementing the principle of community participation in political processes, long-term sustainability of economic development, government interventions and initiatives in the field of socialization of the management system, etc.

The main problems with the implementation of SSE principles in state socio-economic policy do not arise at the stage of their implementation in legislative acts and strategic plans of public administration. It becomes relevant in the process of their practical implementation, in the absence of coordination and effective cooperation of all contractors involved in these processes. The failure of the SSE concept in practice is often linked to the lack of a resource base, due to the weak positioning of the state before donor organizations, due to the austerity principle or lack of



economic liberalization, which should be reflected in facilitating fiscal discipline and simplifying bureaucracy [4].

The effectiveness of public policy in the field of SSE construction depends on a fundamental understanding of its essence. While governments in one country equate the SSE with a tool of poverty reduction, job creation and social services, for others it is a fundamentally different way of building a mixed socially-oriented market economy.

Thus, the SSE can be seen not only as an additional way of achieving the general welfare, but as an alternative complex of the state socio-economic policy of sustainable development.

For successful implementation, public policy with elements of the SSE concept must be comprehensive and multi-vector. Social orientation covers such areas as: health, education, environment, labor relations and the labor market, business development, finance, tax, fiscal, macroeconomic; traditional sectors of economy (agriculture, production, services); various forms of SSE (cooperatives, associations, social enterprises, self-help groups), etc. In addition, government agencies should operate on a uniform basis at local, regional and national levels.

In addition, macroeconomic indicators of economic growth are often at odds with the field of SSE in terms of regulating the labor market and shaping state socio-economic policies, which, in general, is a point of intersection of interests of all parties - business, society and the state. In order to achieve a lasting social effect of economic transformation, the concept of SSE should be the basis, not just an add-on in the economic system of a particular country or region.

The effective development, implementation and evaluation of a country's socially-oriented economic policy depend largely on active dialogue and cooperation between all SSE participants. Even with the understanding of the positive impact on the reproduction of quality human resources, the formation of a perfect social protection system, the improvement of the overall welfare of the population and the achievement of sustainable development, all SSE initiatives are considered by the state as expenditures. Therefore, active actions by the state in the conditions of tripartism principle of social partnership are usually not an initiative, but a response to the demands or / and actions of other participants in the process [7].

Overcoming fragmentation and consolidating of efforts in implementation of state socially-oriented policies is crucial. In some cases, this function is performed by specially created multisectoral intermediaries, SSE network organizations which are operating at national, subnational and regional levels.

It's important fact that all members of society, all economic entities, all regulatory institutions have a responsibility to implement the principles of the SSE for tangible results in the field of sustainable development. Transparency, solidarity and community are the key principles for the implementation of individual programs within the concept of sustainable development. Such a multifaceted approach will maximize the impact on building a national socially-oriented solidarity sustainable economy and achieving a high level of overall well-being [10].

Active social dialogue and public oversight of state policy will serve to democratize the process of resource allocation, broad access to information, and reduce transaction costs for all counterparties. As a consequence, the above risks will be reduced. And the desire to gain long-term popularity among society will facilitate the mobilization of sufficient resources in this field on a long-term basis.

### Conclusions.

The main goals of sustainable development (poverty reduction, job creation, adequate social services, food security, etc.), inherent in the concept of SSE, make it by the basis of public policy, regardless of the overall course of its development. And the widespread public interest and dissemination of various forms of SSE, including social entrepreneurship, creates a coherent network of sustainable social and economic ties. The ability to mobilize the financial resources for the purpose of implementing SSE programs is a key to their long-term existence. It is a good practice to form state-owned development banks, which are primarily concerned with the accumulation of resources and lending to small producers, small and medium-sized businesses and representatives of those sectors which are most affected by the financial crises and adverse fluctuations of the world and national economies. The use of classical banking finance entities by such SSE in the context of evaluating the return on such investments is quite limited. That is why, in the context of building an alternative state financial and budgetary architecture, it is necessary to restructure such areas as: the tax system (transition from regressive to progressive); the expenditure structure of the budget (transition from subsidies and protection to development goals); development of various forms of social entrepreneurship and social investment; the promotion of the principles of solidarity and ethics, etc.

The experience of developed countries in an unstable political and changing business environment demonstrates the need to abandon experimentalism and pilot initiatives, and to pursue a comprehensive and targeted state policy based on scientific theoretical developments, assessment and monitoring of the current situation, prompt response and institutional reform, the executive power on the updated legislative base. The implementation of the SSE principles is an integral element of the achievement of the Global Sustainable Development Goals and of individual national programs for economic growth and general welfare.

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**DYNAMICS AND CHALLENGES OF THE EU-UKRAINE COOPERATION:  
POLITICAL, SECURITY AND TRADE ASPECTS**

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**Abstract.** *The article examines both the challenges and progress in implementing the EU-Ukraine Association agreement with focus on the most promising areas of cooperation. What is the role of the EU in internal transformations in Ukraine and what factors will determine bilateral relations in future? Special attention in a paper is paid to the analysis of the COVID-19 pandemic's challenges to the international relations and international trade, in particular its impact on the EU-Ukraine cooperation. Correlation and regression analysis is used to estimate the vulnerability of the EU-Ukraine bilateral trade to the current economic crisis under the COVID-19 pandemic and the quarantine measures. Both the EU and Ukrainian bilateral exports are vulnerable to contraction of their markets and business activity. On the Ukrainian side exports of metals, chemical products and fuels may be the most affected ones, and the exports of food industry and agriculture may be more stable. Real appreciation of hryvnia affects positively the EU exports. But devaluation of hryvnia is not an efficient tool to boost exports specifically to the EU. Instead further efficient implementation of the EU-Ukraine Association Agreement to ensure quality competitiveness of the Ukrainian goods is a better option.*

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**Keywords:** *EU-Ukraine relations, European integration, Eastern Partnership, Association Agreement, bilateral trade, foreign demand.*

**Introduction.**

The EU-Ukraine Association Agreement, including the Deep and Comprehensive Free Trade Agreement (DCFTA), has become an efficient instrument for enhancing political and economic cooperation between the two parties. The agreement based on the overall objective of political association and economic integration has led to transformation of such spheres as justice and home affairs, security, financial and energy sectors, and public administration reform in Ukraine. A free trade area aimed at lifting tariff and non-tariff barriers and facilitating the bilateral trade has led to the increase of trade turnover. By now the EU is Ukraine's largest trading partner, accounting for more than 41% of its foreign trade in 2019.

Last year was marked by significant transition of power both in the EU and Ukraine: the presidential and parliamentary election campaigns in Ukraine together with institutional changes in the EU (the election of a European Parliament and the appointment of a new European Commission). 2019 was also a landmark year for the Eastern Partnership (EP). The European Commission's proposals to launch a structured consultation on the future of the initiative ended on

18 March 2020 when the Joint Communication on the “Eastern Partnership Policy Beyond 2020: Reinforcing Resilience – an Eastern Partnership that delivers for all” was published. The document outlines the priorities of the new European Commission but it lacks ambitions in setting long-term policy objectives for future cooperation with six partners, including Ukraine, and is just a mix of ongoing mechanisms. The resentment of three partners with European aspirations (Ukraine, Georgia and Moldova) is caused by the discrepancy of the defined goals and stimulus used by the EU in its relations with neighbors. The absence of a membership perspective for Eastern Europe both decreases the motivation of partners and narrows down the EU instruments of influence.

The newest security challenge is the COVID-19 pandemic with the associated economic contraction affecting both bilateral relations and the global economy and international relations, in general. Thus, the aim of this research is to assess the current challenges and prospects for further development of the EU-Ukraine relations by implementing the two tasks: determining the impacts for the bilateral relations in political and security sectors; estimating the vulnerability of the EU-Ukraine bilateral trade to the current economic crisis.

### **Previous research review.**

The current debates on the efficiency and coherence of the EU’s strategy towards Eastern Europe and Ukraine are mainly concentrated on “interest-vs-values” dilemma [1]. The ENP and Eastern Partnership were launched with the dominant idea to create “a ring of friends” and to develop a zone of prosperity and a friendly neighborhood. The EU acting as a Normative Power used such instruments as Association Agreements, DCFTA, visa liberalization to diffuse its values and principles: democracy promotion, human rights and environmental agenda. The principle of conditionality, meaning frameworks and conditions for conducting reforms as well as mechanism of incentives (both positive and negative), was rather effective while implementing the EU enlargement policy in the Central and Eastern Europe. But in practice the approach has demonstrated limited effect in the countries-participants of Eastern Partnership.

The current trends in the international system and, in particular Ukrainian case, demonstrate that the geopolitics prevails. The crisis in Ukraine as well as deterioration of the EU relations with Russia has illustrated, as S. Giusti stresses, “the EU inability to foresee and deal with some unintended consequences of its acting as a Normative Power” [2, p.166]. The evolution of the EU strategic vision was finalized by the EU Global Strategy 2016 with its “principled pragmatism” and “resilience” as the new guiding principle of the EU’s relationship with its surroundings [3].

The recent analysis of the EU policy in the region is carried out with the view of the COVID-19 pandemic’s implications, e.g. the report of the group of experts of the Centre for European Policy Studies headed by M. Emerson and the German Council on Foreign Relations [4-5].

Several researchers analyzed the impact of the EU-Ukraine deep and comprehensive free trade. E. g. M. A. Cardenete Flores, A. C. Campoamor & O. Nekhay used the GTAP database to estimate the effects of the abolishment of import tariffs in the bilateral trade between Ukraine and the EU. In particular they suggested that the EU-Ukraine free trade area itself had a positive effect for the GDP in Ukraine (\$1.24 billion) and in the EU (\$0.25 billion) [6]. Z. Olekseyuk calculated that under various simulations the EU-Ukraine free trade area increases the total Ukrainian exports by 2.4-13.7%, the EU exports by 0.07-0.43%, and their GDP by -0.03-5.67% and 0.01-0.05%

respectively [7]. P. Latkovskiy & A. Marushchak noted that in 2017 Ukrainian export to the EU considerably increased (by 30%) due to the real expansion instead of a price increase. There were structural shifts in Ukrainian exports from metals and minerals to food, agricultural products, vegetable oils, machines and equipment as a result of the EU-Ukraine Association Agreement [8]. T. Melnyk, N. Kalyuzhna & K. Pugachevska attempted to use a gravity model based on time series (GDP and oil prices as a proxy of distance) to forecast the EU-Ukraine trade value. The forecasted value for 2018 was \$40.4 billion [9] in comparison to the actual value of \$45.5 billion [10]. But the current COVID-19 crisis causes a structural break in the trade patterns. IHS Markit [11] expected a negative economic growth in the euro area (-4.5%) and in the US (-5.4%) in 2020. Emerging economies may suffer from the COVID-19 proliferation, the global recession and the related drop in commodity prices. Most economies are expected to restore only in 2-3 years.

### Methodology.

Taking into consideration the multifaceted nature of the EU foreign policy consisting of a wide range of policy areas (trade, enlargement, Common Foreign and Security Policy) the authors decided to use a broad perspective in examining EU-Ukraine relations. The first part of the paper is dedicated to the analysis of political and security dimension of the EU-Ukraine cooperation, as well as its institutional and documentary framework based on a descriptive and interpretive approach. The perspectives of bilateral trade affected by the current economic crisis are examined in the second part of the paper. Correlation analysis and theoretical assumptions were used for the primary selection of independent variables. The general specification of the suggested regression models is:

$$Exp = b_0 + b_1 GDP_{UA} + b_2 GDP_{EU} + b_3 RER \quad (1)$$

*Exp* is the bilateral exports growth in a particular year (from the EU to Ukraine or vice versa). *GDP<sub>UA</sub>* is the Ukrainian GDP growth (in dollars, conversion with exchange rate, current prices) in the same year. *GDP<sub>EU</sub>* is similarly the EU GDP growth. *RER* is the real appreciation of Ukrainian hryvnia vis-à-vis the euro. All the variables are measured in %, therefore *b*<sub>1</sub>, *b*<sub>2</sub> and *b*<sub>3</sub> are elasticities. The number of cases is 23 (1996-2018). The data source is UNCTDStat [10].

The first two regression coefficients may be used to assess the effects of demand shock (GDP decrease in importing economy due to structural and absolute changes in consumption) and supply shock (output decline in exporting economy due to losses in labor supply caused by illness and social distancing). Correction for exchange rate and inflation trends may also be attributable to difference in the phases and amplitude of economic cycles in the EU and Ukraine. Since the GDP of EU and Ukraine correlate substantially (0.66), it is not easy to distinguish the effects of demand and supply shocks, unless one of the correlations with the exports growth is larger enough. But *ceteris paribus* demand shocks are more important usually, although the current pandemic is an unusual event that disrupts labor.

This paper also contains research results with a breakdown by product groups for Ukrainian exports to the EU. Robustness check is provided by weighting years in regression analysis (the weight 3 is attributed to 1996, 4 to 1997, ..., 25 to 2018). Such an approach can help to find out changes in relationships between the variables across time. Finally, the elasticities and the shares of the particular product groups in the bilateral exports are multiplied to assess which sectoral vulnerabilities may affect the overall macroeconomic situation in Ukraine the most.

## Results.

Considering the internal risks as well as a challenging geopolitical environment multiplied by the impact of the COVID-19 pandemic, the paper provides a forecast for the following facets which can affect seriously the bilateral relations in political, security and trade sectors.

The worst-case scenario for Eastern Europe and Ukraine is that protracted quarantine measures cause deep economic crisis and hit solidarity within the EU and its relations with neighbors. The political fragmentation and rise of right populist vision and Euroskepticism can lead to the inward-looking policy, e.g. revision of visa liberalization. Another challenge is increasing divergence of interests of EU member-states on the future of the East European policy, which can weaken this policy and increase competition with third states and return of Realpolitik agenda.

However, the medium-case scenario appears to be the most possible option. Ukraine's perspectives of granting EU membership seem unachievable. The institutional capacity building and structural reforms will be hampered both by lack of strategic vision and economic decline caused by the crisis. Though, the EU-Ukraine cooperation will be focused on sectoral integration. The EU has demonstrated solidarity approach by announcing the "Team Europe" strategy to support partner countries' efforts in emergency response to coronavirus pandemic. The support package includes the recent European Commissions' proposals for a €1,2 billion macro-financial assistance to Ukraine together with financial support to the Ukrainian health system and economy, notably small and medium-sized enterprises, as well as humanitarian projects.

According to the report by the Government Office for Coordination of European and Euro-Atlantic Integration of Ukraine by January 1, 2020 the overall progress in implementing country's obligations under the Association Agreement for the period of 2014-2024 was 43%. The biggest progress has been demonstrated in such sectors as "Political Dialogue, National Security, Defense" (86%), "Justice, Freedom, Security and Human Rights" (80%) and "Technical Barriers to Trade" (79%) while the worst results were in such sectors as "Transport, Transport Infrastructure" (19%), "Financial Sector" (22%), "Energy" (29%), "Agriculture" (34%) and "Public Health" (34%) [12, p.11-12]. The recent crisis is objectively supposed to slow down seriously the AA implementation.

The two parties have to concentrate on spill-over based strategy gradually enlarging the sectors of mutually beneficial cooperation. One of the recent success stories is participation of Ukraine's planes An-124 Ruslan and An-225 Mriya in air transportation for the EU and NATO countries during the coronavirus pandemic which could indirectly lead to extending Ukraine's participation in the EU Common Security and Defense Policy initiatives, e.g. PESCO, and to progress in negotiating the Common Aviation Area agreement.

At the same time in view of the on-going revision of the EU Eastern Partnership initiative Ukraine has to set more ambitious goals in expanding the EP frameworks and mechanisms. The EU-EFTA cooperation model can be adopted when applying for access to the EU single market and policy-shaping process. Though, as it was stated in the report of the EU Institute for Security Studies dedicated to the 10 anniversary of EP program "The Eastern Partnership. A Decade on: Looking Back, Thinking Ahead", "the future of Ukraine - EU relations depends not only on the efforts made by Kyiv in implementing the Association Agreement (which remains essential for ultimate success), but also on the EU's ability to deliver on commitments and its willingness to open "new doors" of integration in the spirit of the "more for more" approach" [13, p.31].

The positive signal was demonstrated by the EC decision to include into the new Communication Ukraine’s proposals of extending some benefits of the EU Single Market to the partners [14], such as accession to the Single Euro Payment Area (SEPA), Trans-European Transport Network (TEN-T), the EU program for the Competitiveness of Small and Medium-Sized Enterprises (COSME) etc.

**Challenges for the bilateral trade.**

As to the impacts on bilateral trade, the EU exports are likely to be more demand-driven (either directly by the Ukrainian GDP growth or indirectly through better price competitiveness under expensive hryvnia in calm periods) than supply-driven by capacities in the EU (see the correlations or elasticities in Table 1 and Table 2). Ukrainian exports are also more demand-driven by the EU market trends. Also in a smaller and open economy of Ukraine exports are more likely to affect its GDP than vice versa. Since the correlation between the Ukrainian exports to the EU and the real appreciation of hryvnia is insignificant, this independent variable is omitted in the second model.

**Table 1. Correlations for the EU-Ukraine bilateral trade**

Dependent variable	GDP <sub>UA</sub>	GDP <sub>EU</sub>	RER
Growth of the EU exports to Ukraine (ExpEUUA)	0.93***	0.65***	0.37*
Growth of Ukrainian exports to the EU (ExpUAEU)	0.66***	0.66***	0.20

Notes. Here and in the next tables \*\*\* means significance (unweighted cases) at  $p < 0.01$ , \*\* at  $p < 0.05$ , \* at  $p < 0.01$ .

Source: authors’ calculations based on UNCTDStat [10].

**Table 2. Regression analysis of the bilateral trade between the EU and Ukraine**

Dependent variable	b <sub>0</sub>	b <sub>GDP<sub>UA</sub></sub>	b <sub>GDP<sub>EU</sub></sub>	b <sub>RER</sub>	R <sup>2</sup>	F-test
ExpEUUA	1.54/0.935 (1.96)	0.783/0.852 (0.138)***	0.773/0.636 (0.346)**	0.371/0.297 (0.162)**	0.90/0.91	55.38***
ExpUAEU	5.38/3.60 (3.29)	0.396/0.475 (0.191)**	0.984/1.012 (0.490)**		0.53/0.60	11.40***

Notes. Here and in the next tables the coefficients for unweighted cases are before a slash (/), and the coefficients for weighted cases are after a slash. Significance according to t- and F-test was calculated for unweighted cases. Standard errors are in brackets.

The elasticities are robust enough (the coefficients obtained without and with weighting cases are similar). Thus, there were no major changes in the relationships between the variables. The model for Ukrainian exports is less determinate than the one for the EU exports because of the influence of other factors (presumably institutional changes, political and security situation etc.).

The correlation analysis shows that a half of the sectoral exports from Ukraine to the EU seem to be demand-driven (Table 3).

But under the COVID-19 pandemic the traditional vulnerability of IT-products to a demand shock may not materialize because today there is an increased demand for distant work and entertainment at home. Products for medical purposes are usually independent from economic cycles, but they are in demand now worldwide.

**Table 3. Correlations for Ukrainian exports to the EU, and their product structure**

<b>Export growth by product group</b>	<b><math>GDP_{UA}</math></b>	<b><math>GDP_{EU}</math></b>	<b><math>RER</math></b>	<b>Share in ExpUAEU, % in 2018</b>
Food and live animals	0.39*	0.19	0.12	18.6
Beverages and tobacco	0.29	0.50**	-0.05	0.2
Agricultural raw materials	0.05	0.34	0.06	3.0
Oil seeds and oleaginous fruits, animal and vegetable oils, fats and waxes	0.47**	0.38*	0.17	11.3
Ores, iron, steel or other metals	0.55***	0.44**	0.22	30.9
Fuels	0.34	0.52**	-0.06	3.3
Chemical products	0.53***	0.57***	0.15	3.3
- Medicinal and pharmaceutical products	0.60***	0.29	0.26	0.1
Textile fibres, yarn, fabrics and clothing	0.35*	0.50**	0.11	3.6
Furniture and parts	0.46**	0.48**	0.04	2.4
Machinery and transport equipment	0.37*	0.33	0.12	14.9
- Office machines and automatic data processing machines	0.10	0.40*	-0.21	0.2
- Telecommunication and sound recording apparatus	0.44**	0.52**	-0.02	1.5
- Road vehicles	0.21	0.07	0.34	0.2

Also a half of sectoral exports might be supply-driven, but there may be a reverse causality: food, metal and machinery exports are large enough to substantially affect Ukrainian GDP growth. And only the exports of agricultural raw materials and road vehicles seem to be independent both from economic cycles in the importing economy and the country of origin.

Again there is no sector-specific evidence that real appreciation of hryvnia affects Ukrainian exports specifically to the EU. A possible explanation is that Ukrainian goods already occupy a cheap segment of the market, and it is rather a matter of quality competition and wider compliance with the EU regulations to extend the Ukrainian exports in the EU.

Table 4 provides sector-specific models. Applying weighting of years proved sufficient robustness of the elasticities.

The following Ukrainian exports may be the most affected by the shrinking demand in the EU: fuels, chemical products and metals. Larger demand elasticities for the IT equipment exports may be partially offset by changing consumption structure under the quarantine.



**Table 4. Regression analysis of growth of Ukrainian exports to the EU, sectoral breakdown**

<b>Product group</b>	<b>b<sub>0</sub></b>	<b>b<sub>GDP<sub>UA</sub></sub></b>	<b>b<sub>GDP<sub>EU</sub></sub></b>	<b>R<sup>2</sup></b>	<b>F-test</b>
Food and live animals	17.56/19.75 (12.98)	1.156/1.179 (0.602) *		0.15/0.16	3.69*
Beverages and tobacco	1.80/5.69 (4.90)		1.512/1.190 (0.565) **	0.25/0.17	7.16**
Oil seeds and oleaginous fruits, animal and vegetable oils, fats and waxes	13.53/12.64 (9.42)	1.051/1.051 (0.434) **		0.22/0.28	5.80**
Ores, iron, steel or other metals	8.52/5.96 (6.30)	0.870/1.017 (0.292) ***		0.30/0.37	8.88***
Ores, iron, steel or other metals	8.27/5.51 (6.94)		1.809/2.279 (0.800) **	0.20/0.26	5.11**
Fuels	2.75/-1.61 (7.55)		2.420/2.893 (0.871) **	0.27/0.35	7.72**
Chemical products	2.38/0.442 (6.14)	0.813/0.942 (0.285) ***		0.28/0.35	8.15***
Chemical products	0.38/-1.71 (6.14)		2.232/2.680 (0.708) ***	0.32/0.41	9.94***
- Medicinal and pharmaceutical products	3.11/6.34 (6.54)	1.036/1.015 (0.303) ***		0.36/0.34	11.69***
Textile fibres, yarn, fabrics and clothing	3.99/0.69 (2.52)		0.768/1.048 (0.291) **	0.25/0.48	6.99**
Furniture and parts	19.69/19.69 (4.53) ***	0.503/0.504 (0.210) **		0.21/0.20	5.74**
Furniture and parts	17.57/17.98 (4.60) ***		1.346/1.615 (0.5310)**	0.23/0.29	6.43**
Machinery and transport equipment	12.27/9.36 (5.90) **	0.504/0.545 (0.273) *		0.14/0.21	3.40*
- Office machines and automatic data processing machines	48.32/27.57 (82.36)		18.851/14.85 (9.49) *	0.16/0.13	3.93*
- Telecommunication and sound recording apparatus	17.12/13.76 (13.13)	1.376/1.374 (0.608) **		0.20/0.21	5.11**
- Telecommunication and sound recording apparatus	12.43/9.40 (12.83)		4.178/4.310 (1.479) **	0.28/0.30	7.98**

Smaller negative effect may be for beverages and tobacco, textile and clothing, and furniture (demand for the latter two groups can be deferred as they are durable goods). The most resilient exports may include food, products for medical purposes, agricultural raw materials, oil seeds and vegetable oils.

Despite the low correlations for exports of machinery and transport equipment, the assumption is that changes in consumption patterns (negatively affecting demand for durable and investment goods) may not favor them in the current situation. Several industries might depend on the growth of the Ukrainian GDP with the elasticities being close to unity. But exports of medicinal and pharmaceutical products may depend on non-tariff barriers and trends in external and domestic demand. As for metals, chemical products, food, oil seeds and telecommunication equipment, this effect cannot be easily distinguished from a reverse effect on the GDP or the EU demand effect. The elasticities for furniture and machinery are smaller. The most acyclical exports may include exports of agricultural raw materials, some IT equipment, beverages and tobacco. Exports of fuels, road vehicles, textile and clothes are also usually quite stable, but currently there may be disruption of labor supply due to illness, logistical problems and social distancing.

If both elasticities and product shares are considered, one of the main sources of vulnerability for the Ukrainian economy may be the shrinking demand for metals in the EU.

### **Conclusions.**

Ukraine may face a double challenge while implementing its European strategy in 2020. The long-term impact includes the deterioration of the regional security milieu starting from 2014 with Russia's aggression, tremendous shift to more realistic and pragmatic agenda in the EU foreign and security policy. The recent short-term challenge of the pandemic crisis has a potential protracted effect causing political fragmentation, the rise of Euroskepticism and return to the Realpolitik agenda. The recent crisis is objectively supposed to slow down seriously the AA implementation.

In order to avoid the worst-case scenario Ukraine should concentrate on the bilateral level of its relations with the EU by deepening sectoral integration based on spill-over strategy. The priority sectors shall be defense and security, meaning Ukraine's more active participation within the CSDP and PESCO initiatives, trade, more engagement into the EU single market, and participation in the EU policy-shaping mechanisms. The second priority in view of the on-going revision of the Eastern Partnership shall be further reforms of initiative by enlarging the principle of differentiation and building "Eastern Partnership Plus" in a form of "quadrilogue" with associated partners (EU dialogue with Ukraine, Georgia and Moldova).

In recent years the EU and Ukraine improved treatment for their bilateral trade. But in 2020 the COVID-19 pandemic became a major shock both on the demand and supply side due to changes in consumption patterns and disruption of labor supply. An empirical analysis and further assumptions were used to assess vulnerability of the EU-Ukraine trade in goods.

This trade depends on the business cycles in both the economies. E. g. the Ukrainian exports of metals, chemical products, fuels, as well as furniture and clothes may be the most sensitive to changes in the EU's GDP. The most stable exporting categories in Ukraine may include food, products for medical purposes, agricultural raw materials, oil seeds and vegetable oils. Disruption of labor supply may also influence some exports. Trends in the real exchange rate of the hryvnia are important for the EU exports to Ukraine (price effect), but not for Ukrainian exports to the EU. Therefore devaluation of hryvnia would not be an efficient policy to boost exports specifically to the EU, although it may affect some imports. Ukrainian exporters do not have a problem of raising price competitiveness in the EU market. Instead their quality competitiveness can be ensured under a wider compliance with the EU regulations. Therefore further efficient implementation of the EU-Ukraine Association Agreement is a better tool for facilitation of exports than devaluation.

### Acknowledgements.

With the support of the Erasmus+ Programme of the European Union within the Jean Monnet Centre of Excellence Project № 611625-EPP-1-2019-1-UA-EPPJMO-CoE “Advancing European Studies in Ukraine: Interdisciplinary Approach”. The European Commission's support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

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**ISSUES OF ANTIMONOPOLY REGULATION OF INTERNATIONAL ECONOMIC  
RELATIONS IN UKRAINE, EUROPEAN UNION AND USA**

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**Abstract.** *The article is devoted to the research of the issues of antimonopoly regulation of international economic relations in Ukraine, EU and USA. The protection of economic competition and the protection of rights and interests of the parties of civil law transactions and commercial transactions are the foundation of the antimonopoly and legal policy of both Ukraine and many other foreign countries. The United States is historically the first state to pursue an essentially antitrust policy. In turn, on September 16, 2014, our country ratified the Association Agreement between Ukraine and the European Union, the European Atomic Energy Community and their Member States. Thus, this research aims to accomplish a comprehensive theoretical analysis of the problems of antimonopoly regulation of international economic relations in Ukraine, the EU and the USA, as well as to assert the author's vision on the prospects for their settlement. The article, in particular, examines the definition of international economic relations and features of their legal regulation. It was also concluded, that the rules of commercial activity of monopolies should be adjusted by states in their jurisdictions in order to ensure that there are no discriminatory approaches and obstacles to economic activity but only under the conditions of rule of law observance and protection of national interests.*

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**Keywords:** *international economic relations, monopoly, protection of economic competition, agreement, treaty, civil law, law, EU law.*

**Introduction.**

The protection of economic competition and the protection of rights and interests of the parties of civil law transactions and commercial transactions are the foundation of the antimonopoly and legal policy of both Ukraine and many other foreign countries. On September 16, 2014, our country ratified the Association Agreement between Ukraine and the European Union (hereinafter – the EU), the European Atomic Energy Community and their Member States (*Law of Ukraine on the ratification of the Association Agreement...*, 2014) [1]. On February 7, 2019, due to amendments to the Constitution (*The Constitution of Ukraine, 1996*) [2], the European identity of the Ukrainian people and the irreversibility of the European and Euro-Atlantic course of Ukraine were confirmed. Concurrent, these processes are impossible without adjusting the Ukrainian law to the European standards. In order to achieve these objectives, the thorough analysis of the existing features of antimonopoly regulation of international economic relations in Ukraine, as well as positive experience of the US and specific EU countries should be taken into account.

This research aims to accomplish a comprehensive theoretical analysis of the problems of antimonopoly regulation of international economic relations in Ukraine, the EU and the USA, as well as to assert the author's vision on the prospects for their settlement. Besides, many experts addressed specific issues of the problems of antimonopoly regulation of international economic relations, in particular, A.S. Bebelo (2001) [3], O.O. Beliaev (2001) [3], I.G. Gelfenbuim (2002) [17], V.I. Eremenko (1997) [14], O.O. Karasyk (2014) [18], N.S. Mislitska (2008) [7], V.F. Opryshko (2003) [4], M.O. Shulgin (2008) [16] and many others. Nevertheless, in the current conditions of globalization and intensification of international economic relations, their study is of particular relevance.

### **Definition of international economic relations.**

International economic relations is a system of economic relations among the states concerning the production, distribution, exchange and consumption of goods (services) that have transcended the boundaries of certain national economies (Belyaev & Bebel, 2001) [3]. The objects of international economic relations are the directed economic activities of various entities, which are created and operate in accordance with their national laws. However, an important prerequisite for accomplishing the economic potential of any state, as well as the most important guarantee of ensuring its national security is the active participation of that state in international economic cooperation based on due observance of the principles and rules of international law, and comprehensive development of global trade connections foremost (Opryshko, 2003) [4].

Monopolistic activities are actions (inactions) of economic entities, authorities and management that are contrary to the national antimonopoly law intending to prevent, restrict or eliminate competition and / or prejudice the legitimate interests of consumers. In 1974, the United Nations approved the Charter of Economic Rights and Obligations of States (*Charter of economic rights and duties of states, 1974*) [5], which declared the right of each state to regulate and control such activities within the scope of its national jurisdiction. In addition, multinational corporations should not interfere in the internal affairs of any state. Besides, in 1974 the United Nations decided to establish a Center and an Intergovernmental Commission on Transnational Corporations, which aimed to develop a code of conduct for transnational corporations. In the basis of the code would be the recognition of the democratic principles of economic activity (Mochernyi, 2000) [6].

The books stated that the complexity of functioning and development of competitive relations requires the formation of state competition policy, and an important component of which is antimonopoly regulation. It aims to protect the economic competition by averting and preventing the negative impact of monopoly entities (Mislitska, 2008) [7].

### **Antimonopoly regulations of international economic relations in Ukraine.**

In accordance with the Art. 42 of the Constitution of Ukraine (*The Constitution of Ukraine, 1996*) [2], the state ensures the protection of competition in business; the abuse of a monopolistic position in the market, the unlawful restriction of competition, and unfair competition, shall not be permitted; law determines the types and limits of monopolies.

In 1996 the Law of Ukraine No. 236/96-BP of 07.06.96 "On Protection against Unfair Competition" was adopted (*Law of Ukraine on protection against unfair competition, 1996*) [8], in 2000 the Law of Ukraine No. 1682-III of 20.04.2000 "On Natural Monopolies" (*Law of Ukraine on natural monopolies, 2000*) [9] and in 2001 - Law of Ukraine No. 2210-III of 11.01.2001 "On

Protection of Economic Competition" (*Law of Ukraine on protection of economic competition, 2001*) [10] were adopted, which defines the legal basis for the support and protection of economic competition, limitation of monopoly in economic activity and designated to ensure the effective functioning of the economy of Ukraine on the basis of the development of competitive relations.

#### **Antimonopoly regulation of international economic relations in the EU and the USA.**

The basis of antimonopoly policy and EU competition law are enshrined in the Treaty establishing the European Community (*Treaty establishing the European Community, 1957*) [11]. Noteworthy, that in order to develop and improve the prohibition clauses of the Treaty of Rome, in 1993 the Maastricht Treaty was concluded on the prohibition of certain activities that qualify as monopolistic. The treaty added the rules that introduced prohibitions and penalties for unfair competition, however, essentially repeated the provisions of the articles of the Treaty of Rome.

The sources of law in economic competition in the EU are the Treaty on the European Coal and Steel Community, 1951; Treaty on European Economic Community, 1957; EU Council Regulations and EU Commission Directives. Thus, among the sources of EU competition law, the following should be mentioned: Council Regulation (EU) No 1/2003 of 16 December 2002 on the implementation of competition rules; Council Regulation (EU) No 139/2004 of 20 January 2004 on the control of concentrations between companies (EU Merger Regulation); Commission Regulation (EU) No 330/2010 of 20 April 2010 on the application of Article 101 (3) of the Treaty on the Functioning of the EU to the categories of vertical agreements and concerted practices; Commission Regulation (EC) No 772/2004 of 27 April 2004 on the application of Article 81 (3) of the Treaty to the categories of technology transfer agreements; Council Directive 89/665/EEC of 21 December 1989 on redress in the relevant national sector of the EU. In addition, legal acts concerning the EU standards in the field of public procurement, including Directive 2004/18 / EC of the European Parliament and of the Council of 31 March 2004 on the coordination of procedures for the award of public works contracts, public supply contracts and public service contract; Directive 2004/17 / EC of the European Parliament and of the Council of 31 March 2004 coordinating the procurement procedures of entities operating in the water, energy, transport and postal services sectors; Directive 89/665 of 21 December 1989 on redress in the relevant national sector of the EU; Directive 92/13 of 25 February 1992 on redress in the EU utilities sector and others.

In the EU, an important step towards the compliance of European legislation against unfair competition was the development of Directive 2005/29 / EC of the European Parliament and of the Council on unfair business (*Directive of the European Parliament and of the Council on unfair commercial practices..., 2005*) [12]. The Directive intends to create a single legal system in EU countries aimed at preventing fraudulent commercial activities, such as misleading advertising, comparative advertising, advertisement for a specific product group, and advertising on television, on the Internet and through other media. .

However, Art. 81 of the Treaty of Rome (*Treaty establishing the European Community, 1957*) [11] applies to the contractual forms of violation of EU competition law, and according to paragraph 1, any agreements between companies, decisions on the merger of undertakings and any coordination activities that may harm trade between the Member States and have as their object or effect the obstruction, restriction or distortion of competition within the common market are incompatible with the common market and are prohibited.

Noteworthy, in accordance with the Association Agreement between Ukraine, on the one hand, and the EU, the European Atomic Energy Community and their Member States, on the other, the following rules, in particular, are specified (*Association Agreement between Ukraine, of the one part, and the European Union..., 2014*) [13]: 1) in sectors where market access commitments are undertaken, the measures which a Party shall not maintain or adopt either on the basis of a regional subdivision or on the basis of its entire territory, unless otherwise specified in Annex XVI-B and XVI-E to this Agreement, are defined as limitations on the number of services suppliers whether in the form of numerical quotas, monopolies, exclusive service suppliers or the requirements of an economic needs test (Article 93); appropriate measures shall be maintained or introduced for the purpose of preventing suppliers who, alone or together, have the ability to affect materially the terms of participation (having regard to price and supply) in the relevant market for postal and courier services as a result of use of their position in the market (Article 110); Any Party has the right to define the kind of universal service obligation it wishes to maintain. Such obligations will not be regarded as anti-competitive per se, provided they are administered in a transparent, non-discriminatory and competitively neutral manner and are not more burdensome than necessary for the kind of universal service defined by the Party (Article 111); the Parties recognize the importance of free and undistorted competition in their trade relations and etc.

At the same time, each of the EU Member states has its own, antimonopoly law, which should not affect the interests of the whole Commonwealth. Thus, German antitrust policy intends to prevent the abuse of the monopoly position on the market by large manufacturing companies and to prohibit collusion between parties that lead to restriction of competition, production or market opportunities. The policy itself is based on the principles of inflating the scope of the market mechanism and reducing intervention in the economy. The principal law in this area is the Law on the Abolition of Restrictions on Competition, which is implemented by the Federal Cartel Service. The acquisition of the assets of the enterprise, the acquisition of shares of 25, 50 and more percent of shares of the company, any transaction whereby a firm obtains direct or indirect control of other enterprises are under control (*Eremenko, 1997*) [14].

A distinctive feature is the antitrust policy of France, which is sometimes called the "monopoly" policy. However, the French authorities are still moving towards a gradual departure from protectionist public policy in favor for a more liberal and competitive one (*Bonaire & Krueger, 1995*) [15].

In turn, the United States is historically the first state to pursue an essentially antitrust policy. In fact, three antitrust laws shape the basis of the US antitrust legislation, namely the Sherman Act, adopted in 1890; The Federal Trade Commission Act, adopted in 1914, and the Clayton Act, also adopted in 1914. In addition, law books refer to the Act "On Tax Relief and Establishment of Government Annual Revenue and Other Purposes", which together with the Law "On Amendments to Articles 73 and 76 of the U.S. Law "On Tax Relief and Establishment of Government Annual Revenue and Other Purposes" expanded the scope of federal antitrust laws.

Currently, the US antitrust policy relies more on economic and theoretical models and estimation calculations (*Shulgin, 2008*) [16, p. 103]. The primary purpose of antitrust laws in the United States is, firstly, to legally define those cases that involve unreasonable means of restricting competition and monopolizing trade; secondly, to exclude certain categories of monopolies from

the scope of antitrust law (*Gelfenbuym, 2002*) [17]. Despite the existence of the position that the US antitrust law is based on the principle of prohibition of monopoly as such (*Goryan & Karasik, 2014*) [18, p. 30], we support the conclusion that the US antitrust laws do not prohibit monopoly as such, but merely do not allow monopolization of the market for a particular commodity.

For instance, in 2007 the Supreme Court rendered a decision in the case *Leegin Creative Leather Products, Inc. v. PSKS, Inc.* (June 28, 2007)<sup>12</sup>, where an approach has finally emerged, whereby any vertical agreements should only be assessed using the "rule of reason" (*Leegin Creative Leather Products, Inc. v. PSKS, 2007*) [19].

In turn, according to the established practice, the US Supreme Court and state courts of appeal do not consider themselves unconditionally bound by their past decisions. Guided by certain considerations, the latter can independently decide on the application of any precedent; the U.S. Supreme Court has similar powers (*Marchenko, 2011*) [20, p. 363]. In American jurisprudence, the essence of the precedent is explained as follows: "If we do not want anarchy reigning in the federal judicial system, federal courts should follow the precedent of this court no matter how erroneous the judges of these courts may consider it" (*Shannon, 2006*) [21, p.2]. The significance of the role of judicial precedent as a source of US antitrust law can be confirmed by the following case study. In particular, the U.S. Competition Law, the so-called Sherman Act, entered into force in 1890. The first article of the law declares illegal "agreements or associations in the form of a trust or in any other form, secret conspiracies and the other actions aimed at restricting trade or commerce between states or with foreign states". The vagueness and ambiguity of the ban led to the fact that "the US Supreme Court found that, by adopting the Sherman Act, Congress had in mind the ban on only unreasonable and unjustified restrictions on trade. Since it is the courts that determine what kind of entrepreneurial practice meets the "rationality rule", it is the court decisions that determine the real content of most of the antitrust law" (*Burnham, 2007*) [22, p. 936-937].

In turn, the importance of legal practice for antitrust regulation of economic relations in Ukraine is also evident in the activity of the Supreme Court. In particular, in Case No. 910/23375/17 the court stated that in order for the right of access to a court to be effective, a person must have a clearly defined and effective opportunity to challenge an event which, in his opinion, violates his rights and interests protected by law. As the current legislation almost does not regulate the procedures and criteria by which the Antimonopoly Committee of Ukraine makes a decision to open or refuse to consider an application, the decision to refuse should be as comprehensive as possible and substantive, and should disclose the applicant's reasons for its adoption. Discretionary powers can not be used arbitrarily by the authority, and the court must be able to review decisions made on the exercise of these discretionary powers, which are the safeguard of arbitrary decisions in the widest possible discretion of the public authority (*Decision of the Court of Cassation within the Supreme Court in Case No. 910/23375/17, 2019*) [23].

### **Conclusions.**

Summarizing the abovementioned and specifying some of the problems of antitrust regulation of international economic relations, we consider it possible to conclude that the rules of commercial activity of monopolies should be adjusted by states in their jurisdictions in order to ensure that there are no discriminatory approaches and obstacles to economic activity but only under the conditions of rule of law observance and protection of national interests.



However, with regard to Ukraine, it should be emphasized that it belongs to the system of continental law. Therefore, despite the generally correct interpretation of antitrust law by the Supreme Court, existing gaps in legal regulation must still be addressed by amending the legislation. In particular, it is necessary to regulate in detail the procedures and criteria by which the Antimonopoly Committee of Ukraine decides to open or refuse to consider a statement on protection of relations in the sphere of economic competition.

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## MODELS OF ASSESSMENT AND ANALYSIS OF THE LEVEL OF MONETARY SECURITY OF THE STATE

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**Abstract.** *The publication highlights the results of the analysis of the possibilities of applying discriminant analysis and applied econometric tools to determine the threshold levels of monetary security of the state, the identification, analysis and forecasting of key macroeconomic parameters that determine the dynamics of changes in the consumer price index and the level of monetary security. Development of a classification rule, construction of a discriminant model with determination of the limit of discrimination allowed to identify periods when the value of the monetary security indicator (consumer price index) is within the target values, and to determine the threshold level and to predict the deviation from the threshold level corresponding to the values of its main indicators determine. Building on quarterly information for 24 reporting periods a simulative model that reflects the main relationships between endogenous and exogenous variables that determine key parameters of the NBU's monetary policy, allowed to trace the direction and nature of cause and effect relationships between the main macroeconomic contexts and predicting the value of the consumer price index. Estimated values of the endogenous variables of the developed model were calculated, allowed to analyze feasible scenarios of monetary security management.*

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**Keywords:** *monetary security, discriminant model, simulative model, consumer price index, threshold level.*

### Introduction.

The current scientific literature covers the results of researches aimed at substantiating the theoretical foundations of financial security for systems of different levels of complexity and hierarchy, as well as the applied aspects of assessing the level of financial security at national, regional and economic entities. At the same time, a much smaller number of publications is devoted to the issues of assessing the level, analysis and forecasting of financial security components of the state, and in particular of monetary security.

At present, a considerable amount of research is devoted to the study of monetary policy management mechanisms, both in advanced countries with highly developed socially oriented market economies and in countries in which systemic transformations occur and are in crisis or post-crisis stages of their development. The majority of such research is aimed at developing mechanisms to support a certain level of inflation, macroeconomic and macro-financial stability based on the development and practical implementation of macroeconomic models [1, p. 116].

### **Problem Statement.**

Relevance, as well as theoretical and practical importance of solving the problem of developing scientific and methodological tools for modeling the processes of monetary security management, and, in particular, modeling the threshold levels of a given component of financial security of the state, as well as evaluating the effectiveness of various levers of monetary policy, including changes in the National Bank discount rate and its impact on the consumer price index led to the choice of the research direction, some results of which are reflected in this paper.

### **Research Questions.**

The main issues covered in this paper are the adaptation and development of the existing approach to assessing the economic security threshold at the regional level [1] to the national level, and, in particular, the monetary component of the state's financial security, as well as developing models for assessing and analyzing the level of monetary security.

### **Purpose of the Study.**

The purpose of the publication is to highlight some of the results of the research aimed at improving existing approaches to the problem of assessing the level of monetary security of the state.

### **Conceptual Models.**

To solve the problem of assessing the level of monetary security of the state, a conceptual model of finding and quantifying the value of the threshold level was used, using the possibilities of correlation-regression and discriminant analysis given in [1]. For the analysis of the level of monetary security, an approach to the analysis of the processes of formation of monetary policy parameters, considered in [2], was developed. This approach involves the analysis of macroeconomic indicators, identifying the direction of causality, as well as the construction, estimation and further study of the simulation econometric model.

### **Research Methods.**

In order to achieve the goals of the study, discriminant analysis, applied econometric models and methods were used. The practical implementation of the calculations presented in the work involves the use of the statistical computing environment R (RStudio), in particular packages "forecast", "lmtest", "mctest".

### **Results.**

Make conclusions about the level of economic security of the system of any complexity and hierarchy, as well as the components of the system of economic security, is only possible through taking into account the critical or threshold values of the relevant indicators. For financial security and its monetary component, the thresholds of security indicators will be characterized by the limit values of macroeconomic indicators of the major spheres of life, failure of which (excess or underperformance) will lead to the formation and intensification of destructive, unregulated processes in the production and financial life, decrease of consumption, decrease the level of social tension, and as a consequence – to unregulated and difficult-to-predict processes in the state [2]. Under the state's monetary security threshold level, one should understand the value of financial macroeconomic indicators, the systematic withdrawal of which beyond the target for several reporting periods under other identical conditions can potentially lead to the destabilization of the monetary system of the state, which will result in an increase in inflation, bank, reducing the purchasing power of the population, etc. An exhaustive list and characterization of the basic methods of calculating the threshold values of economic security indicators and their structural components are given in [2].

One of our tasks is to solve the problem of estimating the threshold levels of monetary security of the state. For modeling the threshold levels of monetary policy impact on the CPI, it is suggested to use discriminant analysis, which has proven to be an effective method for addressing these challenges [2]. The use of discriminant analysis to determine the threshold level of monetary security involves the preliminary identification of indicators, the impact of which should be considered in the context of the formation, analysis and forecasting of monetary policy parameters. On the basis of such indicators, regression to the CPI was constructed. During the econometric analysis, the impact of a number of indicators on the dynamics of CPI change was evaluated.

It should be noted that the impact of the following indicators was not significant enough and, accordingly, they were not included into the model: money turnover, number of turnover; the level of monetization,%; share of cash outside banks in the amount of money supply,%; the average weighted interest rate on national currency loans to banks; the volume of lending to real sector banks,% of GDP; share of consumer loans in the total structure of loans to residents,%; inflation expectations for the next 12 months,% per year; NBU discount rate,% per year; the number of registered unemployed in Ukraine, thousand; the employment rate, in % of the population aged 15-70; the level of dollarization, %.

According to the statement of the task, the performed literature analysis [1,3,4], correlation-regression and logical analyzes, and the available statistical base, the following variables were selected, which are the main regressors of the indicator of the absolute nature of the Consumer Price Index, corresponding to the period of the previous year,% pa (CPI):  $GDP_{t-2}^{gap}$  – the gap between the trend of the logarithmised value of real GDP per capita, UAH;  $ERI_t$  – absolute increase in the index of change relative to the corresponding period of the previous year of the official average for the period of the exchange rate of the national currency to the US dollar,%;  $M2_t^{gap}$  – the value of the imbalance between supply and demand of the logarithmic value of the monetary aggregate M2, mln. UAH.

The logarithmization of GDP and M2 is carried out in order to obtain more homogeneous samples, which has a positive impact on the predictive qualities of the model. The choice of absolute increase is due to the fact that it allows to obtain better predictive qualities of the model, higher statistical significance and can be interpreted as short-term influence. In addition to these indicators, the model is proposed to include the CPI with a lag as a regressor, which allows to model the inertia of inflation [4, p. 14].

The M2 trend and potential output were estimated using the Hodrick-Prescott filter. In [5], the authors compare the Hodrick-Prescott filter and the Hamilton filter, and conclude that in the context of the Belarusian economy (which is similar to the Ukrainian one in the context of a short time observation of macroeconomic time series) and the difficulties of a priori parameter setting (this applies to the Kalman filter) It is more appropriate to use an HP filter. The duration of the lag was determined using the method of all possible regressions on the corrected Akaike information criterion, which is adapted for small samples [6, p. 164].

Using a generated sample of 24 observations, namely quarterly data for 2014 (1) -2019 (4), the following dependence for CPI was obtained (the corresponding Student's t-statistic values are given in parentheses):

$$CPI_t = 0.145 + 0.527CPI_{t-1} + 0.981GDP_{t-2}^{gap} + 29.915ERI_t - 7.226M2_t^{gap}. \quad (1)$$

(0.179)    (5.190)            (0.158)            (5.820)            (-0.251)

In the model of inflation obtained, the parameters estimated at the variables  $\Delta CPI_{t-1}$  and  $ERI_t$  are statistically significant at the p-value level  $<0.001$ , the parameters at the variables  $GDP_{t-2}^{gap}$  and  $M2_t^{gap}$  are statistically insignificant at the given levels, but left in the model based because of the goals of logical expediency. The quality of the dependence obtained, in particular the value of the coefficient of determination and the Fisher criterion ( $R^2 = 0.81$ ,  $F = 21.28$ ) confirm its satisfactory quality. In order to construct a discriminant function, classification rule was defined. Based on on this rule two sets that will fit a particular class of values were formed. The discriminant function is constructed on the basis of the aggregates, which are formed according to the values of change in the CPI growth and listed indicators, which were selected as the main factors influencing the CPI. In the first class were decided to include values with a positive change in increment and in the second class - with a negative change. The change in the CPI growth value reflects the acceleration or deceleration of the CPI dynamics and, as a result, the modeled effect of the impact of monetary policy measures on selected indicators.

Based on the discriminant analysis algorithm presented and described in [7], the following discriminant function is developed to model the threshold levels and the limit of discrimination:

$$Z = -4.036GDP^{gap} + 11.223ERI - 11.480M2^{gap}, C = 0.16.$$

The classification accuracy of this discriminant model is 78.26%. Given that the available sample size is insufficient to form such a test data set, for which an adequate accuracy estimate could be obtained, the classification accuracy is calculated on the basis of the data involved in the construction of the model itself.

**Table 1. Values of the discriminant function and the discrimination margin for CPI growth**

№	Quarter	Z	№	Quarter	Z	№	Quarter	Z
1	1Q2015	5.042	$C = 0.47$			16	1Q2017	-0.708
2	2Q2014	2.688	9	4Q2018	0.415	17	1Q2019	-0.930
3	4Q2014	1.527	10	3Q2019	0.337	18	3Q2015	-0.977
4	3Q2016	1.332	11	1Q2018	0.022	19	2Q2018	-1.016
5	3Q2018	1.167	12	2Q2019	-0.102	20	4Q2019	-1.461
6	3Q2014	1.101	13	4Q2017	-0.104	21	2Q2016	-1.746
7	3Q2017	0.967	14	4Q2015	-0.237	22	2Q2015	-3.206
8	4Q2016	0.509	15	2Q2017	-0.507	23	1Q2016	-3.234

The gray coloured are the periods when the theoretical value of the CPI according to the regression model is within the target value. The higher the Z value, the higher the CPI acceleration is expected to be, the weaker the effect of monetary policy on the discriminant models obtained: the lower – the stromder slowdown. Approaching the threshold level can be interpreted as a steady process or minimal change in CPI acceleration. Taking into account the critiques, advantages and disadvantages of different classes of models, the use of structural econometric model tools was chosen to solve the problem of analyzing and forecasting the key macroeconomic indicators that characterize monetary policy. For the development of the model of analysis and forecasting, a number of indicators were selected from the existing statistic database provided by the State

Statistics Service [8] and the NBU [9], which reflect the macroeconomic situation in the country and have been available since 2014. As a result, the following endogenous and presumably exogenous variables were distinguished:

Endogenous variables: *CPI* – is the absolute increase in the Consumer Price Index in the corresponding period of the previous year,% per annum; *GDP<sup>gap</sup>* – the magnitude of the gap from the trend of the logarithmic value of real GDP per capita, UAH; *ERI* is the absolute increase of the index of change relative to the corresponding period of the previous year of the official average for the period of the exchange rate of the national currency to the US dollar,%; *M2<sup>gap</sup>* – the magnitude of the imbalance between supply and demand of the logarithmic value of the monetary aggregate M2, UAH million; *R* – NBU discount rate,% pa; *CPI<sup>exp</sup>* – absolute increase in inflation expectations for the next 12 months,% per annum; *EMPL* – employment rate,% of the population aged 15-70 years; *W* is the logarithm of the real average wage per employee, UAH; *SEI* – an integral indicator of the level of the shadow economy in Ukraine,% of official GDP; *RES* - absolute increase of the log of the NBU's international reserves, mln. USD;

Exogenous variables: *NX* – absolute increase in net exports, billion USD; *IMF* loans to the IMF, billion USD; *DEF* – state budget deficit, UAH billion; *MB* is the absolute increase in the logarithm of the monetary base indicator, UAH million; *Seas* is a dummy seasonal variable. It should be noted that in addition to these exogenous variables, exogenous variables also include autoregressive elements of endogenous variables in the corresponding equations and lag exogenous variables [10, p.169]. Thus, 24 variables: 10 endogenous and 14 exogenous (including 3 dummy ones) were included into the model. The following structure is developed based on correlation-regression analysis, including the Granger test for identifying the causality direction between the selected indicators and determining the lag duration by the method of all possible regressions on the corrected Akaike information criterion [1, 11-14] relationships between selected metrics.

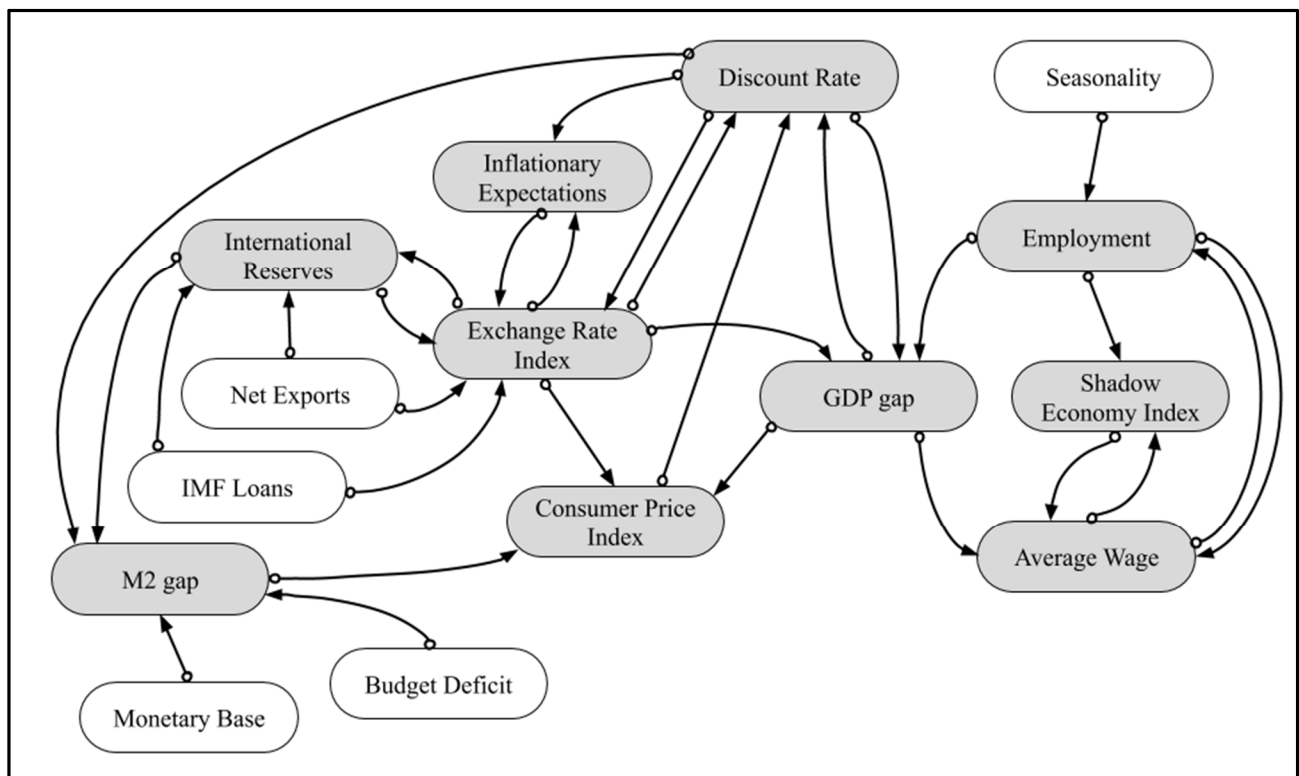


Figure 1. The relationship scheme between the input variables of the model

The presented system was evaluated by 2OLS after preliminary analysis of the fulfillment of its preconditions, in particular rank and order [10, p.172], and has the following form:

$$CPI_t = 0.213 + 0.535CPI_{t-1} + 1.746GDP_{t-2}^{gap} + 34.354ERI_t - 32.034M2_t^{gap}, \quad (2)$$

(0.224) (4.788) (-0.821) (4.529) (0.238)

$$R^2 = 0.79, F = 16.44;$$

$$GDP_t^{gap} = -3.293 - 0.646GDP_{t-2}^{gap} + 0.060EMPL_t - 0.009R_t + 0.214ERI_t, \quad (3)$$

(-3.237) (-6.376) (3.406) (-3.449) (2.679)

$$R^2 = 0.81, F = 20.17;$$

$$ERI_t = 0.133 - 0.003NX_{t-4} + 0.049CPI_t^{exp} + 0.031IMF_t - 0.009R_{t-1} - 0.228RES_{t-1}, \quad (4)$$

(1.842) (-0.179) (3.445) (1.193) (-1.997) (-1.401)

$$R^2 = 0.87, F = 22.98;$$

$$M2_t^{gap} = 0.027 + 0.519M2_t^{gap} - 0.039RES_{t-1} + 0.0003DEF_{t-2} - 0.001R_{t-1} + 0.405MB_t, \quad (5)$$

(1.536) (3.209) (-1.518) (1.765) (-1.759) (3.212)

$$R^2 = 0.68, F = 7.22;$$

$$R_t = 2.879 + 0.835R_{t-1} - 9.449GDP_t^{gap} + 17.126ERI_t - 0.163CPI_{t+3}, \quad (6)$$

(0.960) (4.519) (-2.285) (4.204) (-1.462)

$$R^2 = 0.86, F = 25.84;$$

$$CPI_t^{exp} = 0.697 + 0.687CPI_{t-1}^{exp} - 0.046R_{t-1} + 6.166ERI_t, \quad (7)$$

(0.935) (3.480) (-1.019) (4.411)

$$R^2 = 0.85, F = 35.96;$$

$$EMPL_t = 1.229 + 0.889EMPL_{t-1} - 0.519W_{t-4} + 1.203Seas_t + 0.902Seas_{t-1} + 0.384Seas_{t-2}, \quad (8)$$

(0.236) (8.315) (2.738) (7.364) (6.198) (2.563)

$$R^2 = 0.94, F = 46.85;$$

$$W_t = 9.499 - 0.018EMPL_{t-3} - 0.054SEI_t - 0.125GDP_t^{gap}, \quad (9)$$

(4.292) (-1.162) (-6.305) (-1.425)

$$R^2 = 0.98, F = 361.3;$$

$$SEI_t = 222.226 - 1.447EMPL_t - 12.101W_t, \quad (10)$$

(9.04) (-3.26) (-13.78)

$$R^2 = 0.92, F = 117;$$

$$RES_t = -0.011 + 0.046IMF_t - 0.053NX_{t-3} - 0.654ERI_{t+1}, \quad (11)$$

(-0.550) (2.538) (-3.304) (-5.461)

$$R^2 = 0.81, F = 27.25.$$



Relative quality indicators of the forecast may not adequately reflect the quality of the forecast at  $y_t = 0$  and have extreme values when  $y_t$  is close to zero [6, p.79]. The calculated values of the forecast quality indicators are shown in Table 2.

**Table 2. Values of forecast quality indicators**

	CPI	GDP <sup>gap</sup>	ERI	M2 <sup>gap</sup>	R	CPI <sup>exp</sup>	EMPL	W	SEI	RES
ME	5E-18	-7E-18	4E-18	-2E-18	3E-16	3E-17	0E+00	-2E-16	4E-16	6E-18
RMSE	3.772	0.058	0.067	0.020	2.084	0.724	0.191	0.038	1.570	0.088
RMSPE	1.735	1.111	7.998	1.038	0.128	1.591	0.003	0.004	0.045	10.677
MAE	2.342	0.042	0.053	0.015	1.795	0.621	0.136	0.032	1.266	0.073
MPE	23.036	18.439	-30.387	16.674	-1.672	-1.420	-0.001	-0.002	-0.202	-52.179
MAPE	39.002	27.844	47.775	35.104	11.285	53.520	0.242	0.362	3.658	123.019
MASE	0.229	0.655	0.280	0.435	0.234	0.366	0.210	0.137	0.351	0.442

Estimated values of endogenous variables in the baseline scenario were calculated, in which the predicted values of exogenous variables were obtained using the NNAR model, which is presented in the forecast package [10, p. 445] are shown in table 3.

**Table 3. Predicted values of endogenous variables**

	CPI	GDP <sup>gap</sup>	ERI	M2 <sup>gap</sup>	R	CPI <sup>exp</sup>	EMPL	W	SEI	RES
1Q2020	-1.903	-0.290	0.107	0.024	11.424	0.089	57.784	9.631	24.775	0.093
2Q2020	1.489	-0.160	0.081	0.018	9.580	-0.360	59.046	9.823	22.950	0.029
3Q2020	0.303	0.063	0.036	0.012	8.501	0.795	59.476	9.987	20.653	-0.123
4Q2020	3.320	0.055	0.066	0.039	7.142	1.102	59.474	10.292	18.554	-0.046
1Q2021	4.501	-0.108	-0.101	0.012	7.552	0.951	58.964	10.695	16.732	0.139
2Q2021	-3.533	-0.090	-0.042	0.027	6.579	-0.453	59.424	10.998	15.103	-0.238

According to the simulation model developed, the CPI value at the end of 2020 will be 7%. CPI growth rate threshold (81.48% classification accuracy):

$$Z = -4.112GDP^{gap} + 12.010ERI - 26.739M2^{gap}, C = -0.03$$

Table 4 presents the values of the discriminant function and the discrimination boundaries for the CPI, which are developed on the basis of theoretical and predictive values of the simultative econometric model.

**Table 4. Values of the discriminant function and the discrimination boundary based on the values of the symultative econometric model**

№	Quarter	Z	№	Quarter	Z	№	Quarter	Z
1	1Q2015	6.033	10	1Q2019	0.429	18	3Q2019	-0.698
<b>2</b>	<b>1Q2020</b>	<b>1.851</b>	11	3Q2017	0.355	19	2Q2021	-0.848
3	4Q2014	1.408	12	2Q2018	0.175	20	1Q2021	-1.091
<b>4</b>	<b>2Q2020</b>	<b>1.136</b>	<b>C = -0.03</b>			21	2Q2016	-1.292
5	1Q2017	1.070	13	3Q2020	-0.146	22	4Q2017	-1.293
6	2Q2019	0.774	14	4Q2018	-0.240	23	2Q2015	-1.406
7	4Q2016	0.617	15	2Q2017	-0.468	24	4Q2015	-1.521
8	1Q2018	0.610	16	4Q2020	-0.488	25	3Q2015	-2.076
9	3Q2018	0.450	17	3Q2016	-0.502	26	4Q2019	-2.185
						27	1Q2016	-2.413

The periods when the CPI was within the target are marked grey. According to the calculated prediction, the CPI index, which is below the target, is highlighted in the bold outline using the sumultative model. Formed on the basis of certain key indicators of the impact on the CPI, the discriminant model allows to identify the threshold level, the intersection of which will lead to an acceleration of inflation and an increase in the value of the CPI.

### Conclusions.

The approach proposed in the framework of the conducted research is based on the use of the opportunities and advantages of discriminant analysis and applied econometric tools. The developed structural econometric model allows to take into account the relations between macroeconomic indicators, the dynamics of which characterize monetary policy, and, at the same time, the level of monetary security of the state. With the help of the obtained model it is possible to carry out scenario analysis, and on the basis of statistically significant coefficients of the model - to calculate elasticity coefficients, beta coefficients and indirect beta coefficients, which will allow to obtain the quantitative value of the relationships between the studied indicators, with the cumulative influence of lag effects allows to draw conclusions about the level of monetary security.

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## **GEOGRAPHICAL DIFFERENTIATION OF COMMODITY TRADE UKRAINE WITH SLOVENIA**

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**Abstract.** *The current economic development of Ukraine necessitates the expansion of its foreign trade relations with EU countries, in particular, with Slovenia, which is Ukraine's main trading partner among the Western Balkan countries. The article analyzes the dynamics of commodity trade between Ukraine and Slovenia in 2001–2019. Slovenia's position in the geographical structure of exports and imports of goods of Ukrainian regions is established. A characteristic feature is the direct dependence of the commodity turnover of the regions of Ukraine with Slovenia on the volume of their gross regional product. Significant spatial differences in the regional structure of commodity trade of Ukraine with Slovenia are revealed. Analysis of the features of regional differentiation of commodity trade with Slovenia shows that, in general, the economy of the regions of Ukraine is characterized by a very high degree of import dependence on the supply of goods from Slovenia. The Ukrainian-Slovenian commodity trade equilibrium and connectivity coefficients have been calculated for 25 Ukrainian regions. The regions are grouped according to the degree of trade relatedness of goods and the type of foreign trade relations with Slovenia. The developed regions of Ukraine are characterized by a high degree of dependence of their economic development on foreign trade in goods with Slovenia.*

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**Keywords:** *foreign trade, export, import, equilibrium coefficient, connectivity coefficient, Slovenia, Ukraine.*

### **Introduction.**

Upon the Association Agreement signed with the EU in 2014, issues, concerning the expansion of the Ukrainian foreign trade relations primarily with the EU member-states, are significant for Ukraine at the present stage of its development. Slovenia, being the Ukrainian main trading partner among the Western Balkan countries and actively supporting the Ukraine's striving to be integrated into the EU, stays important for Ukraine. Hence, it follows that a spatial analysis of the commodity trade, particularly, the differentiation and identification of the Ukraine's regional relationships with its trading partners in Slovenia continue to be relevant. Besides, it should be noted that the modern geographic and commodity structure of the foreign trade among countries and regions is being reoriented under the influence of globalization and regionalization processes.

Therefore, recent trends in the foreign trade development have led to the use of new theoretical models for the study of its spatial aspects. Thus, models mentioned above are based on the combination of theories associated with the location and international trade from the standpoint of a “new economic geography”, being well described in the works of D. Anderson and E. Wincoop [1], P. Krugman [3; 5], M. Fujita, E. Venables [3], J. McCallum [6], M. Porter [8], J. Tinbergen [9] and others. In particular, P. Krugman, M. Fujita, et al all consider the model of the “new economic geography” as a location model that is effective for the analysis of the geospatial structure and its features, and for the degree differentiating the foreign trade relations among countries and regions specified herein [3; 5]. According to M. Porter, any foreign trade geospatial structure is significantly differentiated because of the country’s domestic market competition, which determines the level of the regional participation in the international trade, according to the competitive advantages [8]. The actual realization of ideas, proposed by P. Krugman [3], M. Porter [8], allows us to prove that the foreign trade geographical structure for countries, specified herein, is characterized by the predominance of large cities and industrialized country’s regions in the production volume. This leads to some regional differences in the distribution of external and internal trade flows, which have become an important object of geographical researches now. Therefore, the issues studying foreign trade from the perspective of the regional approach are relevant in order to assess its rationality and the directions of its geographical structure transformation relative to the foreign trade with the world countries.

The scientific literature does not abound with example as to how Ukrainian-Slovenian relations have been studied in the context of their spatial features. The analysis has shown some little interest of both Ukrainian and Slovenian researchers in the study of the Ukrainian-Slovenian cooperation in various fields. The Ukrainian scientific literature has been dominated by the analysis of the trade and economic cooperation between Ukraine and Slovenia at the interstate level over the last decades in the light of European integration processes and the two countries’ participation in them [4; 7]. In some publications, Slovenia is seen as an attractive trading partner for Ukraine, especially in the context of its export strategy. However, the issues of identifying the spatial features of bilateral trade relations at the regional level are hardly covered. Therefore, an urgent question is the analysis of the commodity trade among the regions of Ukraine and Slovenia based on a regional approach, which led to the choice of the topic of our study.

### **Materials and Methods.**

Some statistical data for the period from 2001 up to 2019 given by the National Bureau of Statistics of Ukraine have been used both to analyze the Ukrainian-Slovenian trade relations and to determine the main trends in their evolution [2]. To reveal their spatial differentiation, the official data of the regional statistical offices of the Ukrainian 24 regions and the city of Kyiv have been used with taking into consideration the analysis of their commodity export and import volumes, foreign trade turnover and the Ukrainian regional and Slovenian commodity trade balance over 2019. The data on Crimea, including the city of Sevastopol, and some area in the East of Ukraine – the part of the Luhansk and Donetsk regions, uncontrolled by Ukraine because of the warfighting from the start of the Russian aggression there, have not been taken into consideration, as they are not available.

To find out the peculiarities of export and import flows and their ratio among the regions of Ukraine and Slovenia, the equilibrium coefficient relative to the commodity trade has been used and calculated by the following formula (1):

$$Kzb_i = S_i / T_i, \quad (1)$$

where  $Kzb_i$  – the equilibrium coefficient of the commodity trade between the  $i$ -region of Ukraine and Slovenia;  $S_i$  – the balance of the commodity trade, carrying out by the Ukrainian  $i$ -region with Slovenia;  $T_i$  – the volume of the foreign trade turnover of the  $i$ -region with Slovenia. The value of the equilibrium coefficient  $Kzb_i$  for the commodity trade can range from 1 to -1.

It is advisable to apply a methodology grounding on the connectivity and symmetry criteria determining the trade relations in the process of the foreign trade regional analysis in the context of geographical studies. The trade connectivity coefficient ( $K_{zv}$ ), the calculation algorithm of which has been proposed by A. Vaniushkin [10], is used in our study. According to his algorithm, the ratio of the export-import shares of the region in a particular country in the attitude to the total volumes of exports and imports of the studied region is taken into account and calculated by the following formula:

$$K_{zv} = (X_{mn}/X_m) : (M_{nm}/M_m), \quad (2)$$

where  $K_{zv}$  – means the trade connectivity coefficient of the  $m$ -region with the  $n$ -country;  $X_{mn}$  – exports from the  $m$ -region to the  $n$ -country;  $X_m$  – the aggregate exports of the  $m$ -region;  $M_{nm}$  – imports from the  $n$  country to the  $m$ -region;  $M_m$  – the total imports of the  $m$ -region.

Various values of the connectivity coefficient  $K_{zv}$  are possible at some asymmetry, present in the bilateral commodity trade. Such a broad variety shows the defined level of the regional dependence upon the markets of the  $n$ -country (in our case, Slovenia) both in the commodity export and import. The trade connectivity coefficient  $K_{zv}$  equal to 1 or more points out to the fact that the  $m$ -region has some trade connectivity with the  $n$ -country (in our case with Slovenia), as well as, that there is a high degree of focus on the trade relations with trading partners in the  $n$ -country. When the coefficient is less than 1.0, this indicates that there is some trade imbalance between the studied regions and the partner country and some unstable connectivity of the commodity trade relations between the studying region and  $n$ -country. The use a technique mentioned above to identify the features of the commodity trade regional differentiation made possible to assess the dominant trade flows and the asymmetry of trade relations of the Ukrainian regions in 2019 and to classify the regions according to the type of their trade relations with Slovenia.

### **The Current State of the Commodity Trade between Ukraine and Slovenia.**

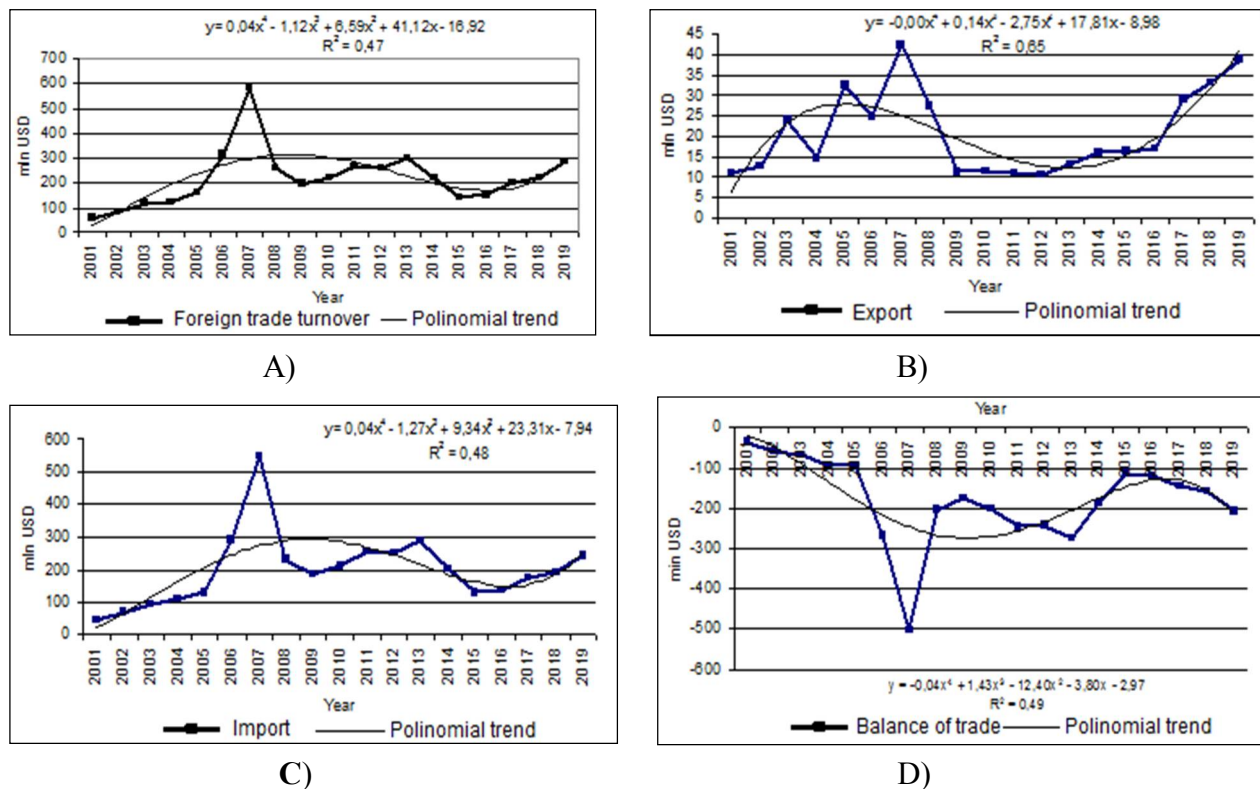
Recent Ukrainian-Slovenian interstate relations have been marked as dynamic because of their diplomatic relations, established on March 10, 1992. The legal framework between these two countries includes more than 20 interstate documents regulating their foreign trade relations. Additionally, the Association Agreement between Ukraine and the EU, signed in 2014 and entered into force on September 1, 2017, became critical to the development of the Ukrainian-Slovenian relations. It has created the conditions for the formation of an in-depth and comprehensive free trade zone between Ukraine and the EU, where Slovenia is its member.

Historical, geopolitical, socio-economic, political and geographical prerequisites and factors in the course of the last ten years, determined the dynamics and intensity of modern Ukrainian-Slovenian trade and economic ties. Their dynamics was unstable, especially in the last 10 years, for various reasons and circumstances. In recent years, the revival of the bilateral trade cooperation between Ukraine and Slovenia is associated with the liberalization of the foreign trade between Ukraine and the EU. This was because of the provisions of the deepened and comprehensive free trade zone, with the establishment of trade relations between the commercial and business structures

of the two countries, and the expansion of their interregional cooperation. Despite the positive dynamics of the Ukrainian-Slovenian trade relations, a noticeable asymmetry is still observed. Ukraine does not belong to the leading countries in the Slovenian foreign trade, because of its focus on the trade with the EU and developed countries of the world.

The foreign trade turnover of the commodity trade between these two countries steadily increased since the beginning of the 21<sup>st</sup> century until the global economic crisis of 2008-2009. (Fig. 1A). The bilateral foreign trade dynamics was unstable in subsequent years with a slight increase in 2010-2013 and the decline in 2014-2015, and some defined revitalization in subsequent years. Therefore, in 2019, the Ukrainian-Slovenian volume of the commodity turnover reached \$ 283.95 million, but it was more than 2 times less (\$ 587.8 million) than in 2007 (Fig. 1A).

The common trend of the Ukrainian-Slovenian bilateral trade relations since the beginning of the 21<sup>st</sup> century has coincided with the overall trends of the Ukrainian commodity trade with other world countries. It can be described by a fourth degree polynomial model with a low determination coefficient ( $R^2 = 0.47$ ) (Fig. 1A). Similar trend models based on the polynomial function are simultaneously traced in the dynamics of the volumes of the commodity export deliveries from Ukraine to Slovenia ( $R^2 = 0.65$ ) and imports from Slovenia to Ukraine ( $R^2 = 0.48$ ) (Fig. 1B and 1C). However, the balance trend of the commodity turnover over an almost 20-year period is characterized by a small determination coefficient ( $R^2 = 0.49$ ) (Fig. 1D) and it is negative for Ukraine. Several groups of various factors caused such an impact on the trade between the two countries, resulting in some instability and significant fluctuations in the volume of the mutual commodity deliveries, especially last 12 years.



**Fig. 1. The Dynamic of Indicators of the Commodity Trade between Ukraine and Slovenia in the Period from 2001 up to 2019: A) a foreign trade turnover; B) a commodity export; C) a commodity import; D) a turnover balance.**

The commodity structure of the Ukrainian exports to Slovenia in recent years has not undergone significant changes. The Ukrainian export deliveries to Slovenia in 2019 included the export of rail locomotives (18.3% of the total volume of the commodity exports to Slovenia), wood and wood products (18%), lead and wood products (14.3%), inorganic chemistry products (7.6%), furniture (6.6%), nuclear reactors, boilers and machines (5.9%), edible fruits and nuts (5.7%) and others [1].

At the same time, as in previous years, pharmaceutical products ranks first in the structure of the Slovenian imports to Ukraine, providing more than a third of all the import flows (42.9% in 2019). This is because of a number of leading global pharmaceutical companies operating in Slovenia ("KRKA", "Lek a Sandoz company", etc.). Other main commodities imported from Slovenia to Ukraine were nuclear reactors, boilers and machines (13.3%), electric machines (12.2%), food (4.5%), essential oils (3.6%), paper and cardboard (2.8%), tanning extracts (2.5%) and other products [2].

### **The Ukrainian-Slovenian Commodity Trade: Geographical Differentiation.**

In the context of the geographical structure, there is some significant spatial differentiation, and great variability in the trade turnover magnitude and imbalances in the Ukrainian-Slovenian interregional cooperation in the area of the foreign commodity trade between Ukraine and Slovenia. This is primarily manifested in attracting of Ukrainian regions, economically developed, to the commodity trade exchange; in a negative balance of the foreign commodity trade; in some low investment activity, and in an ineffective structure of commodity exports of Ukrainian regions.

One more characteristic feature is the direct dependence of the commodity turnover of the Ukrainian regions with Slovenia on the volume of their gross regional product, since the pair correlation coefficient is 0.95. The city of Kyiv had the largest volume of commodity trade turnover (124.56 million US dollars) in 2019. Dnipropetrovsk (76.7 million US dollars), Lviv (12.9 million US dollars), Donetsk, Zaporizhzhia, Kyiv and Kharkiv regions had slightly smaller volumes of trade with Slovenia. The smallest volumes of the commodity trade with Slovenia in 2019 were in Luhansk, Chernihiv, Sumy, Zhytomyr, Ternopil, Vinnytsa, Mykolaiv and Chernivtsi regions (at least 1 million US dollars) [2].

The most developed regions (Dnipropetrovsk, Donetsk, Zaporizhzhia, Lviv and the city of Kyiv) are leaders in the context of the geographical structure of commodity export deliveries from Ukraine to Slovenia. Their total volume accounts for 68.2%. At the same time, 15 regions of Ukraine supplies goods to Slovenia with the smallest volumes of commodity exports to Slovenia – less than 1 million US dollars. Ternopil, Luhansk, Kherson and Vinnytsia regions are among them. The pair correlation coefficient between gross regional product and export deliveries to Slovenia is 0.76.

Leaders, in terms of total imports of Slovenian goods, are the city of Kiev (118.3 million US dollars in 2019), Dnipropetrovsk (69.1 million US dollars), Kiev, Lviv and Kharkiv regions. The smallest volumes of the Slovenian commodity imports in 2019 were sent to Luhansk, Chernihiv, Chernivtsi, Sumy and Zhytomyr regions (from 0.02 to 0.16 million US dollars) [2].

Some disproportion and significant regional differentiation of trade is seen in the trade cooperation among the Ukrainian regions and Slovenia. The positive trade balance with Slovenia in 2019 was only in five Ukrainian regions (Donetsk, Rivne, Chernivtsi, Zhytomyr and Chernihiv).



The greatest negative trade balance (-112.06 million US dollars) in the commodity trade with Slovenia in 2019 was in the city of Kyiv (the main importer of Slovenian goods), as well as in Dnipropetrovsk (-61.6 million US dollars), in Kyiv, Transcarpathian, Kharkiv, Poltava, Cherkasy and Odesa regions (from -6.0 to -2.5 million US dollars) [2].

The bilateral commodity trade equilibrium coefficient ( $K_{zbi}$ ), calculated according to formula (1) for Ukrainian regions, has showed that the foreign commodity trade with Slovenia is only balanced in Donetsk region with a slight predominance of exports over imports ( $K_{zbi} = 0.20$ ). It is with a slight predominance of commodity imports on exports ( $K_{zbi} = -0.06 - -0.25$ ) in Zaporizhzhia, Mykolaiv, Ivano-Frankivsk and Volyn regions. The most unbalanced and with a sharp predominance of import volumes on export ( $K_{zbi}$  from 1.0 to 0.75) is the foreign commodity trade with Slovenia carried out by Luhansk, Ternopil, Kirovohrad, Vinnytsia, Kyiv, Dnipropetrovsk, Kharkiv regions and the city of Kyiv.

Our calculations relative to the connectivity coefficient ( $K_{zv}$ ) of the Ukrainian-Slovenian regional trade relations, performed according to formula (2), indicate that only 5 regions of Ukraine have a close bilateral commodity trade relationship, since the value of the coefficient  $K_{zv}$  is larger than 1.0. Chernivtsi, Zhytomyr, Rivne, Volyn and Chernihiv regions have the highest level of the trade connectivity with Slovenia ( $K_{zv}$  from 9.9 to 1.2). This is due to the predominance of the commodity export flows from the woodworking, engineering, chemical and food industries from the regions mentioned herein over the commodity import flows from Slovenia. The lowest connectivity coefficients of the commodity trade are in Luhansk, Ternopil, Kirovohrad, Dnipropetrovsk, Khmelnytskyi, Kherson regions and the city of Kyiv. These regions are characterized by some significant import dependence on the commodity trade with Slovenian partners due to its imbalance character. Only 12 regions of Ukraine have a connectivity coefficient ( $K_{zv}$ ) of trade relations with Slovenia less than 0.25.

The connectivity coefficient calculated for the trade relations and its comparison with the equilibrium coefficients of the commodity trade and Slovenian share in the region's trade gave reasons to distinguish four types of Ukrainian regions by the characteristics of the commodity trade with Slovenia. The regions of Ukraine can be divided according to the following criteria:

- 1) the region's dependence on exports/imports with Slovenia;
- 2) Slovenia's dependence on export/import commodity supplies from the Ukrainian region;
- 3) the absence of the trade dependence on the region on Slovenia.

A separate group is made up of Donetsk and Zaporizhzhia regions, which develop their economies having a great export dependence on the commodity supply to Slovenia while Slovenia is dependent on imports for industrial technological products manufactured in these regions. The connectivity coefficient of the trade relations with Slovenia ( $K_{zv}$ ) is 0.72 for Donetsk region, and it is 0.44 for Zaporizhzhia region. Regions of Ukraine, having their connectivity coefficient less than 1.0, belong to different types depending on the ratio of export-import flows to Slovenia and the average volumes of commodity export and import to other partner countries. Therefore, Dnipropetrovsk, Kyiv, Kharkiv, Lviv, Transcarpathian, Odesa, Poltava, Cherkasy, Ternopil, Sumy, Kyv regions and the city of Kyiv have a significant dependence on Slovenian commodity imports despite some imbalance in their mutual trade.

At the same time, Vinnytsia, Luhansk, Kherson, Kirovohrad, Khmelnytskyi and Mykolaiv regions form a separate type of regions, characterizing by a low level of trade connectivity in the commodity trade with Slovenia. Therefore, the analysis of the regional differentiation features of the commodity trade with Slovenia has shown that the economy of the Ukrainian regions is characterized by a very high degree of the import dependence on the commodity supply from Slovenia. The coefficient of the pair correlation between the volume of commodity imports from Slovenia and the gross regional product of Ukrainian regions, calculated as 0.94, is the evidence of the fact above and proves that 20 regions of Ukraine have a negative trade balance in commodity trade with Slovenia.

### **Conclusions.**

The result of undertaken studies is that the commodity trade, being carried out by the Ukrainian regions with Slovenia, is found out as much differentiated in the spatial aspect. Imbalances in the development of the Ukrainian-Slovenian interregional cooperation are primarily reflected in the asymmetry of the bilateral foreign trade parameters. The most economically developed regions of Ukraine have been actively involved in trade exchange. Their classification by the commodity trade type give reasons to state that most regions of Ukraine remain predominantly suppliers of raw materials to Slovenia while being highly dependent on imports of high-tech industrial products from Slovenia. In general, any trade between Ukraine and Slovenia is more important for Ukraine and most of its regions than for Slovenia, because Slovenia has a more diversified geographical and commodity structure of its foreign trade. Therefore, the activation of interregional relations and the economic cooperation among companies and enterprises of both countries that will lead to an increase in foreign trade flows, remains an urgent challenge at the present stage of the development of Ukraine.

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## **MODERN ASPECTS OF ECONOMIC AND MATHEMATICAL MODELING OF INDUSTRIAL ENTERPRISE INVESTMENT ACTIVITY**

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**Abstract.** *The article provides an overview of the prerequisites that determine the need for improvement of analytical activity in an industrial enterprise. On the basis of the peculiarities of their manifestation, the method that takes into account factor analysis and economic and mathematical modeling is proposed to use. During the approbation of this method on the enterprise analysis of the main factors influencing its activity was performed; key indicators were identified and were divided into four groups by basic aspects of investment activity; intermediate and final equations of regression were obtained, which allowed to describe the specifics of the enterprise functioning; forecasting the dynamics of the resultant indicator in the future was done. Conducting a thorough analysis of the activities made it possible to clearly identify the main causes, problems and factors that hinder the organization development and describe the nature of their impact on the resulting performance indicators. By the results of testing the proposed approach, its main disadvantages and advantages have been identified, which should serve as a basis for its further modification in the context of globalization phenomena in the national economy.*

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**Keywords:** *investment activity, enterprise, modeling, correlation-regression analysis, investment resources*

### **Introduction.**

The current stage of the domestic economy development is characterized by significant dynamics of macroeconomic processes, structural transformations and globalization tendencies [1]. The effect of these factors creates uncertainty and increases the level of risk in the activity of enterprises as open socio-economic systems. In such circumstances, effective investment activity creates a certain margin of safety for the enterprise, which prevents the development of crisis phenomena in the near future. However, investment activity is considered in most cases through the prism of investor valuation, which can substantially limit its scope. Thus, from the point of view of the enterprise owners the profitability of its activity in the long term is considered, from the position of external creditors the level of risk in the activity, the solvency of the enterprise, the level of profitability are considered. These circumstances complicate the conditions of business entities' functioning, which requires them to increase their efficiency, in particular, in the use of investment resources. This can be achieved through the implementation of quality and logically grounded management decisions, so the detailed analysis of the main factors influencing must precede of their adoption.

### **Problem Statement.**

Some of the most common means of solving this problem are factor analysis and economic and mathematical modeling.

Thus, the theoretical aspects of the use of factor analysis in the study of enterprise activity, influence factors analysis features in qualitative and quantitative expressions are considered; methodological and methodological approaches to the selection of indicators for analytical activities are considered; the peculiarities of the application of the econometric modeling method are considered; integration processes of modeling results in the management process at the enterprise are investigated. One of the leading scientists who have works devoted to research in this field are V. M. Tomashevskiy [2], B. Ye. Hrabovetskiy [3], S. I. Nakonechniy [4], O. V. Ivashchuk [5], P. M. Makarenko [6], O. M. Ostapenko [7].

However, modern macroeconomic processes are changing rapidly, which, despite the considerable scientific achievements of these scientists, requires constant adjustment of the algorithm of existing methods, their analysis and revision of the main factors that are being explored.

### **Research Questions.**

The process of investment activity researching in the context of four interrelated aspects: investment attractiveness, investment risk, investment potential, investment activity; construction of qualitative econometric model on the basis of correlation-regression analysis of factors of influence on studied enterprise investment activity; assessment of prospects for further application of the proposed model were considered in the paper.

### **Purpose of the Study.**

Presentation of an advanced econometric analysis technique that combines factor analysis and mathematical modeling in the field of use of investment resources, verification of its capacity and investigation of its implementation prospects in the activity of an economic entity.

### **Conceptual Models.**

The conceptual model of traditional algorithmization of economic and mathematical analysis of the enterprise investment activity is taken as a basis in the paper, taking into account the mutual influence of the main indicators of efficiency of investment resources using and the resultant indicator of the volume of net profit.

### **Research Methods.**

The study used general scientific theoretical methods: explanation, grouping, comparison, generalization; mathematical modeling.

### **Results.**

Efficiency of investment resources using is one of the most significant indicators of an entity's activity today [8]. In the period of dynamic changes in the conditions of the domestic economy, the impact of destructive crisis phenomena logically substantiated and the quality management of the investment process comes to the fore. It is important not only to evaluate the efficiency of the resources using in investment activity, but also to carry out a cause-and-effect analysis in this field in order to determine the regularities, relationships and trends on which to form the basis for successful investment policy [9].

One of the most widely used and affordable economic and mathematical modeling methods that can be used to solve such problems is correlation-regression analysis based on usage the MS Excel application suite. As an add-on it can be used forecasting methods to evaluate the prospects of development of the studied models [10].

Many domestic enterprises analyze the economic activity, study the main factors influencing its effectiveness in such a way that as a result, the relevant structural units receive significant amounts of information, which is difficult to structure and on its basis to form a holistic view [11].

In such circumstances, the construction of an economic and mathematical model, taking into account a wide range of influence factors, comes to the fore.

The object of the study was selected by PrJSC “Kredmash” – one of the basic enterprises of machine-building branch of Poltava region, which specializes in the production of equipment for repair of roads, municipal vehicles and special purpose vehicles.

The proposed method consists of three stages, the description of which is presented below.

In the first stage, 34 indicators were selected by peer review, which are independent variables in this model. These indicators are the most relevant to modern conditions, have some informative content and are diverse. It is advisable to divide them into the following 4 groups (table 1).

Some details about each group:

- 1) “Investment attractiveness” (includes indicators of the greatest interest to the potential investor when deciding on investing funds);
- 2) “Investment risk” (indicators of this group characterize the probability of realization of the pessimistic scenario of enterprise development);
- 3) “Investment potential” (this group of indicators gives information to creditors about the prospects of further functioning of the enterprise);
- 4) “Investment activity” (reveals information about the degree of intensity of the process of development of capital investments in the enterprise) [14].

The integral indicator of efficiency of use of investment resources ( $Y$ ), calculated on the basis of the 34 indicators, is selected as the dependent variable (resultant indicator).

In the second stage, a summary table is formed for each of the groups of independent variables and the single resultant indicator ( $Y$ ) for the years 2009-2018. For example, the values of the selected parameters in the “Investment attractiveness” group are presented in table 2.

In each of the four proposed groups of factors it is necessary to select those that are characterized by a significant degree of influence on the resultant indicator.

For this purpose, a correlation matrix should be formed, which will clearly show the nature of the relationships between the independent variables. Based on this information, non-multicollinear factors are selected, which is one of the requirements for the adequacy of the future model.

As a result of the actions taken, for each of the four groups of factors the following regression equations were determined:

- 1) “Investment attractiveness” metric group:

$$Y = 0,77 - 1,804X5 - 6,212X7 + 8,564X8, \quad (1)$$

**Table 1. Main indicators of efficiency of enterprise investment resources using**

Investment attractiveness		Investment risk		Investment potential		Investment activity	
Fund-raising, UAH/UAH	$X1$	Financial independence coefficient	$X1$	The level of depreciation of fixed assets	$X1$	The growth rate of the original value of fixed assets	$X1$
Coefficient of providing stocks with own sources of financing	$X2$	The share of fines in the amount of other operating expenses	$X2$	Share of active part of fixed assets at residual value	$X2$	The ratio of investments in fixed capital to its value	$X2$
Equity maneuverability factor	$X3$	The ratio of the size of borrowed capital to the size of own	$X3$	Coefficient of working capital provision with own sources of financing	$X3$	Share of real investments in total investments	$X3$
Dividend rate, UAH/UAH	$X4$	Coefficient of borrowing capital	$X4$	Ratio of accounts payable and receivable	$X4$	Share of long-term loans in the structure of debt capital	$X4$
The rate of return on sales	$X5$	Interest coverage coefficient (coefficient of lender security)	$X5$	Intangible assets share in fixed assets structure (at residual value)	$X5$	The turnover coefficient of current assets	$X5$
The profitability ratio of production	$X6$	Current liquidity coefficient	$X6$	Ratio of current assets value to the value of fixed assets	$X6$	The turnover coefficient of invested capital	$X6$
Return on net assets (RONA)	$X7$	Quick liquidity coefficient	$X7$	Ratio of market price per share and profit per share, UAH/UAH	$X7$	The turnover coefficient of debt capital	$X7$
Return on equity (ROE)	$X8$	Absolute liquidity coefficient	$X8$	Ratio of market and book price of one share, UAH/UAH	$X8$	The turnover coefficient of equity	$X8$
		Amount of net working capital, thousand UAH	$X9$	Profitability of fixed assets	$X9$		

Source: formed on the basis of [12, 13]

where  $Y$  – the integral indicator of efficiency of investment resources using;

$X5$  – the rate of return on sales;

$X7$  – return on net assets (RONA);

$X8$  – return on equity (ROE).

2) “Investment risk” metric group:

$$Y = 0,882 - 0,787X4 - 0,115X7 + 0,151X8, \quad (2)$$

where  $X4$  – coefficient of borrowing capital;

$X7$  – quick liquidity coefficient;

$X8$  – absolute liquidity coefficient.

**Table 2. Correlation-regression analysis field by “Investment Attractiveness” metric group**

Years	Resultant indicator	Factors (“Investment attractiveness” metric group)							
	<i>Y</i>	<i>X1</i>	<i>X2</i>	<i>X3</i>	<i>X4</i>	<i>X5</i>	<i>X6</i>	<i>X7</i>	<i>X8</i>
2009	<b>0,513</b>	7,603	1,029	0,537	0,010	0,105	0,133	0,306	0,181
2010	<b>0,512</b>	8,738	1,066	0,592	0,011	0,116	0,153	0,384	0,274
2011	<b>0,612</b>	3,301	1,234	0,607	0,008	0,086	0,112	0,070	0,052
2012	<b>0,479</b>	5,065	1,293	0,607	0,023	0,088	0,116	0,119	0,072
2013	<b>0,515</b>	8,157	1,341	0,608	0,007	0,062	0,078	0,160	0,102
2014	<b>0,673</b>	9,321	1,316	0,636	0,100	0,106	0,139	0,302	0,230
2015	<b>0,663</b>	7,668	1,597	0,643	0,110	0,084	0,107	0,154	0,109
2016	<b>0,649</b>	6,523	1,711	0,669	0,200	0,149	0,200	0,287	0,225
2017	<b>0,642</b>	5,921	1,926	0,695	0,220	0,086	0,108	0,142	0,108
2018	<b>0,706</b>	7,219	1,601	0,755	0,300	0,119	0,150	0,209	0,170

Source: formed on the basis of [12, 13]

3) “Investment potential” metric group:

$$Y = -0,124 + 0,718X3 + 0,05X6 + 0,112X9, \tag{3}$$

where *X3* – coefficient of working capital provision with own sources of financing;

*X6* – ratio of current assets value to the value of fixed assets;

*X9* – profitability of fixed assets.

4) “Investment activity” metric group:

$$Y = 0,619 - 0,56X5 + 0,491X6 + 0,034X7, \tag{4}$$

where *X5* – the turnover coefficient of current assets;

*X6* – the turnover coefficient of invested capital;

*X7* – the turnover coefficient of debt capital.

In the third stage, the integral indicator of the efficiency of investment resources using for each of the four groups for 2009-2018 was calculated on the basis of the obtained regression equations:

*X1* – the integral indicator for the “Investment attractiveness” metric group;

*X2* – the integral indicator of the “Investment risk” metric group;

*X3* – the integral indicator of the “Investment potential” metric group;

*X4* – the integral indicator of the “Investment activity” metric group (table 3).

At this stage, net profit (*Y*) should be used as a resultant indicator, which, is a fundamental indicator of the organization effectiveness and it’s most interest to potential investors.

The use as independent variables of the integral indicators by four groups is conditioned by the fact that for each enterprise there is an opportunity to distribute own resources not evenly, but in view of the power of influence of this or that metric group, that is, depending on their priority. In general this allows to characterize the strengths and weaknesses in the investment activity of the enterprise and based on them outlines the plan for further development.

**Table 3. The output data of the correlation-regression analysis by group integral indicators**

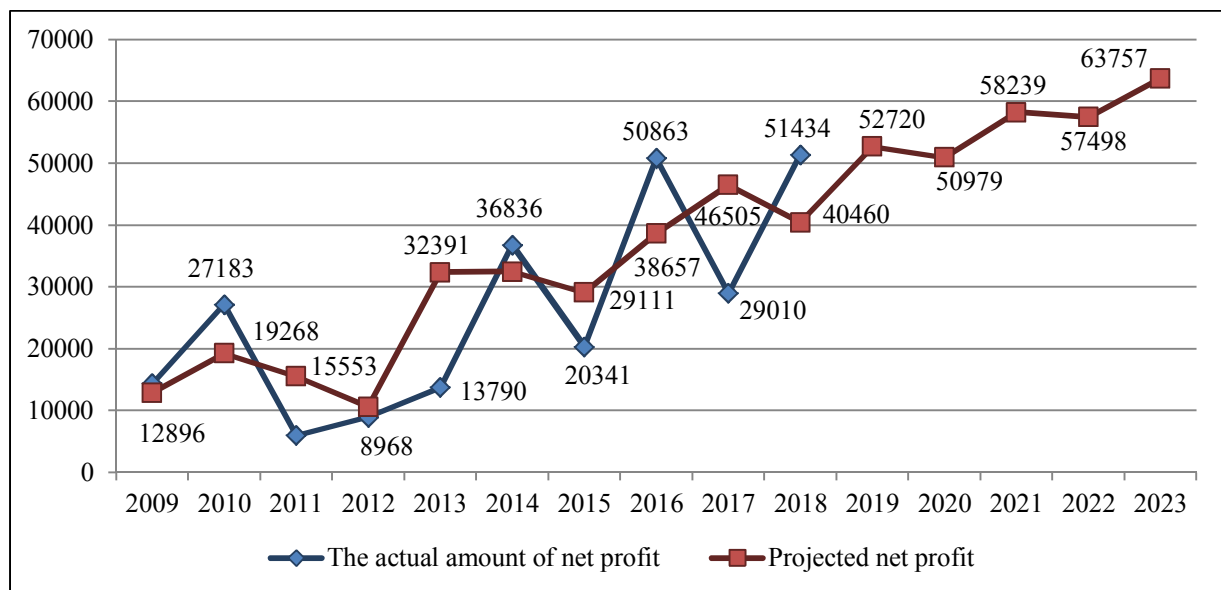
Years	Resultant indicator	Factors (by component)			
	$Y$	$X1$	$X2$	$X3$	$X4$
2009	14395,7	0,235	0,552	0,461	0,491
2010	27183	0,517	0,557	0,531	0,517
2011	6040	0,626	0,588	0,554	0,557
2012	8968	0,485	0,571	0,554	0,548
2013	13790	0,530	0,530	0,502	0,587
2014	36836	0,674	0,629	0,631	0,609
2015	20341	0,601	0,601	0,640	0,602
2016	50863	0,644	0,682	0,667	0,638
2017	29010	0,658	0,690	0,677	0,683
2018	51434	0,716	0,603	0,697	0,710

Source: formed on the basis of [12, 13]

By analogy with the second stage of the proposed method the final regression equation is determined:

$$Y = -77527,73 + 29097,508X1 - 30127,73X2 + 156462,24X3 + 17409,705X4 \quad (5)$$

Therefore, it should be noted that the “Investment risk” metric group has an inverse relationship with the resultant indicator, that is, reducing the risk will contribute to an increase in net profit. Figure 1 presents the dynamics of net profit according to the actual data, the trend of the obtained economic and mathematical model and the forecast of this indicator for 5 years (in thousand UAH).



**Fig. 1. Forecasting the dynamics of the resultant indicator of the proposed economic and mathematical model**

Source: formed on the basis of [12, 13]



Therefore, the proposed model has a sufficient degree of adequacy and can be used to analyze the activity of the studied enterprise and to make forecasts of its development.

However, it is not without its disadvantages, in particular:

- complexity of economic and mathematical calculations;
- a significant number of requirements for model adequacy;
- analysis of data, which for the most part can only be expressed quantitatively;
- subjective nature of the correlation matrix analysis in the selection of the most important factors of influence, etc.

Its advantages include the following:

- availability of means of its implementation;
- analysis of large amounts of information, and, consequently, obtaining a large amount of information, which reveals the clear tendencies of the enterprise development and allows to investigate those which, at first glance, are hidden;
- speed of calculations;
- the possibility of correcting the proposed methodology.

### **Conclusions.**

Thus, the use of the proposed method of factor analysis on domestic enterprises is important today. Conducting a thorough analysis of activities will clearly identify the main causes, problems and factors that hinder the organization development; describe the nature of their impact on the resulting performance indicators and characterize the features of their interaction with each other. In general, this method of factor analysis allowed:

- 1) take into account a significant number of the enterprise indicators;
- 2) to divide them into four aspects of investment activity, with the aim of carrying out more focused corrective actions in the implementation of management decisions;
- 3) identify the most significant indicators in terms of the four groups proposed;
- 4) characterize the impact of group integral indicators on the dynamics of net profit;
- 5) to forecast the amount of net profit in the future;
- 6) to form the basis for the development of practical recommendations.

The analytical information obtained should be the basis for the implementation of the policy of efficient investment resources using in modern dynamic conditions at domestic industrial enterprises.

Further research in the field of the selected topics should be directed towards of improving the mechanism of selection of initial impact factors, finding opportunities for integration into the model of qualitative parameters and increasing the reliability of the obtained prognostic data.

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## **FORMING OF INDUSTRIAL ENTERPRISE DEVELOPMENT STRATEGY BASED ON BALANCED SCORECARD**

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**Abstract.** *The article analyzes different approaches to complex assessment of enterprise performance indicators to elaborate development strategies. It justifies as well the expediency of using the system of balanced indicators for elaboration of the strategy of industrial enterprises development, which encompasses four stages: diagnostics of both internal and external environment of enterprise; formation and exploration of the mission, values, development priorities and strategic goals; strategic analysis based on balanced scorecard methodology; elaboration of enterprise development strategy. The authors propose the model of forming an industrial enterprise development strategy based on a balanced scorecard. The model is based on: defining the mission, goals, development priorities; strategy of enterprise development, working out plans and programs of industrial enterprise development. It is revealed in the paper that the main direction of the industrial enterprise development strategy is to satisfy both customers' requests in national and international markets and stakeholders. These requests are connected with the increase of the quality of products, development of an industrial enterprise based on the introduction of innovative technologies and management tools, strengthening of social responsibility and establishment of corporate culture.*

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**Keywords:** *balanced scorecard, industrial enterprise development strategy, organizational environment, corporate goals, core competencies, competitive advantages.*

### **Introduction.**

The development and revitalization of the national economy imply that it should occupy a proper place in the world economic system, because it is one of the ways to increase well-being of the population as well as ensure long-term prosperity of the country. Thus, the priority of the domestic economy is the development of industry being its key branch. In Ukrainian context, metallurgical complex, as one of the main employers of the country, provides jobs for about a quarter of all industrial production personnel. Ferrous metallurgy covers a number of industries, the

most important of which are the extraction and enrichment of iron and manganese ores, non-metallic raw materials, smelting of cast iron, steel, production of rolled metal, electric alloys, coke and refractory, recycling of metals. Therefore in Ukraine, the iron ore industry has high potential. This industry is also the source of foreign exchange revenues to the state budget (about 5% of the country's GDP), and it creates jobs for the country's industrial regions [9, 10].

At the same time, there are a number of problems that impede the effective development of domestic industrial enterprises. These are: deterioration of fixed assets, limited financial resources, insufficient amount of implementation of innovations, fierce competition in the world market, etc. Therefore, the factors that made up the competitive edge for most businesses at the end of XX century can no longer be a guarantee of success in the future. It necessitates the implementation of measures aimed at establishing an effective mechanism for managing the strategic development of industrial enterprises, which is achieved through the formation of an integrated system of balanced management. Such a system is based on concepts and techniques that focus on the formation, enhancement and strengthening of competitive advantages of enterprises, increasing their value, comprehensive consideration of the economic interests of all stakeholders, the highest quality and efficiency of operational management. The Balanced Scorecard (BSC), which, according to Forbes, has already been implemented or is currently being implemented by 60% of Global 2000 companies [3], is the most essential amongst these concepts. BSC was developed in the 1990s by D. Norton and R. Kaplan [8].

The aim of the paper is the elaboration of a model of industrial development strategy based on BSC.

#### **Literature review.**

A significant contribution to solving the applied issues of strategic enterprise management was made by R. Akkoff [1], I. Ansoff [2], A.D. Chandler [4], M. Mescon [11], M. Porter [12] A. Strickland & A. Thompson [17], and others. The problems of the development and implementation of a balanced scorecard in the practice of enterprise management have been discovered by H. Friedagi & V. Schmidt [6], D. Han & H. Hungenberg [7], D. Norton, & R. Kaplan [8], K.H. Rampersad [14] and others. Taking into account all the modern tools and research results, in this article it is developed a model of forming an industrial enterprise development strategy based on BSC and tested it at Ferrexpo Poltava Mining (FPM), which is a part of the Ferrexpo AG group, the third largest iron ore pellets supplier to the global steel industry in 2017-2020 [5, 16].

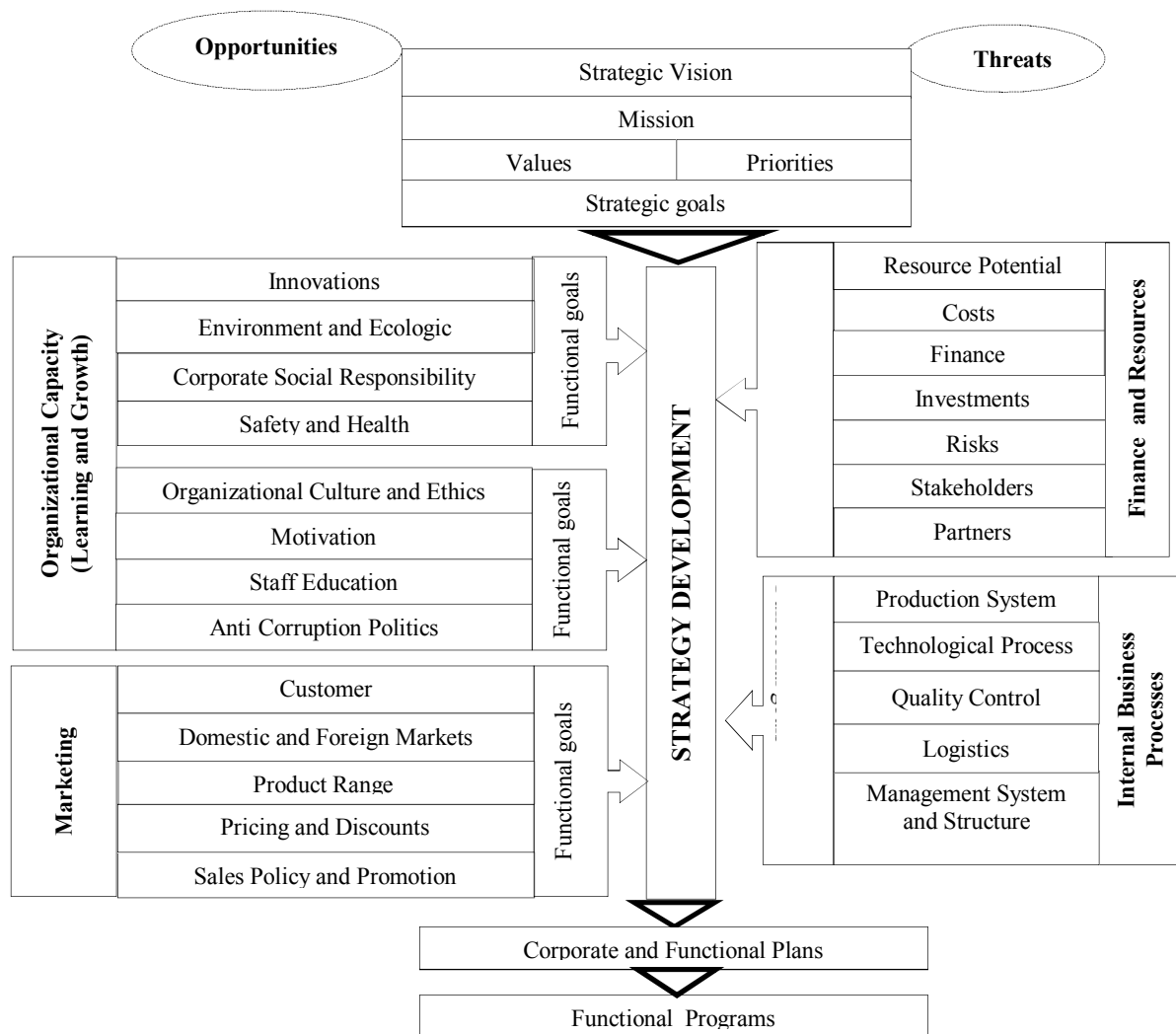
#### **Methodological approach .**

The validity of the results is ensured by the application of general scientific and specific methods and approaches. Theoretical and methodological basis of the study were the basic principles of economic theory, strategic management and planning. The following research methods were used in the research: methods of analysis and synthesis; economic and statistical methods; methods of scientific generalization and systematization (to analyze strengths, weaknesses, opportunities and threats (SWOT-analysis) of the studied enterprise and iron ore industry); peer review methods (to determine the competitiveness of the enterprise (General Electric / McKinsey matrix) and to assess the situation as well as to select strategies for the development of the enterprise under research (SPACE analysis); methods of multivariate factor analysis (to identify

factors of enterprise development); graphical method (to design and visualize the results and conclusions of the research); BSC methodology (to identify and evaluate the critical factors of the organization's functioning and development in the long run, formulate an enterprise development strategy and link it to operational plans).

**Results.**

In the fast-changing conditions of fierce competition, the primary task of any enterprise is to ensure its own strategic flexibility while maintaining the existing level of synergy and interaction. In order to grow effectively, in accordance with environmental demands and internal goals and opportunities, companies need to elaborate a development strategy. Introduction of BSC as an internal strategic analysis tool into the process of elaborating an enterprise development strategy will allow a comprehensive assessment of internal components of enterprise and determine their potential to achieve the set goals (See Fig. 1).



**Fig. 1. A model of elaboration of industrial enterprise development strategy based on BSC**  
 Source: Developed by the authors

As it has been mentioned, the testing of the proposed model was carried out at Ferrexpo Poltava Mining (FPM). Thus, a comprehensive assessment of internal components of the enterprise and its potential to achieve the set goals was carried out. The assessment was done in several stages.

1. *External environment:*

Opportunities. Ukraine, the Russian Federation and Australia own 46% of the world's iron ore reserves. Ukraine accounts for about 17% of the world's explored ore reserves, so it ranks sixth in ore mining. Ukraine also is one of the major producers of commodity iron ore and produces about 2.5% of the world's commodity iron ore production. During 2005-2019, iron ore production increased almost 3.5 times [13]. This not only saved the domestic industry from reducing production volumes, but also helped to increase production volumes. Ukraine enters new markets and increases sales in existing markets. The development of Chinese market where businesses are rapidly expanding production capacity and are in high demand for exclusive high-grade iron ore pellets with high Fe content is of an advantage for Ukraine.

Threats. Among the threats it is necessary to mention: deterioration of the economic situation of Ukraine, inflationary processes, strengthening of external regulatory pressure; external risks: political and legal, currency, credit, fiscal, liquidity; price; infrastructure.

2. *Strategic Vision*, in forming the strategy of enterprise development, is determined by the following components: mission, values, priorities, strategic goals. Corporate Mission is to continually grow our output of iron ore by developing own substantial resources in a sustainable and environmentally sensitive manner whilst developing our people and allowing them to achieve their full potential [5, 16]. Corporate Values: the highest standards of corporate governance, high integrity and ethical behavior of all employees of the organization; safety of employees, stakeholders, partners, customers, the rest of the world and the environment; equal opportunities for employment and professional growth; 100% performance of existing contracts; high performance and productivity in the long run. Corporate Priorities: innovative eco-friendly, low-cost production with a system of continuous improvements and reliable logistics infrastructure; change of the mentality of workers in the field of production safety, implementation of projects to minimize risks at the workplace; support and enhancement of corporate image, ethics and social responsibility of the enterprise by promoting corporate culture and respecting zero-tolerance policies for all forms of bribery and corruption; professional development of young professionals and Talents Management on the principles of equality. Strategic Corporate Goals: formation and increase of competitive advantages, strengthening of competitiveness of the enterprise in the world market of iron ore products; implementation of modern low-cost, energy-efficient and eco-friendly production and logistics technologies; increase of production and sales of high quality products to world-class customers; support of the proper allocation of the capital between balance sheet, profit and investment. strengthening the corporate culture, ethics, social responsibility and image of the company.

3.1. *Internal Business Processes*: Technological Process includes iron ore extraction, ore grinding, concentrate enrichment and production, pellet heating and production; Production System envisages a closed cycle of the main non-waste production of iron ore pellets (with Fe content of 62–67%) and related production that produce related products; Quality Control covers the application of the International Standard "ISO 9001: 2015 Quality Management System", water recycling system, systems for accounting volumes of water collected from natural sources circulating in production, contaminated and discharged into natural sources, monitoring of emissions of liquid, solid and gaseous substances into the environment [5, 13].

Logistics. Production logistics covers the delivery of ore from the quarry for processing and subsequent transportation of all types of raw materials within the production and technological process. Internal transportation is carried out by road mining workshops and railway workshops, with an annual capacity of 90 million tons and 55 million tons respectively. External logistics is provided on the terms of Incoterms 2000 with its own rail (2252 wagons), river and maritime transport [5].

Management System and Structure uses programs of improvement of equipment efficiency, energy management, and product quality with the involvement of employees as initiators of changes ('Bank of Ideas', 'Continuous Improvement System') and corporate governance code of the company. The Maintenance and Production Management Directorate coordinates the improvement of the quality of maintenance and repair of equipment. Administrative Services brings together Assistant Managers and Secretaries to simplify administrative procedures. Functional Strategic Goals: business processes of production equipment updating and technology upgrade capacities; improvement of the quality management system according to ISO 9001: 2015; expansion of the assortment of pellets; optimization of territorial location of logistic infrastructure of the enterprise.

### *3.2. Organizational Capacity.*

Development. Innovations - eco-friendly production line with partial replacement of natural gas by sunflower husk. Modern methods of production management and quality control; cost control systems, emissions; Environment and Ecology - conformity of production with international environmental standards; monitoring of environmental impact; implementation of projects to reduce the amount of emissions into the environment from stationary and mobile sources; reduction of production waste; watering down the shafts in the quarries after explosions and during the dry season; rational use of water and energy resources. Safety and Health - Continuous Improvement System that aims to improve working conditions and increase productivity; industrial safety information boards and road safety on the territory of the plant boards; checking of the condition of bridge crossings, service and repair areas, stair marches by a special commission; a schedule of repairs; first aid training of the staff; information on how fire trucks can reach the fire pond; regular updating of the plant road plan; introduction of a new ISO 45001 standard; development of a unified Risk Register; implementation of an Instant Incident Report; purchasing of the device for determining alcohol and drug intoxication; additional health insurance and health improvement for workers in harmful and difficult conditions.

Corporate Social Responsibility is directed to the staff of the company, their families and local communities, and is implemented by the activity of the Charitable Foundation in the field of sports development, education, medicine, local community infrastructures and the unemployed assistance. The Company is an integral part of the local community, employing over 30% of the local population of working age; 86% of new employees are from local communities. In 2017 the company was included in the FTSE4Good Index [5, 16].

Learning. Organizational Culture and Ethics is governed by the Code of Corporate Ethics of Ferrexpo Poltava Mining, which defines: internal workplace policies; contact persons and ways of reporting violations; information confidentiality, information security and external communications; misuse of market rules and insider deals; human rights in society; environment; charitable and

political contributions; attitudes towards fraud, bribery and corruption; conflict of interests; gifts, hospitality and entertainment; protection of company assets; financial control and accounting. Staff Education: Professional Development of Young Professionals and Talent Management on the basis of equality; continuous advancement of employees of all ranks, unscheduled knowledge testing after accidents, knowledge testing on occupational safety, workers education at higher educational establishments at the expense of the plant.

In addition to the standard system of material motivation, the company uses payments: from the fund of the head of the workshop, for participation in the project 'Bank of Ideas', for the fulfillment of a particularly important task, for continuous lengths of service at the plant, encouragement of the newlyweds, remuneration of five days of disability, non-targeted charitable assistance, royalties and other payments. Non-material motivation includes: free servicing of employees in the medical care facility of the enterprise, health insurance, life insurance; provision of employees with health resorts being partially paid, provision of employees' children with vacations being partially paid, provision of employees' children with free Christmas gifts, provision of employees with meals at a reduced cost. Non-material motivation is also realized through posting photos of the best workers on the Walk of Fame, assigning the titles 'Veteran of Labor', 'Best Young Worker', providing additional days off on compassionate grounds, holding corporate events: Family Day, 'Easter Mosaic' competitions, 'Occupational safety through the eyes of children' and others.

Anti-corruption Policy envisages: activities on the basis of pure competition and strict observance of anti-corruption, anti-monopoly legislation; absolute rejection of all forms of bribery and corruption; introduction of a training program to combat bribery; disciplinary sanctions for violation of company's anti-corruption policy.

Functional Strategic Goals: development and formation of higher value added industrial activities; minimizing environmental impact and developing environmental initiatives; industrial safety and health; improvement of financial position and social conditions at the plant; support of Corporate Social Responsibility projects; minimizing fatal accidents and reducing LTIFR (Lost Time Injury Frequency Rate - the number of lost time injuries occurring in a workplace per 1 mln hours worked); community support through collaboration and various initiatives.

### *3.3. Marketing.*

Sales Policy and Promotion is an aggressive horizontal international diversification strategy, which includes: active response to changing market conditions, increasing product competitiveness, increasing global market share, retaining and enhancing competitive advantage through financial potential, concentrating on strategic corporate interests, by establishing long-term relationships with top clients who produce high quality steel and have competitive advantages in the target markets.

Customers and Markets: More than 85% of its products Poltava VOG exports to: Belgium, Brazil, Belarus, Canada, France, Hong Kong, India, Kazakhstan, Netherlands, Poland, Portugal, the Russian Federation, Slovenia, Spain, Sweden, the United Kingdom, the USA, Turkey, India, China, Taiwan [5, 16]. The company has strong competitive advantages on these markets, such as: established logistic routes and infrastructure for servicing steel mills of Slovakia and Hungary by river barge and / or railway; territorial proximity, which reduces the length of the logistics chain of small shipments compared to Brazilian, Canadian, Swedish suppliers for consumers from Germany, Italy, Austria, the Czech Republic; significant potential for increasing sales with territorial



proximity to Turkey, the Middle East, India; large shipments of premium products for top steelmakers in Japan and South Korea with the possibility of shipment by large-tonnage vessels; unique high-iron products for China and Taiwan.

Product Range: iron ore pellets, iron ores and not agglomerated concentrates; iron ores and agglomerated concentrates; pebbles, gravel and gravel; blocks and bricks of cement, artificial stone or concrete; articles of cast iron and steel casting; granite pavers; corrosion-resistant pipes; steam and hot water supply services to power plants.

Pricing and Discount are determined by external factors, such as pricing policies for suppliers of raw materials and energy; tariff policy of transport companies; the value of metals on world commodity exchanges; quotations of currencies on world currency exchanges; the level of protectionism and dumping protection of the importing countries, the customs tariffs of the exporting and importing countries, the level of the indicative prices of the exporting country; price policy of competitors in target markets. The available system of discounts is conditioned by: volumes of purchases; assortment of the order; location of warehouses for shipment; availability of necessary stocks. Special conditions include 'open price' and 'offline discount' policies; insurance in case of failure to meet conditions or adverse changes in market conditions; fixing prices or exchange rates for the customer.

Functional Strategic Goals: to maintain competitive value of products with improved metallurgical properties; to concentrate on long-term cooperation with regular customers; to increase the share in premium markets; to increase export potential.

#### *3.4. Finance and Resources.*

Enterprise Resource Potential includes personnel's potential, intangible assets, capital and real estate, production facilities, financial and investment resources, etc. Costs associated with the implementation and operation of the Quality Management: internal; external, costs for quality control, costs for prevention. Costs require mandatory monitoring of energy and water usage, emissions, and waste generation. Energy-saving initiatives are regulated by Energy Management Systems (ISO 50001:2011), Environmental Management System (ISO 14001:2006). The Company monitors the emission in Ukraine from both the fixed plant and mobile equipment: gaseous emissions; the overall CO<sub>2</sub> emissions; sulfur emissions; solid emissions (dust); diesel and gas consumption; electricity and steam consumption; the Company measures water extraction, consumption, reuse and discharge both at mines and in its processing plant. Finance includes long-term financial investments, which are taken into account by participation in the capital of other enterprises: TIS-Ruda LLC (Odessa), PJSC 'Stakhanov Wagon-Building Plant' (Stakhanov), Ferrotrans (Gorishni Plavni), United Energy Company LLC (Horishni Plavni), Nova-Logistics LLC (Horishni Plavni). Investments: there are five investment projects of construction and production and technological division, totaling UAH 2076760898, which should be fully covered by 2021 [16]. Stakeholders, Partners and Shareholders.

Clear and concise information on payments to governments, creditors and investors, shareholders and stakeholders is published. Ukrainian Fiscal Service listed Ferrexpo Poltava Mining as one of the largest tax-payers. Long-term share price appreciation and consistent dividends to shareholders are usual for the company. Risks.

Risk management system involves monitoring, identifying, ranking of existing and new risks; assessment of their potential impact on the activities and development and establishment of an effective control and regulatory measures. The Company's risk management system identifies external (price - reduction in ore prices, transportation tariffs; operating - raw material costs, country risk, currency, liquidity, credit, interest; financial - taxes) and internal risks. Functional Strategic Goals: access to the banking or debt market; further capital investment into development; implementation of projects to increase productivity and reduce operating costs; reduction of stocks of raw materials and finished goods; increase in revenue; improvement of operating results; reduction of net debt.

### **Conclusions.**

According to the results of the study, the key directions of the industrial enterprise development strategy shall be: establishment and application of world best practice standards for increasing mineral resources in Ukraine; satisfaction of consumer and stakeholder requests for continuous improvement of the quality and competitiveness of products in the national and international markets; introduction of innovative techniques and technologies, management tools. Special attention should be paid to social responsibility and development of corporate culture. In order to develop an effective enterprise development strategy, among the development goals it is necessary to highlight the following ones: Safeguarding our workforce, Environmental stewardship.

Maintaining social license to operate through ethical business: build strong relationships through fair and transparent practices; maintain risk register and identify counterparty risk in all business activities; maintain zero tolerance approach to corruption; promoting diversity in the workplace; increase the representation of women in management to 24% by 2021; maintain 5% of workforce registered as disabled at operations in Ukraine; annually, support a CSR program empowering women.

Decent work and combating poverty: fair and decent employment, with 98% of employees on permanent contracts; average salaries at Ferrexpo's mines in 2017-2019 were 48% above the official national average salary for Ukraine. Engaging with local communities: contribute to education and development of skills of local population; provide targeted assistance to local communities (3% of revenue spent on community projects). Protect healthy water supplies: maintain high level of water reuse (40% by 2022); protect environments by continuing to treat discharge water to meet standards; continue water supply projects for rural communities. Tax responsibility and payment of dividends: Ferrexpo Poltava Mining as one of the largest tax-payers which publishes clear and concise information on payments to government, investors, creditors, shareholders etc. It is crucial to point out that the proposed model for developing a BSC enterprise development strategy is a copyright and is driven by the industry's business and its market. For practical use of the model it is necessary to adapt it to the specific operating conditions and characteristics of the studied enterprise.

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**FORMATION AND IMPLEMENTATION OF THE TARGET STRATEGY FOR  
INNOVATION AND INVESTMENT DEVELOPMENT OF THE REGION**

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**Abstract.** *The main tasks of the innovation and investment system of the region are described. The role of public administration in the formation of the innovative potential of the region is determined. The model of strategic management of innovation and technological development in Ukraine at the macro, meso and micro levels has been improved. It is envisaged that to increase the competitiveness of the national economy, the model of innovative progress in Ukraine should provide for cooperation between the state and the business sector, and all actions of business entities and authorities should be consistent with the goals and objectives of innovative development of economic activity at the regional level. The features of investment activity in Ukraine are considered, the emphasis is made on modern approaches and visions. The conditions for the successful implementation of economic modernization by introducing innovations in the context of globalization are highlighted. The factors of the development of investment and innovative attractiveness are considered. Ways to improve investment and innovation ability in the regions are proposed.*

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**Keywords:** *innovation, innovation activity, regional innovation system, investment, investment support, investment policy.*

**Introduction.**

Regions of Ukraine in the conditions of introducing a decentralized management model get a real opportunity to expand their powers to regulate the processes of rational use of regional resources and create conditions for increasing the quality of life of the population. This requires increased responsibility for the regional authorities and the validity of management decisions. World practice shows that strategic management at both the national and regional levels is impossible without building a system of socio-economic predictions and clearly defined development priorities. Under these conditions, the problem of improving the efficiency and role of forecasting and planning in the regional governance system becomes urgent [14].

Sustainable development of each region separately and of the country as a whole, the growth of their economic potential, improving the living standards of the population depends on many factors, among which are the most significant: strengthening the economic independence of the regions, creating favorable conditions for their socio-economic development. The investment development of the region determines the long-term dynamics of its economy and social sphere; in this regard, it should be planned, analyzed and regulated within the framework of the state

investment policy based on the developed strategy for the investment development of the region's economy. The region's investment development strategy is determined by its regional investment policy, which is a set of measures carried out by regional authorities to substantiate the volumes and sectors of attracting investments, as well as to create a favorable investment climate that focuses on the implementation of the main goals of investment activity, taking into account socio-economic and environmental development of the area. Unfortunately, there is no consensus on the process of formulating and implementing such a strategy. In this regard, this issue is relevant and demanded by both scientists and regional authorities.

### **Literature review.**

Theoretical and practical researches related to innovation and innovation activity were and are still carried out by such famous scientists as Revenko M. [9], Mushenyk I. [6], Fedulova L. [12], Romanchuk O. [9], Ulianchenko O. [10] and others. They created a significant contribution to the methodology and practical tools of innovation. However, the modern dynamic development of innovative processes in Ukraine indicates the relevance of further research in the direction of ensuring the innovative development of the country's economy.

The status and prospects of innovative activity of agricultural enterprises and problematic issues related to the formation and implementation of the innovation strategy of agricultural enterprises, its resource support were studied by such national scientists as O. Datsii [3], L. Fedulova [13], O. Shpykuliak [14], M. Misiuk [5], I. Vlasenko [1] and others.

The *objective* of the article is to analyze the current status and development trends of innovative activities of agricultural enterprises of Ukraine and to generalize areas and activities to increase their innovative activity.

### **Results.**

The development of the region cannot be represented as a process of time change of a complex multi-level organization, therefore, in modern conditions, it is impossible to imagine the gradual development of the region without a strategy clearly defined and adapted to regional conditions.

The region's investment strategy is a model of the interaction of all resources allocated to tangible and intangible assets (including "human capital"), which allows regional authorities to set development priorities and effectively fulfill their mission while achieving sustainable competitive advantages [4].

The investment development strategy reveals the choice of the course of action or penetration into the market, and the investment activity strategy is understood as long-term offensive or defensive measures and consider that the strategy is a conscious and deliberate development to achieve a specific goal [1].

The most common objectives for developing a regional investment strategy are the following [5]:

- developing a unique position and common understanding of what is happening in the regional investment environment;
- determination of the directions of regional investment development and identification, as a result of establishing partnerships, of the most likely behavior of public and private organizations operating in the investment sphere;

- assisting the entities of the investment system in making specific decisions that allow them to increase the purposefulness and coordination of actions.

The profitability of the region from its influence on its investment activity is determined by the indicators of gross income received in the region, as well as by the factors that influence it. Namely: the number and volumes of profitable enterprises, the inflation rate in the region, real incomes of the population, export orientation (export dependence) of the region, etc. [1].

Since the assessment of profitability is carried out through the prism of investment activity, the volumes of capital investments and construction and installation work carried out within the region are no less important indicators. Therefore, it is considered to be expedient to determine the profitability of a particular region of the country to assess its investment activity based on the following indicators: gross regional product (absolute value; growth rate - takes into account the dynamics of this indicator; the volume of gross regional product per person - takes into account the saturation of individual region); regional inflation; real incomes of the population, received for a certain period (year); financial results of the enterprises of the region, obtained for a certain period (year); the number of profitable and unprofitable enterprises in the region (relative to the total number of enterprises in the region); the volume of capital investments and construction works performed in the region during the relevant period; export orientation of the region (balance of foreign trade turnover of the region, taking into account the volume of trade in goods and services) [6].

Also, an important component of the region's investment activity level is the region's liquidity indicator, it is necessary to determine the totality of criteria characterizing the cash inflows into a particular region and their outflow, the time structure of these cash flows, the inflow of foreign investments into the region and the investments made by the region itself. Under the volumetric measurement, the volume of investments in the monetary dimension was considered.

Foreign investors contributed \$1,871.2 million of foreign direct investment (equity) in the economy of Ukraine in 2017. This was reported by the State Statistics Service. \$1,244 million of direct foreign investments (DFI) was sent to Ukraine from EU; and \$627.2 million – from other countries of the world in 2017. The main investor countries of Ukraine were Cyprus - \$ 10008.6 million, the Netherlands - \$ 6292.9 million, the Russian Federation - \$ 4598.4 million, the United Kingdom - \$ 2169 million and Germany - \$ 1792.6 million. The largest amounts of direct investment receipts at the reporting date (cumulatively) were directed to industry enterprises - \$10,685.6 million, financial institutions and organizations engaged in financial and insurance activities, - \$10,213.3 million, as well as wholesale and retail trade, repair of motor vehicles - \$ 5140.8 million (Fig. 1).

As can be seen from the cumulative figure as of January 1, 2018, non-resident equity in Ukraine equaled \$ 39144 million (from EU countries - \$ 27465.5 million, from other countries - \$ 11678.5 million), which was 4,3% higher than the indicator of the beginning of the year (\$ 37513.6 million).

However, the state pays little attention to the issues of the innovative development of territories and the science that underlies innovation. For example, since 1999, the main criterion for this attention to the financing of scientific and technical activities from the State Budget does not exceed 0.5% [ 11, p. 10, 26].

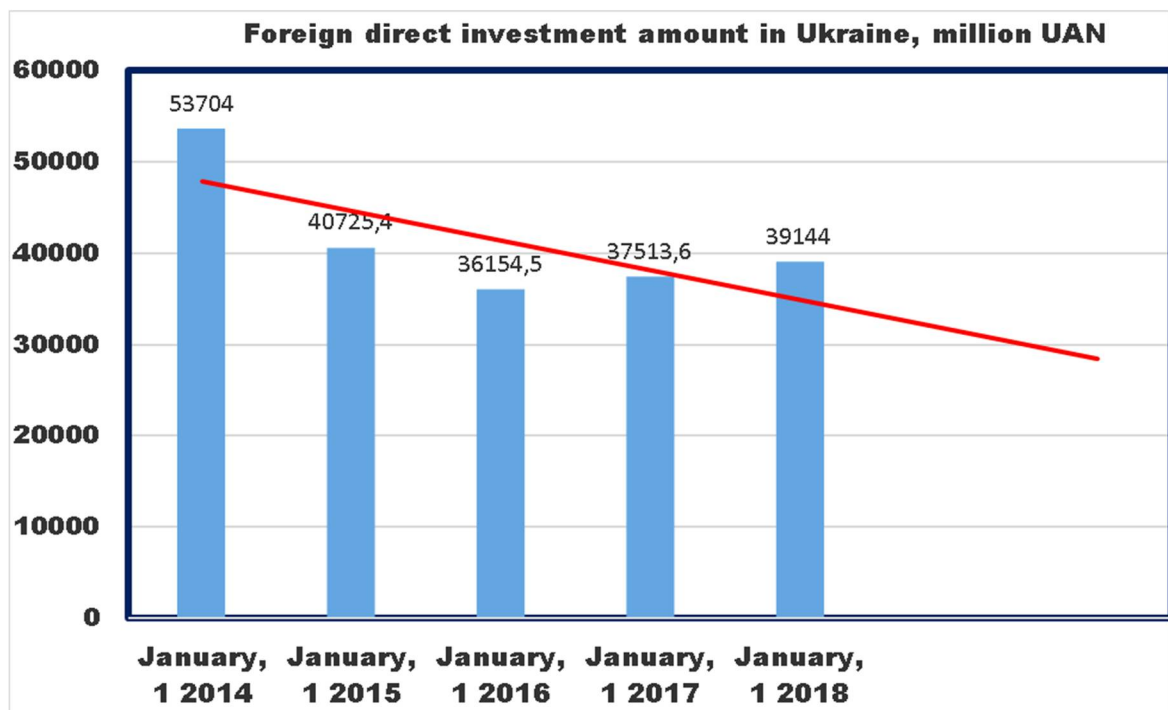


Figure 1. Foreign direct investment amount in Ukraine, million UAH

Source: compiled by the author due to the data [6].

Since innovation is a systematic process that ensures the continuous improvement of production as a result of the development of new knowledge and is carried out to implement the achievements of scientific and technological progress in production and social sphere, its implementation requires a flexible approach to the use of already formed resource potential and constant updating of resource potential of agricultural enterprises because of new technological requirements (Fig. 2).

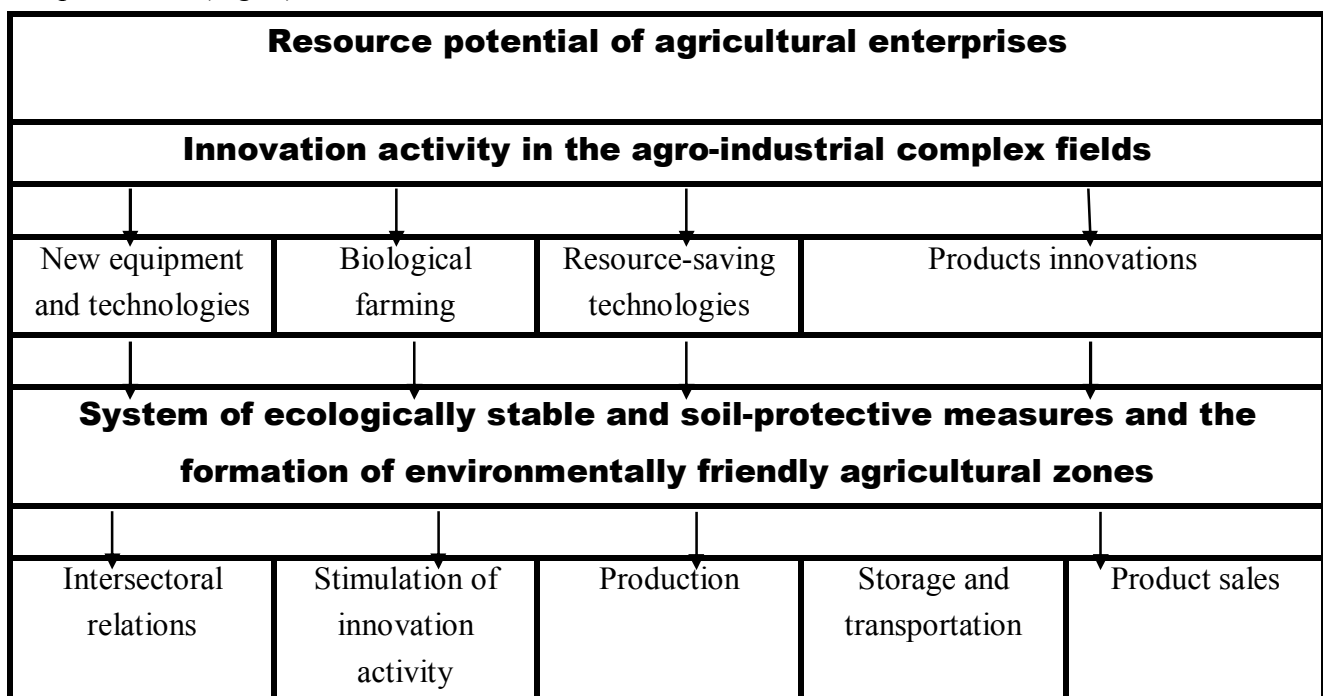


Figure 2. Effect of innovation in the development of the resource potential of agricultural enterprises

Source: compiled by the author due to the data [10, p. 108].

The introduction of innovative technologies is one of the key factors for improving the competitiveness of the agro-industrial complex of Ukraine and the country's economy as a whole. The agro-industrial complex is peculiar, it is caused by a large number of producers of agricultural products, which is standardized, rather easy conditions for entering the market of agricultural enterprises, the inability to significantly influence the level of prices on the part of producers, it is these particular features of the industry that determine the main source due to which the profits of agricultural enterprises can grow - these are innovations whose introduction reduces unit production costs [6].

The main feature of an innovative agricultural enterprise is the creation and commercial use of technical and economic innovations in the agricultural sector. The core of the activity is innovation, which generates revenue for both the manufacturing and service industries, which allows you to create a new market or meet new needs.

The process of searching for a new product, taking into account the needs of consumers, the launch of a new product on the market, the observation of sales volumes are the basic structural elements of the enterprise innovation policy. A prerequisite for a strategic choice of the type of innovation policy of an enterprise is to take into account the characteristics of that sector of the economy to which the enterprise belongs. The analysis of scientific papers defines three types of innovation policy: offensive-risk, offensive and evolutionary, which have common features that need to be detailed. It should be noted that the offensive type of innovation policy has a wide range of applications - it is characterized by a forceful, risky and stable nature. The offensive type of innovation policy is aimed at creating our research laboratories and departments that are constantly working on developing new products in the relevant industry, allocating funds to acquire the right to release a new product from another enterprise and the ability to quickly launch mass production of new products, thanks to their financial capabilities.

### **Conclusions.**

The socio-economic development of the regions is significantly affected by the innovation and investment activities of enterprises operating on their territory. It is suggested to evaluate the innovation and investment activity of the regions based on an integrated approach, using a system of indicators: investment volumes (own and attracted), gross regional product, dynamics and structure of receivables and payables, labor resources, inflation, the financial condition of the region's enterprises, the export orientation of local production. An analysis of the results of assessing the investment activity of the regions over the course of the year indicates that key industrial regions were leaders in investment-active regions before the global financial and economic crisis. However, as a result of ignoring the concept of innovative development and the implementation of the "consumption policy", these regions were unprotected against the crisis. It is obvious that to more evenly develop the regions of the country, it is necessary to intensify innovation and investment activities by orienting production to the needs of the national market; introduction of high technology instead of material and energy-intensive; production of national goods instead of importing goods of a similar group; increasing the competitiveness of products and the like. Further research needs to expand the boundaries of the analysis of factors of influence on the innovation and investment development of the country's regions and determine the instruments of their state regulation.



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## **CASHLESS AS AN ELEMENT OF FINANCIAL INCLUSION: UKRAINIAN REALITIES AND EUROPEAN BENCHMARKS**

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**Abstract.** *The paper attempts to reveal the pressing issues of attracting consumers of financial services in Ukraine based on cashless. The main aim of the study is to assess the level, state and prospects of the cashless and payment infrastructure of Ukraine in comparison with similar indicators of the EU countries. Systematization and generalization of the existing achievements allowed to evaluate the options and possibilities of remote access offered by modern banking. In particular, the study consists the definition of the main idea of cashless payments as a component of the formation of financial inclusion, assessment of the level of digitalization of Ukraine via the world rankings, the analysis of macroeconomic indicators and the payment market of Ukraine, the research of online services offered by the TOP-5 Ukrainian banks, the construction of an integral indicator to measure the place of Ukraine in European countries cashless banking, the predictive assessment of Ukraine's prospects in achieving the Central Bank objectives specified in the "Strategy of Ukraine's financial sector development up to 2025". The study period includes the years from 2003 to 2019. The object of the article is the participants of the financial ecosystem since they determine the level of cashless and the stability of financial inclusion. The study empirically confirms and theoretically proves that the current and forecast state of development of the Ukrainian payment market and digital technologies will allow Ukraine to attract even more consumers in convenient and reliable financial services.*

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**Keywords:** *cashless, financial inclusion, ecosystem, digitalization, banking, payment market.*

### **Introduction.**

The main elements of financial inclusion are the digitalization of the economy and an increase in the volume of non-cash payments. The National Bank of Ukraine (NBU) is actively working to increase the list of financial transactions that are performed remotely. As a result, in 2019, for the first time in Ukraine, 50.3% of all transactions with payment cards were cashless. However, in the context of European integration, Ukraine needs to understand the place it occupies in this issue between European countries.

### **Problem Statement.**

In the context of the recent spread of the pandemic caused by COVID-19, a topical issue for countries around the world, which would help to reduce the possibility of infection of people to a certain extent, is the development of non-cash payments and attracting more stakeholders to them. In the context of this problem, the problems of identifying participants in the financial ecosystem, that ensure the development of the payment market and cashless, determining the position of Ukraine in international innovation ratings and comparison with the EU payment market, researching the features of modern Ukrainian banking in the field of online services, forecasting the prospects for achieving key indicators of the payment market development and making appropriate proposals relevant.

### **Research Questions.**

Ensuring sustainable financial inclusion and developing cashless is not a new area of research. Challenges and experience of individual countries, payment systems and international companies in ensuring financial inclusion and digital development of society were investigated by Söderberg (2018) [16], Cojocaru & Floroiu (2019) [2], Mullis (2019) [8], Owczarek (2018) [9], Taylor (2018) [19] et al. Panteleeva (2017) [10], Tarasyuk & Kosheev (2017) [18] paid attention to the study of financial innovations in the conditions of digitalization of the economy. Pizhuk (2019) [15] focused on modern methodological approaches to assessing the level of the digital transformation of the economy and world ratings. The basics of organization and development of the cashless economy in Ukraine were studied by Kravets (2016) [6], Dikiy (2017) [3]. The influence of cashless payments on the economic growth of the country investigated by Pirog, Nikolayeva, Alexandrenko (2019) [14], the nowadays challenges of modernization the financial relations in Ukraine investigated by Honcharenko, Berezina, Schevchenko (2017) [5]. Moreover, a lot of statistical data is provided on official web resources [12, 13], but their grouping, comparison, analysis and forecasting is not enough. Also, the clear understanding of the current position of Ukraine regarding the development of cashless indicators in comparison with other, more technologically developed countries, is absent nowadays.

### **Purpose of the Study.**

The study aims to assess the level, state and prospects of the cashless and payment infrastructure of Ukraine in comparison with similar indicators of the EU countries.

### **Conceptual Models.**

The model of the integral indicator of the cashless level in Ukraine and the EU countries was built for achieving the purpose of the study. The forecast model for determining the prospects for Ukraine to achieve the target indicators of the level of financial inclusion in the context of reducing the volume of cash transactions in 2025 was elaborated.

### **Research Methods.**

The logical, historical, statistical, analysis, synthesis, grouping, comparison and generalization; graphical and tabular methods; economic and mathematical methods, in particular, multidimensional ranking; modern forecasting methods, in particular, the apparatus of artificial neural networks; induction and deduction, analogy, etc. were used in the study.

### Findings.

The main objectives of financial inclusion aimed on increasing the availability and level of usage of financial services; strengthening the protection of rights of financial services consumers and increasing the level of financial literacy.

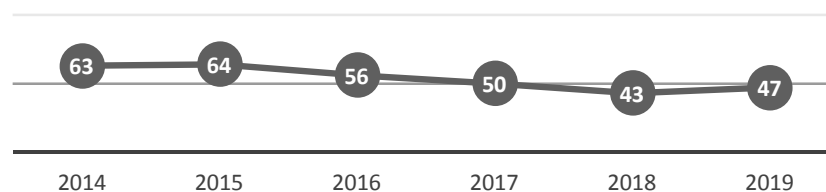
The implementation of the first task, among other things, involves the comprehensive involvement of economic entities through the development of cashless and the use of modern banking, that is, digital technologies and online services.

The main participants of the financial ecosystem that ensure the development of the payment market and cashless are:

- financial service providers are companies and government institutions that directly provide financial products and services to end-users;
- infrastructure and technology-companies and government institutions that provide products, services, and solutions to financial service providers and other participants in the financial sector, enhancing their value proposition for financial service consumers;
- regulation and control are usually state institutions that create rules for interaction between ecosystem participants and monitor compliance with these rules.

Their development is facilitated by various projects and support programs, including the pilot project of the National Bank of Ukraine to support the development of FinTech solutions in Ukraine, based on which an Expert Council on communication with innovative companies was created.

As a result, the number of Fintech startups is growing in Ukraine, and users are actively using mobile technologies that increase their capabilities (the smartphone penetration rate in 2018 was 48%). According to the Global Innovation Index (GII, 2019) [4], Ukraine is becoming more and more innovative (Fig. 1). Its position in the ranking among the world's countries has increased from 63rd place in 2014 to 47th in 2019. In these conditions according to the data of Computer software spending and ICT services exports were in this index in 2019. Ukraine is ranked 19 and 11 respectively in the world ranking.

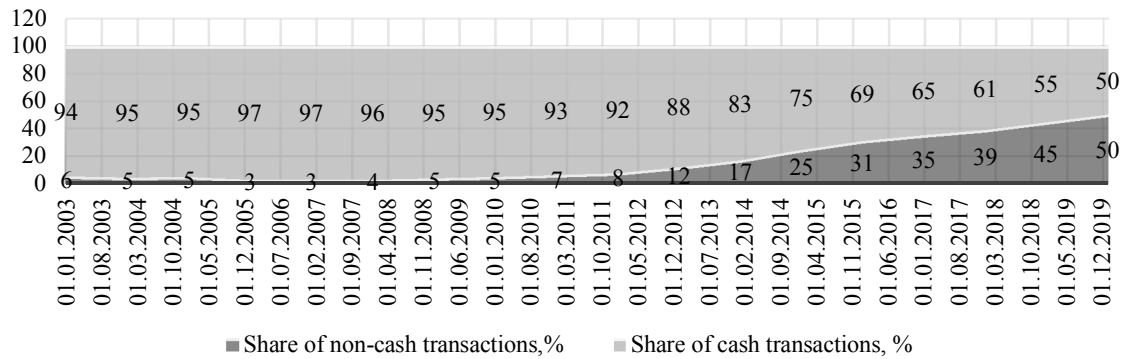


**Fig. 1. Ukraine's position in the Global Innovation Index**

*Source:* built by the authors based on the Global Innovation Index [4]

The development index of information and communication technologies (ICT) in Ukraine is higher than the world one. If the average value of the index among countries in 2017 was 4.9 points, Ukraine received 5.3 points. And the contribution of mobile technologies to the economy of Ukraine was 3.7% of GDP against 4.5% of GDP on average worldwide. Also, according to the NBU, our country ranks 4th in the world for contactless payments. Besides, Ukraine has one of the most affordable Internet Sites (about \$ 5 per month) with sufficient speed.

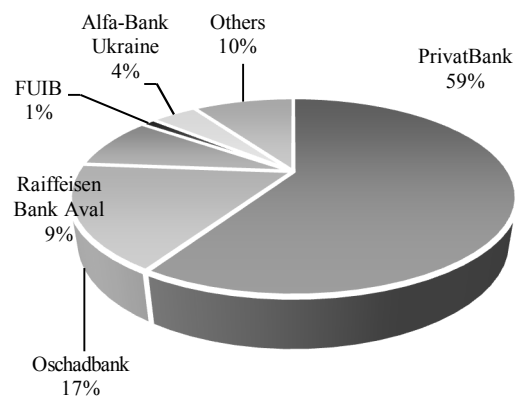
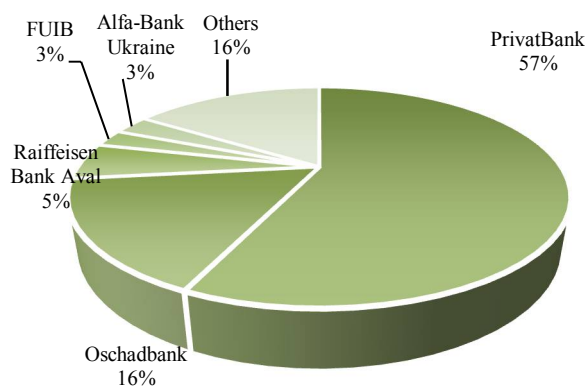
As a result, the interaction and access of economic entities to many spheres of life are improving, new jobs are being created, the growth rate of the economy is increasing, and the monetary aggregate M0 is decreasing (Fig. 2). The level of cash in the economy in 2019 compared to 2014 decreased from 17.8% to 9.2% of GDP. The share of non-cash transactions in the total volume of transactions using payment cards increased from 25.0% in 2014 to 50% by the end of 2019. Eight out of ten transactions with payment cards were non-cash. [20]. Consequently, such operations using payment cards are becoming more and more popular among Ukrainians.



**Fig. 2. The ratio of cash and non-cash transactions in Ukraine**

Source: based on Payment and settlement statistics of the National Bank of Ukraine [12]

Financial service providers that are the main components of the financial ecosystem of Ukraine, and that actively develop cashlessly, include banks. According to the NBU, PrivatBank, Oschadbank, Raiffeisen Bank Aval, First Ukrainian International Bank (FUIB), Alfa-Bank Ukraine belong to The TOP 5 acquiring banks as of 01.01.2020 [12, 22-26]. They comprises for more than 80% of cards in Ukraine (Fig.3) and more than 90% of the entire infrastructure (Fig. 4). It should be noted that almost 60% of the Ukrainian payment market by all indicators belongs to PrivatBank, which is the leader in the retail segment and provides universal service for a wide range of customers.



**Fig. 3. The number of active electronic payment means      Fig. 4. Total number of payment terminals**

Source: based on Payment and settlement statistics of the National Bank of Ukraine [12]

The analysis of the study of cashless services offered by these banks to their clients proved their high positions in the rating among all providers of remote financial services. In particular, banks use transactional platforms that allow them to effectively perform operations for maintaining

customer accounts in all segments. Among the main channels for servicing retail customers that provide them with opportunities for non-cash payments and remote access are mobile banking, Call centre, POS terminals, self-service terminals, mini-branch, social networks, Internet banking, mobile-online, ATMs (ATM), WEB/HUB partners, Google Pay, Apple Pay, Garmin Pay, SMS banking, agents-brokers, chatbots.

With their help, users of retail and corporate banking services can make payments and transfers 24 hours a day, 7 days a week, from any place in the world with access to the Internet. It should be noted that the TOP 5 acquiring banks are members of the National payment system (Prostir) and international card payment systems VISA and Mastercard, which significantly expands the cashless payment space for their clients.

Ukraine declares its desire to integrate into the European economy, society, and value system. In the process of such integration it is logical to focus on the situation and trends that exist in Europe. According to the European Central Bank, one European resident possessed 1.6 cards during 2018 [13], while one Ukrainian was the owner of on an average 1.4 cards. So, if the trend of issuing cards by Ukrainian banks persists, Ukraine will be able to approach the average European indicators.

Unfortunately, this indicator does not present the general position that Ukraine takes in the development of cashless among other countries as well as its guidelines for the future. The ratings of the Global Innovation Index and the information and communication technology development Index have shown that Ukraine is in the Top 50 innovative countries and has an ICT development index higher than the world one. However, neither innovations nor communication technologies allow to distinguish exactly the level of cashless. Therefore, in the context of European integration, the comparative analysis of Ukrainian indicators that characterize the issue under study, with the corresponding indicators of 28 EU countries (as of 01.01.2019) done.

As it is known, European countries differ dramatically in population size, GDP, development of the payment sector and other macroeconomic indicators. Therefore, it is very difficult to assess the availability of credit cards, the level of infrastructure for servicing them, and the state of cash payments according to the 2014-2018 data provided in the relevant reports of the European Central Bank [13] and the National Bank of Ukraine [12]. Besides, since these studied indicators are usually characterized by a set of features ( $m \geq 2$ ), then ordering the units of the population, it becomes necessary to aggregate all the features of the set into one integral estimate [1]. This indicator named the "Integrated indicator of the level of cashless in the country ( $I_{cashless}$ )".

The indicators, which will form a feature space, calculated according to [7, 12, 13] are : the level of cash in the economy (M0/GDP), % ( $x_1$ ); the number of transactions using electronic payment instruments per capita, units ( $x_2$ ); members of card payment systems per 1 million of the population, pieces ( $X_3$ ); the number of transactions using electronic payment instruments, Euro per 1 person ( $x_4$ ); the number of issued payment cards with the payment function and the cash per 1 person, pieces ( $X_5$ ); the number of operations of cash payment per 1 card in the cycle, mln pieces ( $X_6$ ); the number of operations for obtaining cash per 1 card, Euro ( $X_7$ ); the ratio of transactions using electronic means of payment/GDP ( $x_8$ ).

It should be noted that:

1) an array of indicators that appear in the reports of the ECB and the National Bank is much more substantial. However, only the proposed indicators contain harmonized data that can be compared;

2) due to the lack of generalized data for EU countries for 2019 at the time of this study, the analysis of indicators carried out for the period 2014-2018.

The calculation of the integral indicator of the cashless level in the country made using the formula (1).

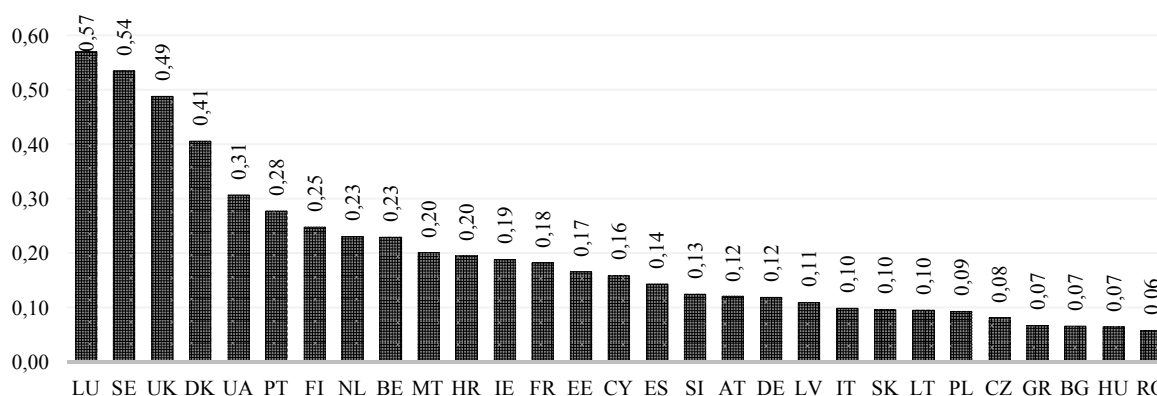
$$I_{cashless_j} = \sum_{i=1}^m z_{ij}d_i = 0,222z_{1j} + 0,111z_{2j} + 0,028z_{3j} + 0,167z_{4j} + 0,139z_{5j} + 0,056z_{6j} + 0,083z_{7j} + 0,194z_{8j}, \tag{1}$$

where  $d_i$  is the weight of the plural attribute ( $\sum_{i=1}^m d_i = 1$ ) calculated using the formula (2):

$$d_i = \frac{2(m-k_i+1)}{m(m+1)} = \frac{(9-k_i)}{36}, \tag{2}$$

Where  $z_{ij}$  – standardized values of the  $i$  indicator of the ( $i = \overline{1,8}$ ) level of the payment market in country  $j$  ( $j = \overline{1,29}$ )  $d_i$  is the weight coefficient of the  $i$ -th criterion,  $m$  is the total number of indicators taken into account when determining the integral assessment,  $k_i$  – the value of the  $i$ -th criterion rank (the higher, the more significant the indicator is for the cashless assessment).

Here is the average value of the integral indicator  $I_{cashless_j}$  in the context of 29 countries (EU countries + Ukraine) for the period 2014-2018 (Fig. 5).



**Fig. 5. The average value of the integral indicator  $I_{cashless_j}$  in the context of 29 countries for the period 2014-2018**

Source: built by the authors based on [7, 12, 13]

According to Fig.5 Luxembourg characterized by a high level of development of cashless. This is due to the number of operations using electronic payment instruments per capita, members of card payment systems per 1 million of population, the amount of operations with the use of electronic means of payment (in euros per 1 person) and the number of issued payment cards with payment function and the cash advance per 1 person of this country is sometimes ahead of other countries in European payment (for example, the number of terminals per 1 million population in Luxembourg is 300.9 million, while the European average is 30 thousand). The next positions in this rating are occupied by Sweden, the United Kingdom and Denmark, which also pay significant attention to reducing the volume of cash payments and support the payment infrastructure market.

The 5th place among 29 countries belong to Ukraine. However, this is not only due to the increase in the number of cards, ATMs, POS-terminals, etc., the activation of the NBU's actions to develop the payment market, but also a significantly smaller amount of money supply, income and expenditure of the population, which explains, for example, an insignificant value of the  $X_7$  indicator.

In addition to determining the current situation of cashless development, it is important to understand the benchmarks and forecast estimates for Ukraine. The National Bank, as the main participant of the financial ecosystem, which is entrusted with the functions of regulation and control, has developed a strategy for the development of the financial sector of Ukraine until 2025 [25]. According to this document, specific indicators of the level of financial inclusion in the context of reducing the volume of cash transactions are set. In particular, these are targets such as the ratio of cash ( $M_0$ ) to GDP ( $\frac{M_0}{GDP} * 100$ ), the ratio of non-cash card transactions (including P2P) to the total number of transactions ( $\frac{N_{cashless}}{N_{transactions}} * 100$ ), the ratio of non-cash card transactions (including P2P) to the total volume of transactions ( $\frac{V_{cashless}}{V_{transactions}} * 100$ ). Using the data of the National Bank of Ukraine for 2003-2019, the prospects for Ukraine to achieve the targets of these indicators in 2025 were determined as well as and forecast the ratio of card payments to GDP ( $\frac{V_{card\ payments}}{GDP} * 100, \%$ ) and the number of POS terminals ( $\frac{thousands\ of\ POS}{million\ people}$ ) (table 1).

When predicting the values of all five factors (indicators), artificial neural networks (Park & Sandberg, 1991) [11] were used. The neural network was trained according to the Levenberg-Marquardt algorithm, in the neurons of the hidden layer the activation function was a hyperbolic tangent, in the neuron of the output layer – a linear function. The number of iterations equalled 300, and the root-mean-square error did not exceed 0.01.

**Table 1. Current and forecast values of cashless development indicators in Ukraine**

as of 31.12.	$\frac{M_0}{GDP} * 100$	$\frac{V_{card\ payments}}{GDP} * 100, \%$	$\frac{N_{cashless}}{N_{transactions}} * 100$	$\frac{V_{cashless}}{V_{transactions}} * 100$	$\frac{thousands\ of\ POS}{million\ people}$
...	...	...	...	...	...
2017	11.14	71.21	39.3	74.8	5.94
2018	10.21	80.79	45.1	78.5	7.05
2019	9.45	83.65	49.7	81.9	8.36
2020	9.17	86.06	57.82	82.42	8.43
2021	8.99	90.41	60.99	82.98	8.87
2022	8.56	94.44	62.13	83.5	8.98
2023	8.21	98.30	62.48	83.74	9.52
2024	7.85	98.92	63.43	83.88	10.21
2025	7.68	99.10	63.98	84.26	11.77
<i>NBU</i> <sub>2025</sub>	no more than 7.5%	-	65%	not less than 85%	-

Source: built by the authors based on [7, 12, 13]

Based on the obtained results, it is clear that in the next 5 years Ukraine has all the chances to come close to the targets of three key performance indicators for the implementation of the “Strategy for the development of the financial sector of Ukraine until 2025”. At the same time, the approximate values of the ratio of card payments to GDP and the number of POS terminals can



reach the values of 99.1% and 11.77 thousand units per 1 million population, respectively. This confirms the prospects for a high level of development of cashless in our country.

This is especially true in the context of a pandemic due to the spread of COVID-19 coronavirus infection in the world when cash is also a source of infection.

The National Bank of Ukraine tries to secure operations with banknotes by automating the processing of hryvnia banknotes, increasing their storage period and special heat treatment before returning to circulation [21]. However, despite these actions and certain recommendations for security measures, it is still much more reliable to use non-cash payments, contactless and mobile payments, payments using Apple Pay, Google Pay, smartphones and smartwatches, and chipped payment cards to preserve your health. After all, it is in the languages of the declared quarantine that you can: order and pays for products and goods online; do not visit Bank branches and choose remote service; make utility payments using online services of banks or payment operators; use non-cash payment using a payment or transport card in transport. Therefore, it is possible to use the development of cashless not only to save life and health, but also to increase the level of financial inclusion among citizens of Ukraine and the world.

### **Conclusions.**

The main participants of the financial ecosystem, which ensure the development of the payment market and cashless were identified in the paper. They are regulators and financial services providers, as well as Fintech companies. Thus, the study showed the vital need and serious level of effort that all participants of the financial ecosystem of Ukraine are applying in the development of remote payments. This provided our country with a fairly high position in the cashless rating among the EU countries, as well as in the world rankings. In the course of assessing the features of modern Ukrainian banking in the field of online services, the TOP-5 of Ukrainian banks were highlighted. The integral indicator cashless for measuring the place of Ukraine among European countries was build based on the significant amount of statistical data. It showed significant achievements, namely the fifth position in the ranking among 29 participants in the European financial ecosystem. Forecasting the prospects of meeting key indicators of the payment market development in Ukraine has confirmed the ability of our country to achieve the goals of the National Bank specified in the "Strategy for the development of the financial sector of Ukraine until 2025." The proposals, mentioned above, will allow Ukraine to become a more technologically advanced country and attract more consumers to convenient and reliable financial services.

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### Section 3. International Trade and Innovation Management

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#### FEATURES OF INTELLECTUAL PROPERTY PROTECTION FOR INNOVATIVE DEVELOPMENT OF THE UKRAINIAN ECONOMY

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**Abstract.** *Intellectual property and its state of protection as a factor of activation of innovative development in the format of the triangle of competitiveness of economy are substantiated. The main feature and problem of intellectual property protection of innovative development of economy of Ukraine are distinguished now. It is to create favorable conditions for foreign residents and to form a national entrepreneur depending on them. Based on correlation and regression analysis, Achilles' heel of domestic innovation development was invented. This is an unsatisfactory commercialization of the results of scientific and technical activities caused by a low level of patent protection. The decreasing dynamics of the number of inventors, industrial designers and innovative proposals during its territorial integrity have been constructed. The dynamics of receipt and registration of applications for industrial property objects for 2015-2019 in Ukraine (inventions, utility models, industrial designs, signs for goods and services) was analyzed. The list of the largest national applicants for 2018-2019 in the fields of services (trade) and agriculture and the low activity of the applicants in the enterprises of strategically important industries were highlighted, which gives impetus for its development. The necessity to motivate inventors, increase their prestige in the economy and society, as well as measures to stimulate this process have been updated.*

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**Keywords:** *intellectual property, innovative development, inventors, investments, knowledge.*

#### Introduction.

In the conditions of becoming an information society, the activity and efficiency of innovative economic development is conditioned by the level and quality of protection of intellectual property rights. However, negative trends in the development of the national economy, a decrease in the levels of the index of innovative development, satisfaction of vital interests of the population need to study the main trends in the change in the number of applications for objects of intellectual property and the identification of basic conditions, obstacles, features of the state and development of invention in the country, as well as development of measures to increase its prestige in Ukraine.

### Literature review.

Experts have repeatedly emphasized the importance of intellectual property protection for the economy. Thus, at the parliamentary hearings "Building an effective system of intellectual property protection in Ukraine" by Roksolana Podlasiy it was stated that "the basis of economic growth is the increase of labor productivity, which can be achieved only through the modernization and development of innovative technologies...Need high technologies and in agriculture, and in industry and it is desirable not to import them, but to produce them domestically... and the intellectual property system and the building of bridges between science and business are crucial for this ". However, "according to the Global Competitiveness Index, in 2019 Ukraine ranks 118th in the world in terms of IPR protection, worse than in Russia or Moldova, and worse than in China, known for copying technologies" [1].

An example is the experience of South Korea, which from 1970 to 2010 provided a 37-fold increase in GDP per capita due to an effective innovation system. At the initial stage, the country imported innovations to reduce the technological gap at national enterprises, and then created internal opportunities for using and improving these technologies [2].

In developed countries, 50% to 90% of economic growth is driven by innovation and technological progress. In times of crisis, innovation is of utmost importance and "must be the main driver of the development of the industrial sectors and services to move the country to a new technological level" [3].

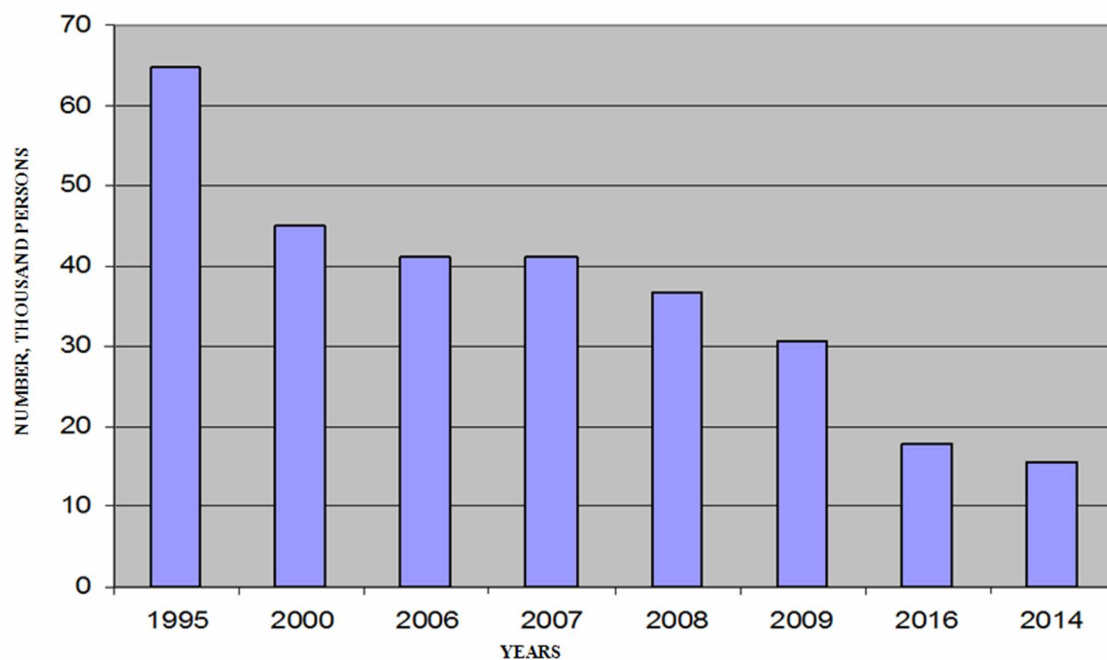
Kuzubov S.A. and Platonova E.I. noted that "in America, an inventor makes a business innovation, and commercialization of the invention turns it into an innovation" [4].

However, the number of inventors, authors of industrial designs and innovative proposals in Ukraine for the years 1995-2014 (the period of territorial integrity of the country) indicates their decrease by more than 3 times, and since 2015 the statistics of inventors have been canceled altogether (Fig. 1).

At the same time, the Cabinet of Ministers of Ukraine adopted the Resolution №496 of June 12, 2019, elaborated by the Ministry of Economic Development, according to which the fees for actions related to the protection of intellectual property rights in Ukraine were increased by 3-9 times . This is indicative of the threat of lowering the level of protection of intellectual property rights. Thus, Olena Dovidna, a member of the Workers' Association of Ukraine, noted that the result would be "the expense of the Ukrainian enterprise by increasing the fees for the protection of intellectual property. This will several times exceed the amount paid by local entrepreneurs in Spain, Italy, Germany, Poland, Romania, Slovenia, Hungary, the US, France and other Western countries.

At the same time, the Association of Workers of Ukraine predicts that national entrepreneurs will be forced to abandon the protection of intellectual property in general due to a significant increase in fees.

In addition, the fee for the distribution in Ukraine of international trade mark registration in accordance with the Madrid procedure is 100 Swiss francs for 3 classes (approximately 2600 UAH). Instead, the application for the national procedure should be paid 13,800 UAH [5].



**Fig. 1. Dynamics of the number of inventors, authors of industrial designs and innovative proposals in Ukraine for 1995-2014 (period of territorial integrity of the country)**

*Source:* built by O.V. Bondar-Pidhurska based on the processed data of the State Statistics Service of Ukraine using the MS Excel software package.

That is, for non-residents of Ukraine the fee is 5 times less than for national applicants, which creates a situation of dependence of domestic entrepreneurs on foreign developers.

The patent offices are called upon to defend their inventions, but the threat of closure is now emerging. This is due to the reforms of the new government at the National Academy of Sciences. Thus, for the implementation of paragraphs 6-8 of the decision of the National Council of Ukraine for the development of science and technology (Protocol №3 of November 5, 2019), proposals were prepared by three working groups of the National Council of Ukraine for the development of science and technology of December 17, 2019, where “the priority of the Academy reform should be optimization of the network of scientific institutions and organizations based on the results of internal evaluation and the results of state certification...In particular, this is the optimization of networks of scientific institutions and organizations with the help of similar associations and the creation of scientific complexes based on them” [6].

At the present time, the need for reforming academic science, bringing it closer to the urgent needs of society, intensifying the initiative of scientific institutions in studying current problems of social development and developing ways of solving them, actualizing research in developing an effective national development strategy in the context of globalization and developing information society, competitive decisions in the scientific information market.

Ukrainian science should become a reliable lever for the Ukrainian nation and state in the process of their development now...The future of Ukrainian science is a fundamentally important and patriotic issue that concerns not only the current government, but also the entire political elite of Ukraine and is about resolving the fate of the fundamental and applied science in our society. The answer to this question will give an idea of the desire of the national establishment to see the Ukrainian perspective in the information society [7].

*Purpose of the research:* to highlight the features of intellectual property protection of innovative development of the Ukrainian economy and to develop measures to stimulate inventors as the main generators of innovations.

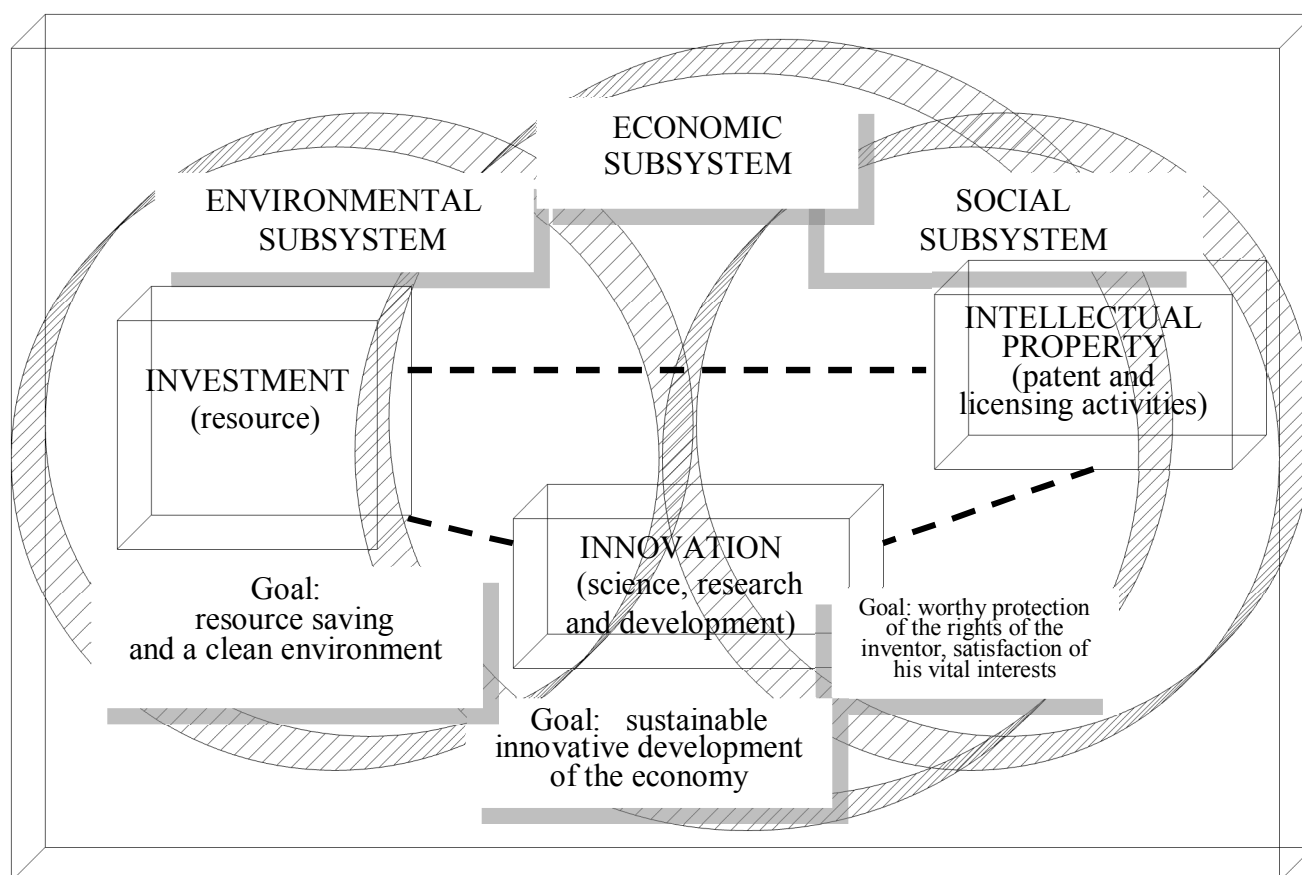
The analysis of Table 1 data shows that Ukraine's GDP is low compared to Norway's GDP as one of the most developed countries in the world.

**Table 1. Share of GDP per capita of Ukraine in 2007-2017 compared to highly developed countries, %**

Countries	Years										
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Ukraine	4,95	6,22	4,15	4,83	5,70	5,96	6,12	4,46	3,07	3,12	3,66
Norway	100	100	100	100	100	100	100	100	100	100	100

*Source:* own calculations by O.V. Bondar-Pidhurska based on the worked out sources [8]

The search for the root cause of such a situation should be sought in the plane of functioning of the triangle of competitiveness of the national economy (Fig. 2).



**Fig. 2. Substantiation of the place of intellectual property as a factor of sustainable innovative development of the Ukrainian economy: the triangle of its competitiveness**

*Source:* refined and adapted by O.V. Bondar-Pidhurska based on source analysis [9].

Thus, to ensure sustainable innovative development of the economy, attention should be paid to such components of the triangle as investment, innovation and intellectual property (knowledge). It is knowledge that allows at the present stage not only the rational use of all resources, but also their efficient distribution and achievement of set goals, and the implementation of socio-economic development programs at the state level.

The most significant example is the communications sector. “At the beginning of 2015, Kyivstar, MTS Ukraine (Vodafone) and Lifecell paid UAH 8.7 billion for the new licenses at the 3G auction, and also invested more than UAH 20 billion in the new generation infrastructure, that is, foreign licenses are included investment amounted to \$ 1 billion”[10].

The peculiarity of the current stage is the change in the role and importance of knowledge as an economic resource for the national economy of Ukraine should distinguish the following types of knowledge: 1) know-what. They refer to knowledge of "facts"; here knowledge is closer to what is called information; 2) know-why. It is scientific knowledge of the principles and laws of nature; 3) know-how. It is the skill or ability to do anything; 4) know-who contains information about who owns and knows what skills they have.

Moreover, the first two types of knowledge refer to explicit or codified knowledge, which can be expressed in the form of words and numbers, and be transmitted in a formalized form on appropriate carriers. This type of knowledge can be easily reproduced and disseminated to a large number of consumers [11]. And the third and fourth types of knowledge can be attributed to intellectual property, which needs appropriate legal protection. In addition, the main trends of the last decade, namely the “aging of knowledge”, the development of business through franchising, the creation of dealer networks require “protection of knowledge about technology”, which allows the owner to earn money on knowledge.

Therefore, the state of protection of intellectual property rights in the country should be considered as a significant factor for sustainable innovative development of the economy. The basis for this statement will be the results of formalization of innovative development of Ukraine and a detailed analysis of its index components. Thus, the results of the correlation-regression analysis of the Innovative Development Index (Y) of Ukraine in 2007-2017 allowed us to form an econometric model, the high reliability of which was confirmed by the correlation coefficient  $R = 0.9999286159$ , the coefficient of determination  $R = 0.998572828$  (99.86% of data) fit the obtained regression) and Fisher's criterion  $F(174,9215826) > F_{tab}(0,230052631)$  - fits the statistics; and the significance level of the model  $\alpha = 0.005696479$  is less than the significance level of the regression 0.05, proving that the obtained model is reliable with a probability of 0.95

$$Y = -0,94 - 0,33X_1 + 0,65X_2 + 0,22X_3 + 0,55X_4 + 0,16X_5 + 0,29X_6 + 0,43X_7 + 0,23X_8, \quad (1)$$

- $X_1$  – part of patents for production of Ukraine among the countries of the world, %;
- $X_2$  – percentage of scientists from the total number of employees, %;
- $X_3$  – share of the volume of performed scientific and technical works in GDP, %;
- $X_4$  – the share of innovation-driven enterprises, %;
- $X_5$  – the share of realized innovative products in the volume of industrial, %;
- $X_6$  – introduced new technological processes per 1 scientist, units per person;
- $X_7$  – the state's share in financing the innovation activity of industrial enterprises, %;
- $X_8$  – % R&D in GDP .

All the coefficients of the model according to the Student's criterion (table = 0.068088) are reliable with a probability of 0.95 ( $a_0 = -3.18446$ ,  $a_1 = -2.30419$ ,  $a_2 = 2.813894$ ,  $a_3 = 0.739272$ ,  $a_4 = 3.266372$ ,  $a_5 = 2.399516$ ,  $a_6 = 4.081831$ ,  $a_7 = 10.57352$ ,  $a_8 = 1.881944$ ).

Results of correlation-regression analysis of index of innovative development of economy of Ukraine in 2007-2017 obtained by O.V. Bondar-Pidhurska based on his own calculations using Microsoft Excel. Being a stimulant by its nature, "the share of patents for inventions of Ukraine among the countries of the world" is of crucial importance in the resulting econometric model, which allows us to speak about certain problems in this field and the expediency of their more detailed consideration. Because reliable patent protection for inventions and other industrial property in demanded and licensed countries is a prerequisite for the successful commercialization of technology.

However, it is here, as the analysis of innovative development of Ukraine in 2007-2017 showed, that the most significant is the "realization of innovative products in the volume of industrial", which follows the tendency to decrease, while at the same time increasing the share of enterprises introducing innovations by 2.8% in 2017 compared to 2007, which gave birth to the Achilles' heel of domestic innovation development. In particular, this is an unsatisfactory level of commercialization of the results of scientific and technical activities caused by a low level of patent protection. For comparison, in industrialized countries, 80% of industrial exports are protected by patents, and in Belarus, Ukraine, Russia - 3-5%, and this is further affected by the global financial and economic crises. In addition, in the context of global competition, commercialization of intellectual property assets and management based on CALS technologies (automated product lifecycle management) is the most significant determinants of national competitive advantages on the path to sustainable innovative development of the economy and a high level of satisfaction of vital interests of the population. In order to highlight the features of protection of intellectual property, we analyze the dynamics of receipt of applications for industrial property in Ukraine during 2014-2019 (Table 2).

During the period under review, the number of applications for industrial property is increasing. In 2019 compared to 2017 - 108.08%, 2018 - 105.48%. In the structure of applications, applications for utility models from foreign applicants have a negative trend in 2019 compared to 2014 - by 73.08%, 2015 - 84.82%, 2017 - 74.22%, 2018 - 70.90%. These trends prove that national enterprises are aware of the need to protect existing knowledge and commercialize it into intangible assets. Among foreign countries, Cyprus remains the leader in submitting applications for utility models in 2018-2019. The number of applications from which has doubled in 2018, and the share exceeded 40% of the total number of foreign applications for utility models [12, 13]. This reaffirms the interest of the foreign investor in knowledge management issues and actualizes the need to intensify the activities of national applicants. In 2019, applicants from Slovakia, the United Kingdom, the Russian Federation, Belarus and Latvia were active. The number of applications from the Russian Federation decreased by more than 46% and their share - by 13.8% in 2018 compared to previous years. Despite the decrease in applications received in 2018 from applicants in Belarus (-38.5%), the United States (-58.3%), Germany (-28.5%) and Poland (-50%), of the leading countries [14]. Thus, foreign investors demonstrate an interest in new knowledge and invest in their protection, which will gain competitive advantage.



**Table 2. Analysis of the dynamics of receipt of applications for industrial property objects 2014-2019**

Industrial property	2014	2015	2016	2017	2018	2019	2019/ 2017	2019/ 2018
Everything has come	44156	47819	51559	53462	54784	57784	108,08	105,48
<b>1. Inventions, including:</b>	4814	4497	4093	4049	3965	3850	95,09	97,10
National procedure (including legal entities)	2675	2506	2422	2494	2355	2296	92,06	97,62
from foreign applicants	1335	1127	1206	1200	1167	1177	98,08	100,86
<b>2. Useful models, including:</b>	220	235	192	213	250	201	94,37	80,40
by national procedure, including:	9384	8618	9559	9112	9123	8459	92,83	92,72
from national applicants	9373	8602	9551	9105	9118	8448	92,78	92,65
from foreign applicants	9243	8490	9470	8977	8984	8353	93,05	92,98
<b>3. Industrial samples, total:</b>	130	112	81	128	133	95	74,22	70,90
from national applicants:	2664	2080	2302	2480	3042	2678	107,98	88,03
from foreign applicants	2045	1811	2016	2249	2787	2455	119,08	96,09
<b>4. Signs for goods and services:</b>	619	269	286	231	255	223	96,54	87,45
According to the national procedure, of them:	27280	32621	35605	37817	38651	42194	111,57	109,17
from foreign applicants:	18796	24652	29600	30183	30899	33736	111,77	109,18
According to the Madrid system	3655	3407	3536	3908	3572	3908	100,00	109,47
Topography of IC	8484	7969	6005	7634	7752	8458	110,79	109,11
Qualified indication of the passage of goods	1	-	-	-	-	-	108,08	105,48
	3	3	-	4	3	6	150	200

*Source:* summarized by Glebova A.O. based on source processing [12, 13]

In 2019, there is a decrease in the number of applications for industrial designs compared to previous years, especially from foreign applicants. Whereas the decrease in the number of applications from national applicants occurred only in 2019, whereas in 2014-2018 there was a clear positive upward trend. Among the largest Ukrainian applicants in 2018 were the following entities (Table 3). Thus, it becomes apparent that the main national applicants in 2018-2019 are the services (trade) and agriculture, i.e. those sectors that are important for the functioning of society but not sufficient for sustainable economic development. In order to satisfy the vital interests of the population, the applicants of strategically important sectors of the national industry should be activated. From foreign applicants in 2019, compared to 2014, the number of applications is reduced by almost 3 times. In 2019, the main foreign applicants were the Russian Federation, China, the United Kingdom, and the United States. In 2018, the Russian Federation was the leader in the submission of applications, which increased its activity by more than 44% (62 applications against 43). The United States (+30%), Japan (+75.0%), France (+45.5%) and the United Kingdom (+66.7%) also increased their activity. Applicants from Korea, Canada, Australia, Vietnam, Estonia and Croatia received 17, 6, 5 and 4, respectively. Instead, Germany, which was the leader in 2017, significantly reduced its activity (3 applications against 49). The activity of Belarus decreased slightly (-60%), Poland (-25.0%), China (-16.7%), Cyprus (-10.0%) [12, 13].

**Table 3. List of the largest national applicants in 2018-2019**

Name of company	Роки	Activity	Number of applications
Subsidiary with foreign investments "Ukrplastutomat"	2018	leasing and rental of containers, industrial machinery, equipment and tools for the mining and oil industry	26
PJSC «Zhytomyr Butter Factory»	2018	processing of milk and dairy products	26
	2019		27
PJSC "Koblevo"	2018	production of grape wines	17
Technotorg-Don LLC	2018	sale of agricultural machinery	17
Beveridge Trading Company LLC	2018	food and beverage manufacturing and wholesale of alcoholic beverages	16
Elworthy PJSC	2018	agricultural machinery production	15
Cheese Club LLC	2018	making hard cheese	11
Mareven Food Ukraine LLC	2019	production of a wide range of fast food products	23
LLC Trading House Kievklib	2019	production of bread	20
JSC ATB-market	2019	retail	15

*Source:* compiled by Glebova A.A. based on source processing [12, 13].

Thus, statistics confirm that the leading countries enterprises in the international market play an important role in the protection of intellectual property rights, the development of knowledge in the form of intangible assets, which can significantly increase their market value and earn additional income.

Trademarks for goods and services under the national procedure have a positive upward trend.

In 2014, their number was - 18796, in 2019 - 42194. With applications from foreign applicants, the situation was best in 2017 and 2019. Their number was 3908. The lowest value in 2015 was 3407. In this case, it should be noted about the increase in the activity of national applicants in comparison with foreign ones. Among the countries applying for marks for goods and services under the Madrid system, the leaders in 2019, as in the previous year, were US applicants (778 applications, + 21.6%), Cyprus (448, -14.5%), Switzerland (409, +55.5%), China (284, +25.7%), United Kingdom (232, +3.1%), India (199, +5.1%). Thus, the transformation of knowledge into industrial property in 2014-2019 has a positive dynamic, and proves that knowledge is now one of the strategic resources that allow to provide competitive advantages, increase the market value of enterprise assets, generate an additional source of income.

### **Conclusions.**

An important feature of the modern stage is highlighted. This is a change in the role and importance of knowledge as an economic resource for the national economy of Ukraine. The protection of intellectual property as a factor of sustainable innovative development of the Ukrainian economy is substantiated. Its place along with innovations and investments in the plane of the triangle of competitiveness of the economy and the role in raising the level of knowledge are determined.

It is stated that the state of intellectual property depends on the level of its protection and activity of stimulating inventors in the country. It is suggested to return to stimulating the invention by developing certain benefits in certain spheres of life, as well as enhancing its prestige. It is recommended to return the copyright upon receipt of a patent for the invention, to give the right to the deserved inventor to receive an apartment out of turn, or with payment of 50% for housing; 50% payment for utilities; to allow admission to higher education institutions on a non-competitive basis, etc.

It is argued that the slow and significant impediment to intellectual property protection is the slow development of intellectual property legislation and the lack of relevant market institutions. This slows down the speed of commercialization of its results. In this context, Ukrainian enterprises are losing significantly to foreign companies and are losing their competitiveness. It is recommended to intensify the process of commercialization and implementation of intellectual property at industrial enterprises, to develop cooperation between business, science and education.

Thus, the existing problems of protection of intellectual property rights at the legislative level, lack of institutional infrastructure hinder the processes of sustainable innovative development of the national economy of Ukraine, reduce the level of its competitiveness, and require decisive authorities.

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**MODERN TRANSFORMATIONS OF EUROPEAN FINANCIAL INTERMEDIATION**

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**Abstract.** *The article shows the problem of contradictions of the modern transformational transition, which lies in structural and functional changes of financial intermediation and its role in ensuring economic development, as well as systematizes the manifestations of institutional imbalance in the EU financial intermediation environment, which reflect the continuing tendencies of excessive concentration of resources in the financial sector: continuing liquidity surplus against the backdrop of dysfunction of credit institutions; closed circulation of liquidity in the financial space under the controversial monetary policy of stronger regulatory requirements and against the backdrop of increased refinancing; the decline in interbank lending and higher volumes of banks' operations with other financial institutions and the state. It is proved that the title indicators of financial intermediation dysfunction (as an institute of redistribution of financial resources from entities the budget surplus to the entities with the budget deficit, based on risk-taking and getting profit) is a continuing global tendency to reduce an average interest margin as a difference between interest rates on loans and deposits, increased share of income from transaction operations against the background of a lower share of income from commercial transactions.*

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**Keywords:** *financial intermediation, institutional transformations, dysfunction.*

**Introduction.**

The European financial intermediation system has deep historical roots which began developing in the prehistoric era, revealing to the economic world its most complete, intricate functional modus in a capitalist economy. Today, in the process of evolvement of a network-based way of organizing economic activity and social existence, European financial intermediation (as part of the economy of capitalism) is gradually retiring from the economic stage, both in the global financial arena and in the European system. losing its institutional status as a financial basis for economic development. The purpose of the study is to show how financial intermediation loses its institutional status as a financial basis for economic development. The methodology of the research is a logical and historical approach and comparative analysis. Financial and credit operators are changing their deep market assignment for business not only in Europe, but also in the whole world. Today, this is evidenced by the tendencies of functional transformation of financial intermediation, disintermediation against the backdrop of intensified financial development and deteriorated financial intermediaries.

The development of the global banking system is cooling down, with the credit growth of only 4 percent in 2018. It is the lowest rate for five years. According to a recent McKinsey study [1], generally, return on tangible equity (ROTE) has fallen to 10.5%; banks of developing countries showed decreased ROTE levels □ from 20.0% in 2013 to 14.1% in 2018, largely due to active introduction of digital technologies and growing competition; banks on advanced markets have somewhat improved productivity and risk management, thereby increasing the ROTE value from 6.8% to 8.9%; but, totally, the global banking industry is in decline, with 60% of banks having revenues below the equity value. This is primarily due to low or even negative interest rates, as in the continental Europe.

### **Results.**

With regard to European banks, the situation is too complicated, with three major factors affecting stagnation in the industry, namely: slow economic growth, more rigorous regulation and, most importantly, negative interest rates. For example, if the Commerzbank development plan for 2016 indicated 8% ROTE predictive data, then in 2019 the bank's management estimated that this indicator would fluctuate at the level of no higher than 4% in the medium-term period. Significant is also the influence of regional factors on the decline in profitability of banking: for example, in Germany, a strong trade union movement often seeks to increase remuneration for employees, which also adversely affects the bank performance. In terms of declining profitability, banks continue job cuts, which is typical of HSBC, UniCredit, and many other institutions [2]. In general, the reduction in all banks of the world in 2019 amounted to about 60 thousand employees, with the majority of the unemployed from Europe [3]. In addition, for European banks, problems are exacerbated by increased price competition, which is the basis for concern not only in continental Europe but also in Great Britain, with the liquidity surplus leading to a rapid intensification of mortgage lending and, consequently, price competition between banks [2]. Today, the only way out for European banking institutions is to concentrate capital by merger and acquisition for the scale effect [4].

Banking efficiency in the euro area is declining against the backdrop of an imbalance in the institutional environment, which is reflected in the contradictory results of monetary regulation. The crisis and post-crisis growth in the supply of liquidity by central banks of the euro area against more rigorous regulatory capital and liquidity requirements has led to the predominantly closed nature of liquidity circulation in the financial space of the euro area. Additional liquidity, provided to the monetary market institutions (through refinancing and redemption operations), does not intensify the lending and post-crisis recovery processes, but stimulates accumulating banking system reserves. The Eurosystem's total balance as of July 2008 was 0.5 trillion euros, with 3.3 trillion euros in 2018. At the same time, excess liquidity in the Eurosystem reached trillions (almost 1.5 trillion euros) [5]. Any assistance provided by central banks to commercial ones in the form of refinancing is exacerbated by increased imbalances in the banking system through a disproportionate distribution of liquidity across the countries. Today, the largest amounts of liquidity are in Denmark, France, Italy, Estonia and the Netherlands [5]. It should also be borne in mind that concentration of liquidity in several large banks is a factor of the volatility of interest rates and abuse by banking institutions with significant levels of liquidity: opportunistic financial intermediaries can create fluctuations and instability.

If one looks at the countries with significant amounts of liquidity today, it is Denmark, above all, which is known for its large credit portfolios in the private sector, and especially in the household sector. At the same time, recently, influence of financial institutions on the economic development of the country has gradually diminished; having reached the maximum level of banking activity in the private sector of 201% of GDP in 2009, with its decline until 2017 (162% of GDP), and in 2018 it reached 163% of GDP [6]. Italy witnesses fluctuating trends, with the decline in banking activity in the previous eight years, which in 2018 was 76% of GDP [6]. One can also observe the same situation in the Netherlands and Estonia, which have been slowing their banking activity for the previous three years, and in 2018 it reached 105% of GDP and 62% of GDP, respectively [6]. France is the only country with significant liquidity surpluses and growing banking activity [6].

Of the five leaders in terms of excess liquidity, four countries have not restored the necessary lending activity of banking institutions. The question then arises, how is the liquidity, provided to the banking system, used today? The European interbank market is inactive today □ only 3% of banking operations concentrates on it (while the pre-crisis development of the European banking system indicated that it was the largest cross-border lending market in the world), 60% of transactions are made between banks and financial asset managers, pension funds, insurance companies, in other words, non-banking representatives of the financial area [5], which are not directly related to redistribution of financial resources in the real economy. Continental Europe sees liquidity concentration processes in the financial space as a result of post-crisis regulatory policies.

It was in response to the credit dysfunction of European banking institutions and intensification of interaction between banks and non-banking representatives of the financial area that the European banking sector indicators changed in 2019, with regard to EONIA rates, one of the most widely-used interbank interest rates. Until October 1, 2019, it was calculated as the weighted mean value of all unsecured interbank lending operations for a term of 24 hours [7].

In order to increase the awareness of the real situation in the banking market with regard to counterparties, in the early 2018, a working group was established consisting of European authorities and financial institutions. Its function was to identify and recommend alternative calculations of the EURIBOR and EONIA benchmark prices, used for a wide range of financial instruments and contracts in the euro area. Henceforth, EONIA will be calculated on the basis of a new rate, namely: the short-term rate (STR), which is calculated not only based on interbank activity, but also on the interaction of banks and non-banking institutions [8].

The intensified interconnection of the Eurosystem and the euro area countries is a component of institutional imbalance in the euro area through growing a sovereign securities portfolio on the balance sheet of central banks. In the initial phase of the 2007–2009 crisis, main refinancing operations [9] and long-term refinancing operations (LTROs) [9] were made to provide banks with sufficient liquidity [9], and in 2009, central banks launched purchases of private sector securities, in 2010 – purchases of public sector securities, with their volumes reached a critical mark in 2019 – of more than 2 trillion euros [5]. In 2014, under significant credit dysfunction of banking institutions, central banks started targeted long-term refinancing operations (TLTROs) [10], with government securities as the main assets used by central banks to support monetary policy.

This is another manifestation of institutional imbalance, as by enhancing the functional and institutional links between the Eurosystem and the states, such a policy not only eliminates the competitive foundations of the European financial area, but shows that the basic institutions responsible for the redistribution of financial resources in the economy are gradually de-actualizing their institutional purpose. Financial resources are not redistributed, but concentrate on two poles: the financial space and the states, with the real economy remaining diluted.

The internal problems of European financial intermediation are exacerbated by its clear loss to US competitors. European financial experts argue that: “Against the backdrop of low interest rates which sharply reduce bank revenues, due to the regulation of the banking sector, which causes margins to decline, and, above all, due to the digital revolution, in which customer expectations change and new competitors emerge, scale is playing a key role. The sector needs investment in new technologies. Compared to the financial giants from the USA, which is in more favourable situation and annually allocates billions of dollars to the IT sphere, European banks find themselves in a completely unfavourable situation and are always at a risk of failure” [11]. Although the United States is predominantly a stock investment model, in other words, the stock space is more active than banking intermediaries, nevertheless, the banking sector is much more profitable than that of Europe (ROTE is almost 10% higher than in Europe, in the USA □ 16%, in Europe □ 6,5%) [1]. This is due to a significant concentration of banking capital, higher interest rates, stimulating tax policies and active development of lending.

At the same time, despite a more favourable position of the banking business in the United States, the tendencies of institutional transformation of financial intermediation are reflected in the American economy. Back on the basics of financial intermediation, one should take into account that market financial intermediation is part of the modernist society □ the society of transformation. Creative destruction and innovative development are mechanisms of economic development of a capitalist modernist society, realized through financial intermediaries, which provided efficient accumulation and redistribution of financial resources. Transformation is the main context of financial intermediation, namely: acceptance of deposits and loan granting, with income from the bank redistributive function being the margin between average rates on loans and deposits. Today, the margin is declining.

Bankers in many countries of the world testify to the lower margin. According to the Federal Reserve Bank of St. Louis, since 1994 the US has witnessed a long-term trend to reduce its net interest margin. The maximum was in 1994 □ 4.91%, the minimum □ 3.15% □ in 2008, and in 2019 it fluctuated at 3.34%. [12] The analysis of the interest margin flow, performed by the ECB in 2009, also proves that there are long-term trends of its decline. At the same time, net interest income became less important for banks than other types of income. Banks began focusing on commissions [13].

Payment transactions are the largest source of commission income. The European payment industry is gradually growing, both as a result of on-going trends of the decline in cash transactions and with the introduction of the Second Payment Services Directive, which contributes to further establishment of the EU’s common payment space. The most active payment markets are Denmark, Sweden and Italy, while pan-European trends show rather slow growth [14].

The volume of payment services in the United States is increasing much more actively due to a stimulating tax policy, interest rates, higher than in Europe, the greater number of transactions, and thus the income for this type of transactions. In 2018, interest income accounted for one-fifth of US bank transaction revenue, with e-payment growth double the GDP growth rate [14]. As for the global trends, today 40% of banking income is commission income from transactional banking. Payments and trade financing were the drivers of growth in 71% of banking institutions in 2019, with this segment providing 5-6% of annual growth [15]. In 2018, global revenue from the payment industry was 1.9 trillion dollars. [14]. Achieving such indicators was made possible by the digital development and increased involvement of the population in the financial transaction system.

### **Conclusions.**

Nowadays, financial and institutional transformations in the system of European financial intermediation continue. They are the result of:

- the global redesigning of economic and social life, caused by the processes of capitalist transition and emergence of an electronic economy;
- the intra-European crisis and post-crisis economic and institutional imbalances which have led to the functional transformation and institutional elimination of financial intermediation in the continental Europe.

Levelling financial intermediation as a traditional basis for economic development means loss by banking institutions of their deep institutional market assignment for business, which slows down development of the global banking system, and especially its European continental component, which is affected by three major economic factors, namely: unstable economic growth, more rigorous regulation and negative interest rates.

The institutional imbalance of the European banking environment is reflected in the ongoing liquidity surplus as a contradictory result of monetary regulation aimed at more rigorous regulatory capital and liquidity requirements against the backdrop of the higher central bank liquidity supply of the euro area. Such a policy has led to a closed circulation of liquidity in the financial area when additional liquidity, provided to the monetary market institutions (through refinancing and repurchase of securities), does not intensify lending and post-crisis recovery processes, but stimulates accumulating reserves in the banking system. At the same time, interbank lending is in decline, and the main counterparties to which banks provide liquidity are financial asset managers, pension funds, insurance companies, i.e. non-banking representatives of the financial space, which are not directly related to the redistribution of financial resources in the real economy. An important manifestation of institutional imbalance in the euro area is also the intensified interconnection of the Eurosystem and the euro area countries through the growth of the sovereign securities portfolio on the balance sheet of central banks.

Institutional dysfunction of financial intermediation as an institution of redistribution of financial resources and risk-taking manifests itself in the long-term tendency of the decreased average margin between loan and deposit rates, lower commercial income and increased income from transactional activity under intensified digital development and growth of financial inclusion.



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## **COMPETITION AND MONOPOLIZATION IN THE INSURANCE MARKET OF UKRAINE: PECULIARITY AND CURRENT TRENDS**

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**Abstract.** *The insurance market from the point of economic theory and finance is a complex system of financial relations between its participants regarding the provision (acquisition) of insurance protection. It develops under the influence of the unity and struggle of opposing interests of market subjects and reflects the contradictions of transformations of the inversion type in the Ukrainian economy. Effective and transparent insurance market is a prerequisite for sustainable development of the state's economy, ensuring continuity of the reproduction process, and a tool for state risk management at the macroeconomic level in order to solve urgent economic and social problems of society. The insurance market of Ukraine, which has emerged over the last 20 years, is an economic phenomenon that reflects all the contradictions and problems of a country with an imperfect transformational economy, where market laws cannot yet fully manifest themselves. The purpose of the article is to investigate the current state, trends in competition and monopolization and their social significance in the domestic non-life insurance market, as well as to produce the present types of monopoly.*

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**Keywords:** *Ukrainian insurance market, Herfindahl-Hirschman Index, competition, “niche” monopoly, monopoly models.*

### **Introduction.**

In developed countries, insurance is a strategic sector of economic development, since it removes the burden from the expenditure part of the budget to compensate for losses, attracting investment in the economy, solving social problems of society. In addition, the main factors of socio-economic development of any country include the criterion of the level of safety of life and production, ie insurance protection. Insurance companies worldwide are regarded as a powerful financial and investment institutions. The relevance of the article is that in current economic conditions, insurance is almost the only sector of the Ukrainian economy that has had a steady significant annual increase in the volume of services provided in recent years, thus the the main trends in the development of competition and monopolization in the Ukrainian insurance market should be identified and analysed.

In III quarter 2019 total number of Ukrainian insurance companies was 234, including life insurance - 23 companies, "non-life" - 211 companies [1].

Number of insurance companies tends to decrease: III quarter 2019 compared to the same period of 2018, the number of companies has decreased by 51. Simultaneously, we can state that despite the large number of companies, in fact, the main share of gross insurance premiums in the insurance market - 98.5% - accumulate 100 non-life insurance companies - more than 47% of the total number of non-life insurers.

The Herfindahl - Hirschman Index of non-life insurance (HHI) is 273.8. The HHI of the insurance market as a whole was 210.9. The data shows the significant level of competition (HHI 3 times less than 1000) on the Ukrainian non-life insurance market [2].

However, Ukraine's insurance marketplace tends to consolidate and, accordingly, to monopolize.

### **Problem Statement.**

According to Bain [3], monopolistic competition, a homogeneous oligopoly, a heterogeneous oligopoly and a monopoly must be regarded as "imperfect competition". At the same time, under the monopoly author understood a state of the market in which there is no interchangeability of goods, the interchangeability of firms and there are significant restrictions on entering the market. Often a monopoly is understood as a market condition when one firm produces an indispensable commodity and determines its price with a blocked entry into the industry.

As above, according to the Ukrainian state regulatory authority, 234 insurers were registered in the unified state register of insurance business entities on III quarter, 2019. It would seem that the number of insurance companies testifies to the irrelevance of the discussion of existence of monopoly in insurance.

However, if one looks at the problem of a modern monopoly on the Ukrainian insurance market from the position of policyholders, one can find a number of facts that indicate a problem:

-in some localities there is only one insurer and trips to other settlements are associated with serious costs;

- financial intermediaries offer services of one insurance company and the purchase of a policy of another company may lead to a refusal to obtain services of a financial intermediary;

- some individual types of insurance services can be obtained only in one company.

The above facts testify to the presence of forms of a "niche" monopoly on the Ukrainian insurance market.

### **Research Questions.**

Important for the definition of a "niche" monopoly is the interpretation of the term "insurance market". If by the definition of insurance market is understood only the insurance industry it should be recognized that the monopoly in the insurance market in Ukraine is absent. If the insurance market is understood as the insurance industry segment (divided by type of insurance, by territory, by type of insured, by distribution channel), then the presence of monopoly in individual segments can be proved, as pointed out by Klyuzina [4].

**Table 1. Comparative analysis of traditional monopolies and “niche” monopoly in the Ukrainian insurance market.**

Category	Traditional monopoly	"Niche" monopoly
Insurance market	Insurance industry	Segment by: - type of insurance, - territory, -type of policyholder, - distribution channel
Causes	Exclusive rights granted by the authorities Exclusive rights to the resource	Exclusive rights granted by a commercial organization or local authority Innovative activity Exclusive rights to the resource
Interchangeability of services	-	-
Interchangeability of the insurer	-	-
Entry restrictions	Administrative	Financial Administrative

Source: Klyuzina [4].

Consequently, in the insurance market can be identified (by type of segments of the insurance market) three forms of "niche" monopoly:

- distribution channel monopoly;
- product monopoly;
- geographical monopoly.

As Zhuk [5] underlines, with a "niche" monopoly, as well as with a traditional one, two main reasons for its occurrence can be identified: granted exclusive rights to operate and granted rights to the resource.

Under a traditional monopoly exclusive rights are granted by the state, when in the case of a "niche" monopoly such rights are granted by commercial firms, most often either by cooperation terms or by shareholders relations, and in some cases by a local self-government units (for example, by House-building authority, Housing and Construction Cooperative, Garden Non-profit Partnership, etc.).

Exclusive rights to operate help to build a distribution channel monopoly in the insurance market. Rights to the resource in the form of a unique insurance product lead to the emergence of a product monopoly.

### **Conceptual Models.**

#### ***Distribution channel monopoly.***

According to Bryzgalov [6], distribution channel monopoly is manifested when the following circumstances occur:

- 1) the offer of insurance services is carried out through non-insurance intermediaries (for example, through banks);

2) the need for insurance services is associated with services of intermediaries (for example, the need for comprehensive mortgage insurance when obtaining a mortgage loan);

3) insurance services through an intermediary are provided by single one (exclusive) insurer;

4) with the obligatory nature of insurance services policies of other insurance companies are not accepted by the intermediary or it creates significant difficulties for their recognition;

5) there is no intermarket competition (it is impossible to replace insurance services with other services);

6) "niche" distribution channel monopoly is realized when considering individual intermediaries.

Distribution channel monopoly is possible when selling insurance services through credit organizations, auto dealers, carriers, tour operators and travel agencies, ticket sales agents.

At the moment, the distribution channel monopoly in Ukraine is mostly pronounced when selling insurance services through tour operators and travel agencies, carriers and ticket sales agents. The activities of the Antimonopoly Committee of Ukraine for compliance with antimonopoly legislation resulted in a significant reduction of the distribution channel monopoly in the banking sector. Among auto dealers the monopoly on Motor Third Part Liability (MTPL) and Motor Own Damage insurance (MOD) did not initially exist as the consumer was always given a choice, which is understandable by the latter's ability to conclude an auto insurance policy independently, without dealer knowing of such conclusion.

The authors studied sales of insurance services through carriers and ticket sales agents. In 2018, most leading airlines sell additional programs of passenger insurance against accidents, baggage insurance, as well as travel insurance programs when passenger buys a ticket.

For the majority of airlines the insurance program for passengers and travelers is offered by Busin Insurance Company and for Utair - by ASKA Insurance Company.

**Table 2. The interaction of airlines with insurance companies in 2018**

Online ticket seller	Insurance Company
MAU	Busin
RIA	Busin
UTair	ASKA
Western avia	Busin
BIM avia	Busin

*Source:* created by the authors.

Within four air carriers studied insurance services can be purchased only in one insurance company, that is, a distribution channel monopoly is present.

A similar situation is observed in the segment of sales of insurance services through tour operators. Within top 20 tour operators in 14 of them insurance services can be purchased only from one insurer.

Thus, in the air carrier's distribution channel monopolization level approaches 90%, in the tour operators channel - 70%.

### ***Product monopoly.***

Product monopoly is manifested in the insurance market in times when an insurance program or an insurance product can only be purchased from one particular insurer. It is possible to distinguish two forms of the product monopoly - innovative and factorial.

An innovative product monopoly is linked to the development by the insurer of a new insurance program or insurance product and the absence of its proposition from other insurers. An innovative product monopoly has a "niche" characteristic, as there is a specific segment of the insurance market with demand-supply only for such new product.

The period of innovative product monopoly on the insurance market lasts from the time of the development of the innovative program until the emergence of its substitutes from competitors. In practice, with the commercial success of the new insurance program the monopoly period on its realization does not exceed one year.

The reason for the emergence of innovative product technology is the insurer's right on innovation (resource). There were two examples of an innovative product monopoly on the Ukrainian insurance market.

Alfa Insurance Company has developed the "AlfaMOD 50-50" program [7]. Unlike the usual MOD the initial premium for the program was 50% lower than the premium for a standard MOD policy. For that premium, the insurer promised to pay an indemnity in the event of "Theft" and "Total Damage". In the event of "Partial Damage", the policyholder could pay the remaining 50% of the premium and receive an indemnity from the insurer.

The first market copy of the "AlfaMOD 50-50" program appeared 7-8 months after its development and after 2 years such program was present in the product portfolio of at least 5 insurers.

In the life insurance market the life insurance program "Investor", developed by Allianz Life [8], was a significant innovation back in 2010. In only one year (in the middle of 2011) similar life insurance investment programs emerged in Alfa-Life and Renaissance Life. In 2013 life insurance investment programs were offered already by 9 insurers.

According to Bryzgalov [6], factorial product monopoly arises in the presence of other non-innovative factors that determine the existence of an insurance program for only one insurer. Such factors include: high riskiness of the insurance program in combination with social significance, for example, mortgage insurance; the decision of the executive authorities, in particular on insurance of credit and export risks; the decision of municipal authorities to develop insurance programs with one insurer, for example, subsidy housing insurance programs; the decision of the management of a commercial company on the development of the system of sales of insurance services in the workplace with one particular insurer.

This year, the most actively factorial product monopoly is manifested through the system of sales of insurance services at the workplace. Classical definition – worker sales management (WSM) – allows to consider sales of insurance services at the workplace as a special channel for sales of insurance products to individuals - employees of enterprises that are clients of the insurer. Through WSM insurers mainly promote MOD, MTPL, household insurance, health insurance, accident insurance and travelers insurance.

From the point of view of the employer, that is an insurer's corporate customer, organization of WSM has a number of significant advantages that positively influence the personnel policy of the enterprise. In particular, it saves the employees' working hours in the search for and selection of the optimal insurance offer, and later on the settlement of losses; increases loyalty of employees to the employer; can be presented to employees as part of the social package that does not require any financial costs from the employer. The interest of the other insurers in the deployment of WSM is determined by the following factors: obtaining a niche monopoly position; low-cost distribution channel for basic insurance services; strengthening the relationship with the corporate customer; cross-selling of products with small loss ratios.

***Other forms of "niche" monopoly.***

Geographical monopoly in the insurance market is associated with the offering of insurance services by one insurer in a separate area, for example, in a particular settlement or district.

In this case, the barriers to entry into the local insurance market are:

- low population size of the territory or a low number of the target group, which leads to the economic inexpediency of opening a representative office or a sales point in such territory;
- lack of the insurance awareness in provincial society;
- economic inexpediency of the organization of the claims settlement point in the territory, even with the use of agreements of representation with other insurers;
- high transport costs (commensurate with the cost of the policy) of travel to another locality;
- limited number of financial and non-financial intermediaries in the territory;
- territorial isolation, difficulties in transport communication.

As Solomatina [9] points out, in foreign markets a "niche" monopoly sometimes emerges from a deep specialization of the company in something as a part of its development strategy (space risks market, energy risks market etc.). In Ukraine the product monopoly is manifested in the following segments: compulsory insurance of various groups of civil servants (military, judges, etc.). The insurer is selected according to the tender and during the term of the contract has the exclusive right to provide insurance services; state or municipal programs for discounted property insurance. As a rule, one insurer is selected per region, which becomes the provider of preferential insurance programs for homeowners; insurance of "marginal" segments. In some regions cars older than 3 years old are not accepted for insurance, unless they were previously insured (due to the high loss ratio). Periodically insurers appear that are focused on such segment.

**Findings.**

In this way, in Ukrainian insurance market there are quite a lot of situations that do not fit into the traditional scheme "several insurers compete for the insured": the competition of insurers for insureds is often seen not only with each other, but also with other financial organizations (banks, investment companies, non-state pension funds); in competition for one same need insurance companies can use different types of insurance; there are situations of competition for insureds between different divisions (sales channels) of one insurer; monopoly and oligopoly of insurers are realized on various segments (niches) of the insurance market.

As Berlin [10] outlines, if competition takes place between insurance companies (or divisions of one company) then such competition is referred to as an intramarket competition (such competition is often described in the earlier classical scientific literature).

Competition between the insurance companies and other financial organizations (banks, investment companies, non-state pension funds) or non-financial organizations (medical clinics, car dealers) is an intermarket competition.

In Ukrainian market the following cases of intermarket competition can be observed:

1. Competition between life insurance investment products (insurers) and structured investment programs (investment companies) or deposits (banks).
2. Competition between pension insurance products (insurers) and voluntary pension plans (private pension funds).
3. Competition between voluntary health insurance products (insurers) and annual attachment programs (medical clinics).
4. Competition between "extended warranty" insurance products against breakdowns (insurers) and programs of increased warranty from automakers (auto dealers).
5. Competition between "road assistance" insurance products (insurers) and service programs (auto clubs, auto dealers).
6. Competition between mortgage insurance products (insurers) and an increased interest rate on a mortgage without an initial installment (banks).

Intertype competition is a form of intramarket competition and is manifested in the form of competition for a client between insurance companies or between selling divisions of one insurance company with the use of different types of insurance to meet one same need for insurance protection. In the modern Ukrainian market the following examples of intertype competition can be observed:

1. Traveler insurance is carried out by some companies within the health insurance products, while other companies place it in the context of insurance of financial risks (unforeseen expenses).
2. Insurance against loss of work by life insurers is made by insurance of a specific peril - survival till the event of "the loss of work", while non-life insurers place this peril within the framework of insurance of financial risks.
3. Managing the risk of non-repayment of the loan in the event of the death of the borrower can be carried out through the personal insurance of the borrower in case of death or insurance of the financial risks of the credit institution.
4. Personal insurance of the borrower is carried out by a number of insurers through life insurance products while other insurers provide insurance against personal accidents.
5. The program "Anti-Mite" can be implemented through health insurance or through insurance against personal accidents.

Distribution channel competition in the insurance market provides for competition between insurance companies for customers taking into account the specifics within a particular sales channel or competition between insurance companies or selling units of one company for customers between different sales channels. The outline of distribution channel competition in the insurance market is caused by the following factors:

- different rates and insurance conditions that may be offered by insurers when purchasing insurance services through different sales channels.
- high commission of intermediaries (mainly agents and brokers) who through their brokerage provide additional discounts.



- availability of internal factors of competitiveness of insurance services when selling through intermediaries.

- possibility of monopolization by any insurance company of a separate sales channel which is most often manifested in the banking sector.

Insurance companies in the process of choosing a development strategy and tactical plans for its implementation should take into account the positive and negative impact of abovementioned types of competition on the insurance market in general and the activities of individual companies. Positive and negative aspects of influence that inherent in new types of competition require special consideration and development of response measures. For example, after performance of SWOT analysis the positive and negative impact of new types of competition can be interpreted as opportunities or dangers of the insurer's activity in the insurance market or in its specific segment.

**Table 4. Positive and negative impact of new types of competition**

Effect of influence	A new kind of competition	Specifics of influence
<b>Positive impact</b>		
The emergence of new segments of customers	Intermarket competition	-
Independent supervisory authority	Distribution channel competition	Selection of priority sales channel in respect to the consumer's situation
	Intertype competition	Choosing the optimal type of insurance according to consumer properties or economic situation
	Intermarket competition	Optimization of the use of "right" (corresponding to consumer properties) service
<b>Negative impact</b>		
Monopolization	Distribution channel competition	
Stagnation	Distribution channel competition	Slowdown of fees on any sales channel due to redistribution of premiums to other channels
	Intertype competition	Reduction of fees for a certain type of insurance due to redistribution in a competing type of insurance
	Intermarket competition	Reduction of fees for a certain type of service due to the consumer's preference for non-insurance services
Reducing the impact of traditional factors of competitiveness	Distribution channel competition	Influence of internal (distribution channel) factors of competitiveness
Image losses	Intermarket competition	Negative image processes in markets that compete with insurance market may have a negative impact on the insurance market image
	Distribution channel competition	The problems of intermediaries, such as brokers, can adversely affect the insurance industry as a whole

Source: compiled by the authors.

### Conclusions.

When analyzing the current issues in the Ukrainian insurance market, the authors came to certain conclusions. Namely there are:

1. To investigate on corporate level the specifics of the current development of the insurance market in Ukraine conditioned by the convergence of financial services, the irrational behavior of the consumer, the high share of sales through intermediaries and the imperfection of regulation of financial markets (which all lead to the emergence of new types of competition).
2. While choosing development strategies and marketing operational plans for upcoming years insurers should take into account the specifics of new types of competition in the insurance market. Particular attention should be paid to activities to minimize the negative impact of newly identified forms of competition, such as the stagnation of collected premiums by type or distribution channel, possible monopolization of a particular channel, negative image influence, a decrease in the influence of traditional factors of competitiveness.
3. To more actively study the activity of potential competitors in correlated markets, the correlated markets themselves that serve as a source of intermarket competition and to predict changes that may affect the insurance market. Ignoring these problems can lead to the loss of market segments.
4. To promote laws against “niche” monopolies.

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**FINANCIAL TECHNOLOGIES IN THE INVESTMENT SECTOR**

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**Abstract.** *In conditions when the processes of introducing of financial technology instruments are being strengthened, the participants of financial services markets undergo significant transformation of their institutional environment. Implementation of financial technology achievements has been transforming the field of investment, providing new opportunities and creating challenges for its participants at national and global levels. The aim of this article is to study possibilities of investment sector modernization using financial technology instruments. It has been investigated in the article that the usage of financial technology instruments has led to investment sector modernization and has become an integral part of financial ecosystem. It has been established that innovations, systematization, customer-oriented investment services and transparency of investment activities are the main principles of investment sector modernization based on its digitalization. Implementation of financial technology instruments into both traditional actors of the investment sector and new actors and investment internet platforms have also been disclosed. It has been found that big data analysis provides an opportunity to develop investment strategies for both institutional and individual investors. The strengths, weaknesses, opportunities and threats of using robot consultants, artificial intelligence and blockchain technology in the investment sector have been identified. The opportunities of investment sector modernization using financial technology instruments has been justified.*

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**Keywords:** *financial technologies, investment sector, digitalization, modernization, innovations, blockchain, artificial intelligence, big data.*

**Introduction.**

In conditions when processes of introduction of financial technology instruments are being strengthened, participants of financial services markets undergo significant transformation of their institutional environment. It also concerns the investment sector, where digitalization influenced increase of participants' level of competitiveness; institutional transformations; increase of consumers' access to investment services; strengthening of interaction between investors and entities; improvement of investment operations transparency; protection systems development of investors' rights. Implementation of *FinTech's* achievements has been transforming investment industry, providing new opportunities and creating challenges for its participants at national and global levels.

### Literature review.

Foreign scientific researches have just started investigating opportunities to implement financial technology instruments in the investment sector. Thus, J. Manning [1] has studied issue of artificial intelligence usage in the investment sector. S. Spann [2] and B. Friedberg [3] have focused on benefits of using robot consultants. N. Kitonyi has considered problems of big data using during investment decisions making [4]. U. Chohan has investigated problems of implementation of blockchain technology in stock exchanges activities [5]. In the given article [6] we have considered opportunities of using cryptocurrency simultaneously as financial technology instrument, means of capital accumulation, and method of payment and investment direction.

Ukrainian scientists Zh. Harbar, V. Harbar, S. Sobchuk, and O. Menchynska have acknowledged that processes related to expansion of using modern information technologies in the business environment, public administration systems and investment sector are becoming relevant under the existing circumstances [7]. However, in spite of great number of existing theoretical developments, the issues of using financial technology instruments in different segments of investment sector require further research.

The aim of this article is to study opportunities of the investment sector modernization using financial technology instruments.

### Results.

Digitalization of financial relations components implies formation of financial ecosystem, an integral part of which is the investment sector. Financial ecosystem is defined as a set of traditional financial intermediaries, *FinTech* companies, *FinTech* startups, incubators, accelerators, regulators, economic entities, individuals, public financial institutions, educational institutions that interact on the basis of using financial technology instruments, which ensures the maximum consumers' inclusivity in financial services markets and transparency of public finances [8]. Investment sector modernization on the basis of using financial technology instruments implies transfer to its development model, which mostly considers the consumers' needs. Besides, in our opinion, the main tasks of investment sector modernization should be the following:

- functional expansion of investment markets;
- easier access to investment resources;
- strengthening of synergistic interaction between participants of investment processes;
- achievement of participants' integrity and cohesion during business processes in investment markets;
- increase of participants' competitiveness in investment markets;
- harmonization of participants' interests in investment markets;
- formation of development institutions using financial technology instruments;
- formation of legislative environment for mechanisms of investment attraction using *FinTech* instruments.

The main principles of investment sector modernization based on its digitalization include:

- innovation, which involves using financial technology instruments;
- customer-oriented investment services;
- transparent investment activities, which are the key to investment attractiveness of projects;

- systematic approach, which implies precise coordination of participants' interaction within investment activities.

Institutions using financial technology instruments in the investment sector should be divided into two groups:

- traditional financial intermediaries: stock and currency exchanges, banks, non-state pension funds, co-investment institutions;
- online platforms used to raise funds through crowdfunding to obtain robot consultants services.

In the investment sector, such financial technology instruments as big data, artificial intelligence, blockchain, biometrics are used. Opportunities of using artificial intelligence in the investment sector are:

- investors' investment plan making based on the study of financial products which they are interested in. They are based on recommendations that help to increase profitability and minimize risks during investment making;
- improvement of investors' access to market information during financial decisions making;
- optimization of investment processes and decision making based upon quick analysis of specific financial instrument;
- rational decision making by avoiding influence of behavioral factors;
- offering at the markets non-traditional financial assets due to their low usage demand or small volumes. In particular it concerns small and medium-sized enterprises which might obtain start-up financing or real investments through crowdfunding.

Effective investments making requires constant monitoring of great number of information resources, in particular, news, historical data, companies profit reports, social networks, insider information. It increases using information systems and technologies during investment decision making and entering into agreements in investment markets. According to Autonomous Next report made in 2018, artificial intelligence in field of investment management had created 460,000 jobs [1]. High-frequency trading enables institutional investors, who use computers with high-speed Internet connection, make bigger daily profit because of small price difference of great number of transactions. Individual investors do not have access to such an expensive instrument. However, they might use trading platforms *Robinhood* or *TD Ameritrade* for their investment purposes without paying brokerage fees.

Big data and artificial intelligence increase efficiency and automatization of customer service and data management. Big data and machine learning provide real-time assessment of bad trends and improve risk management and investment decisions. Traders use automated trading programs that provide anonymity, increase the speed of order fulfillment, and reduce trading costs. At the same time, these instruments help investment and asset managers make effective investment decisions based on assessing clients' risk taking and choosing right investment direction. Machine learning is important in preventing and defining counterfeiting, as well as in meeting the requirements of *KYC* asset managers.

Big data analysis provides opportunities for systematic investment. It is possible to make investment strategies with the help of big data evaluation using machine learning to improve investment analysis of asset types.

This approach helps to avoid typical behavioral preconception by controlling risks. According to *Standard & Poor's* research, about 20% of investment managers use automated business process management system that improves customer service efficiency, data management and online support. At the same time, 80% of asset managers plan to increase their investment in big data, despite the fact that only 6% of managers, who took part in a survey, claimed that using big data technology is not the highest priority in their plans and activities.

Financial regulators seek to use big data opportunities to identify early-stage risks. Thus, Federal Financial Supervisory Authority of Germany (*BaFin*), together with Boston Consulting Group (*BCG*), are exploring big data potential in investment management and impact of technological market development on transformation of government regulatory and supervisory functions [4]. Using big data with machine learning assists financial regulators and investment managers to define counterfeiting and prevent it in financial market.

Nowadays, using of robot consultant services is becoming increasingly popular among investors when they manage their investment portfolios. Internet investment platforms appeared in 2008, and since 2010 their services have expanded. Robot consultant services in investment services market are in high demand among Millennials and Generation *X*. We distinguish the following components of investment portfolios offered by robot consultants: stocks, bonds, real estate, natural resources and commodities [2]. Investment robot consultant is an automated online service for customers' investment management that is based on the following financial technology instruments: artificial intelligence and big data. In order to receive asset management services, customers open their accounts and complete online questionnaire regarding their investment goals and risk tolerance. On the basis of this information, a diversified investment portfolio is automatically generated, which does not consider the whole spectrum of individual customer needs, but is usually designed for a specific segment of customers with similar questionnaires. In addition to investing operations, according to a customer's particular level of risk taking, robot consultants may also provide account balancing services, investment in order to optimize investments taxation and make targeted investments in case of retirement, children or their own education. The most financial consultants services fee is more than 1% of assets under management, comparing to 0-0.89% fee for online investment platforms [3] or fixed monthly amount.

The advantages of using robot consultant investment services are: easier access to the service; minimal amount of investment assets required for service access; high speed of transactions; low cost of services; lack of behavioral preconception during consulting.

The disadvantages of Internet investment platforms include: incomplete assessment of individual needs and customer's risks; lack of long-term financial plans; low suitability for investors with some investment accounts.

We should define the following customers' threats: customer's irrational decision making; inability to consider specific purpose of investment during investment plan making. Opportunities for Internet investment platforms development are: customers' investment into diversified portfolio; functioning of hybrid platforms offering robot consultants, which give access to certified investment consultants under certain conditions. Blockchain technologies are now widely used in the operation of crowdfunding platforms, stock and currency exchanges.

Studies show that blockchain technology will reduce costs of processing securities transactions by at least 30% [9]. Using blockchain technologies in stock and currency exchanges creates the opportunity to improve transactions effectiveness, confidentiality, appropriateness, availability and reliability of trading systems [5]. On November 16, 2017, Korea's largest derivatives stock exchange, *Korea Exchange*, announced the launch of a new secondary market for Korean startups called *Korea Startup Market*. This platform, built on blockchain platform developed by *Coinstack*, will allow investors to trade with startups stocks on the open market. In 2015, New York Electronic Exchange NASDAQ launched the Linq blockchain platform for private equity trading. The first company to issue shares on this platform was blockchain development startup *Chain*. Australian Securities Exchange *ASX* is another global stock exchange that is testing blockchain technology actively, working with Digital Assets Holdings to develop a blockchain clearing and settlement system. This will facilitate and accelerate post-trading processes, as well as reduce risks and costs for both the exchange and investors.

Joint venture company *APX Settlement Pty Limited (APXS)* was created by Sydney Stock Exchange *SSX* together with blockchain startup *Bit Trade Labs*, to develop the system of real-time shares issue and distribution with instant securities settlement and transfer during contract fulfilment. At the same time, Boston state financial corporation *StateStreet*, in partnership with California blockchain startup *PeerNova*, are developing blockchain solutions to track transactions related to investment assets. It will allow the corporation to manage additional assets, improve its financial position and transaction security.

Introduction of blockchain technology in crowdfunding platforms is also future-oriented. Considering that conclusion of transactions on crowdfunding platforms is done in the Internet, using blockchain will help to prevent risks during this process. Using distributed ledger technology within crowdfunding will increase platform users' confidence, security of transactions, make easier voting process, communication. This is particularly relevant considering that about 78% of companies do not meet funding targets and 1.2% of crowdfunding companies give funds to developing countries [10]. At the same time, increasing volume of their activities will become the basis for activization of *DLT* technology in crowdfunding. In 2018, global crowdfunding investments attracted nearly \$ 35 billion, which is 13.8% of venture capital. Nearly half of this money was raised in the North American region, in total \$ 17.2 billion. \$ 11 billion was raised in Asia Pacific, \$ 6.5 billion - in Europe [11]. It is predicted that global crowdfunding market will steadily grow by about 17% by 2021 [12]. In the context of financial resources deficit, despite project initiators' risk of bankruptcy, crowdfunding is powerful enough to attract small and medium-sized enterprises funds [13]. According to projections, by 2025 crowdfunding industry will grow to more than \$ 300 billion [14]. Apparently, blockchain will be mostly used as crowdlending that is crowdfunding segment. This assumption is based on the fact that, nowadays, in most developed countries, crowdlending is a major part of crowdfunding. Thus, in China, crowdlending is 98% in the structure of crowdfunding, in the USA – 92%, in Japan – 94%, in the United Kingdom – 80%, in Denmark – 71%, in Germany – 66%, in Switzerland – 43% [15].

Currently, *ICO (Initial Coin Offering)* is widely used to attract investment for cryptocurrency projects, which are actually based on blockchain crowdfunding. Using this technology will enhance the security of *ICO*. *Ernst & Young's* analytics have analyzed 372 initial token placements (ICO) during 2015-2017 years and have revealed that 11% of \$ 3.7 billion obtained from tokens sales did not reach the recipients. In addition, phishing hacking attacks in the process of *ICO* resulted in average monthly loss of more than \$ 1.5 million with simultaneous access to *ICO* participants' personal data [16]. The advantage of this *ICO* method is that token issuers do not need to set up investors' cabinet, check them for *KYC* requirements compliance, because the stock exchange carries out these processes for a certain fee.

First of all, biometrics are used in investment sector for making payments under concluded agreements. Thus, this underlines that investment sector integrates into financial ecosystem using financial technology instruments. In order to strengthen cybersecurity, Markets regulator Securities and Exchange Board of India (*Sebi*) introduced biometric authentication in the process of securities trading using mobile applications, tablets and smartphones [17]. At the same time, investor's account is blocked after several unsuccessful attempts to enter trading platform, until a new authentication will be completed, for which an email or one-time password may be sent.

### Conclusions

Investment sector has become an integral part of financial ecosystem due to introduction of financial technology instruments. Investment sector modernization based on its digitalization should be carried out on the basis of the following main principles: innovations, systematization, customer-oriented investment services and transparency of investment activities. Artificial intelligence, big data, blockchain are used by both traditional actors of the investment sector and new actors, in particular, investment internet platforms. Artificial intelligence allows investors, traders to analyze unstructured data and identify patterns that help optimize investment decisions. At the same time, robot consultants improve integration of investors' behavioral models in achieving their financial goals. Blockchain technology makes it possible to decentralize processes of raising funds and entering into transactions in investment market. Biometrics, as a financial technology instrument, simplify payments for investment transactions under concluded agreements and strengthen cybersecurity for exchange trading.

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**THE MODEL OF STATE-TO-BUSINESS INTERACTION AND THE NATURE OF  
PARTICIPATION IN INTERNATIONAL ECONOMIC RELATIONS:  
HISTORICAL EXPERIENCE OF UKRAINE**

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**Abstract.** *Current trends in the global economy strengthen the challenges facing national economies. Many previous researches have suggested development trends for economic integration in Central and Eastern Europe. This article attempts to identify the causes of the problem. In particular, there was conducted the historical and economic analysis of the factors that influenced Ukraine's place within the world economy. The purpose of the article is to reveal the dependence between the economic business model and the nature of the country's participation in international economic relations. There are used methods of comparativity and approaches of evolutionary economic theory. The place and prospects of each particular economy within the world economy are determined by historical development. It was argued an idea that the balance between the economic roles of the market and the state within the national economy influences the nature of participation in the world economy. This dependence is confirmed by the historical experience of Ukraine. There were identified historical barriers for involving post-communist countries into the international value chains and revealed specific problems of young states with unstable market institutions and commodities export structure.*

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**Keywords:** *economic history, model of state-to-business interaction, international economic relations, structure of foreign trade, state monopoly, global value chains, structural imbalances, competitiveness.*

**Introduction.**

Radical changes in the global economy are challenging national economies. This refers to their place in the current system of international economic relations. Leader countries review their foreign economic policies. They take measures to increase the effectiveness of the state-to-business interaction for protecting national interests.

For countries with underdeveloped market institutions, commodities and monocultural specialization there are increased risks of strengthening dependency and loss of national personality. Strengthening positions at foreign markets, joining global value chains, preserving the country's competitive advantage and finding new, promising development trends for national production with the purpose of strengthening national sovereignty are important tasks for each country. It raises the question about the factors that determine the position of countries in the world economy. Among them, there are probably historical, geographical, technological, political-economic, institutional and other factors. Hence, the current scientific challenge is to reveal the dependence between the national economic model and the nature of participation in international economic relations.

The dependence between the domestic economic system and participation in international economic relations was explored in the modern literature. Researchers explore the historical experience of CEE countries for developing economic integration. More specifically: the integration potential of Southeast European countries in the context of historical features of economic, financial and institutional development in the Balkans [1]; prospects for economic integration of CEE countries in relation to the quality of the business environment [2]; relation between the international competitiveness and economic development with the smartness concept [3]. Researchers associate drivers for strengthening the international competitiveness and economic stability of the Visegrád Four (V4) countries (Slovakia, Czech Republic, Hungary and Poland) with their common history and cultural and economic traditions [4]. Ukrainian scientists analyzed the structural changes in the world economy and their influence on the economy of Ukraine [5; 6]. They identified institutional transformations as a factor for strengthening countries' positions in the world economy [7]. At the same time, the questions of the historical path of the national economy development in the system of determinants of foreign economic positions of countries remain unnoticed by the scientists.

### **The purpose of the research.**

The results of which are presented in this article, consists in determining the role of historical factors in formation of Ukraine's modern positions within the world economy. Therefore it raises the *task* of analyzing the peculiarities of international economic relations, changes in the structure and geographical vectors of foreign trade in the context of the influence of the state on the economic environment.

### **Methods.**

The methods used to achieve this purpose are based on the application of the approaches of evolutionary economic theory and comparative analysis to the research of forms of the national economy integration into the system of international economic relations. The concept of «permanent changes», which is the basis of the evolutionary economic theory, defines the interpretation of the world economy as a dynamic system that grows and develops, improving. The current state of foreign economic relations of the country is the result of its previous development and, at the same time, determines the tendencies and prospects of its further integration into the world economy. Internal contradictions are a source of changes in the national economic model and a driving force for new trends and forms of integration into the world economy.

The use of comparative analysis allows comparing these trends and forms in historical retrospect and evaluating their influence on the development of the country's economy.

### **Results.**

Both models of state-to-business interaction and forms of international economic relations are of historical nature. The peculiarities of foreign trade of the Ukrainian economy have been forming for a long time. During the period of active development of national markets and states, Ukraine lost its political personality. In the XVIIIth century, its territory was part of the Austrian Habsburg Monarchy, the Polish–Lithuanian Commonwealth, the Russian Empire, and the Crimean Khanate. The economy developed within the feudal-hierarchical system of power and property. The agricultural production prevailed, the main export items were grain, wood and forest products. Ukrainian merchants were denied the opportunity to directly enter external markets. Flows of goods were redirected to the domestic markets and external ports of the states, which included Ukrainian lands. Ukraine received the status of the breadbasket of Europe.

Structural changes in the economy, caused by the industrial revolution, began only in the middle of the XIXth century and were sketchy. Herewith the system of personal dependence of peasants on landowners was maintained. There were no conditions for formation of the capital and labor market.

At the end of the XIXth century, the economy of Western Ukraine began to actively receive investments from Germany, Austria and the Czech Republic. The construction of railway tracks opened the eastern regions of the Austro-Hungarian Empire for the Western European capital. The region served as a market outlet and a source of raw materials. This determined the proper production specialization and formed the basis for the unbalanced development of the economy of Western Ukrainian territories. Foreign investors and entrepreneurs were most interested in railway construction, chemical, engineering, oil-producing and oil-refining, power generating, sawmilling, wood-processing and ozokerite industry, banking management and wholesale trade. On the cusp of the XIXth and XXth centuries, along with Austrian and German private capitals, American, French and English capitals began to enter the Western Ukrainian economy. Thus, the Western Ukrainian economy was included into the world turnover of commodities. At the same time, the sectors that provided raw materials for the industry of the developed European countries developed mostly.

Other Ukrainian lands were part of the Russian Empire. After conducting market reforms, the Ukrainian economy remained mainly an importer of industrial products and an exporter of grain, iron ore and coal. The part of the Dnieper Ukraine within the world production of basic grain crops on the cusp of the XIXth and XXth centuries was quite high and was about 7%. The Russian government promoted the consolidation of the monospecialization of the Ukrainian economy. Grain exports accounted for more than two-thirds of total exports. Ukraine maintained the status of one of the largest bread producers and exporters in the world [8]. Changes took place not only in the structure of the world market, but also in the logistics system. In the mid-1880s, foreign trade leadership in the Russian Empire moved from the Baltic to the basin of the Black and Azov Seas. The most important seaports were the Ukrainian cities of Odesa, Mykolaiv, Kherson, Sevastopol, Mariupol and Genichesk. The main importers of agricultural products were the United Kingdom, Germany, France, Holland, Italy and other European countries, but in much smaller volumes [9].

Exports of Ukrainian grain and other agricultural products promoted the accumulation of foreign exchange reserves in the country and normalized the balance of trade. The economic policy of customs protectionism promoted the flow of foreign capital. The forced monopolization of the key branches of industrial production and the establishment of state capitalism on the cusp of the XIXth and XXth centuries led to the loss of innovative and competitive potential of national entrepreneurship. The state remained in key positions within the financial, industrial and foreign economic spheres.

Due to low employee remuneration and lack of conditions for the development of small and medium-sized businesses, the labor migration increased. From the middle of the XIXth century, as a result of agrarian reforms, the loss of economically active peasantry increased. The share of peasants among Ukrainian emigrants was more than half. The main factors of labor migration from different parts of ethnic Ukrainian lands were: institutional (formal removal of serfdom), socio-economic (shortage of arable land of Ukrainian peasants, mass impoverishment and poor living standards), innovative and infrastructural (development of new means of communication and large geographical discoveries), promotion of migration by other states. The immigration policy of the recipient countries was developed in the context of labor shortages, since in the second half of the XIXth – at the beginning of the XXth century a world industrial civilization was formed. At the same time, there was no preventive state policy in the Ukrainian territory. Economic factors promoted even transatlantic migration (up to 14% of the population in some rural areas departed [10, p. 134]. In the course of 1900-1909 only from the territory of Galicia 113690 Ukrainians came to the United States [11, p. 46], and 62509 moved to Canada [12, p. 611]. As a result, Ukrainian emigrants worked hard in terms of economic and political discrimination and made invaluable contributions to the reclamation of virgin lands of other countries, promoted the development of industry and agriculture.

After the end of the World War I, the collapse of the Russian, Austro-Hungarian, Ottoman Empires and the formation of a number of new independent states, Ukrainian lands became part of Poland, Romania, Hungary and the Soviet Union. Thus, absence of the state authority and regionalism continued to be important factors in the development of Ukraine's economy and the nature of its foreign economic relations [13]. The policies of the governments of Poland, Romania and Hungary were aimed at strengthening positions of foreign companies within the industry of Western Ukraine and integrating its resource potential in its own economic cycle. The dominant positions of American, French, German, Belgian, Austrian, Hungarian and Italian companies limited the abilities of Ukrainian manufacturers to compete successfully in the domestic and external markets. Accordingly, a low-tech economy structure was formed, which corresponded to the comprador character of foreign capital.

The model of the economy, which was created in the USSR, did not involve private property, entrepreneurship and competition. Centralized distribution of resources and products, state monopoly of foreign economic activity caused the absence of economic incentives and investment mechanisms for entry of enterprises into foreign markets. However, the nationalization of enterprises and banks, the approval of the non-market model of the economy determined fundamental transformations in the institutional basis of the USSR relations with foreign states.

The sources of financing industrial transformations in the Soviet Union during the 1920s–1930s were: active exports of raw materials (grain, forest products, fur and oil), concession revenues, industrial gold extraction, TORGSIN and Intourist activities, domestic and external loans, etc. Since the state monopolized export-import operations, foreign exchange earnings mainly were spent for purchasing equipment abroad and payment for work of foreign specialists and engineers. The heavy industry at this stage was developing twice as fast as in the light industry, which led to significant deformations of the Ukraine's economic structure – excessive production increase of production means due to narrowing of consumer goods output. The economy of Ukraine developed as an organic part of the Soviet economy complex.

After the end of the World War II, when the creation of the economic community of the socialist bloc countries began, Ukrainian enterprises were included into the system of socialist economic integration. On the one hand, this made it possible to realize the potential of factor advantages inherent in the industrial society. On the other hand, it restrained the formation of a complete production cycle and the potential of technological advantages required to enter the global competitive area of the post-industrial society. Trade within the socialist bloc was subordinated not only to economic but also to political interests. Sometimes goods were sold at below-cost prices [14, p. 427]. However, the interdependence of economies was maintained.

The level of technological development determines the country's competitiveness in the world market. The economic model of state monopoly could not provide long-term sustained economic growth based on its own innovations. In the early 1990s, Ukraine's foreign trade dynamics was determined by its extensive type of growth, dependence on imports with regard to production means and technologies, dependence on exports with regard to prices and demand for energy resources, industrial raw materials, primary processing and agricultural products.

During the Soviet period, the state limited leaving abroad of the specialists (especially engineers, technicians, scientists), which hindered migration of labor force. Even internal displacements were regulated by labor law, housing policy and passport system. At the same time, during the 1950–1985, the gap between the salaries of scientists and workers rapidly increased, and the real salary of scientists decreased by 25% [15, p. 12-13]. Since the research environment was completely dependent on government funding and planning, the motivation for intellectual work and self-actualization was leveled out. All this formed the great migration potential of the competitive labor force, which was fulfilled after the opening of the borders.

In the conditions of market transformation of the economy and Ukraine's gaining of state independence, new risks arose. The collapse of the USSR and the socialist economic community led to the breaking of traditional economic relations and supply chains. But the competitiveness of products in external markets was low. The rejection of the state monopoly system, the privatization and the opening of the domestic market did not automatically create the conditions for successful foreign economic activity of enterprises. Only exporters of industrial and agricultural raw materials had a relative advantage. The intensification of integration processes was mainly the result of the formation of corporate-type large sectoral structures. Now the oligarchic structure of the Ukrainian economy blocks the institutional transformations that would promote the economic development and strengthen the country's foreign economic positions.

Modern processes of the economy's digitization, opening of borders, increase of labor mobility promote the intellectual emigration of Ukrainians. This became one of the most pressing challenges for the nation. This trend is gaining more and more menacing proportions. Ukraine is losing the human potential for innovative modernization. First of all, this situation is caused by internal political and economic factors. The comprador business and the corrupt bureaucracy are focused on their own enrichment. Therefore, there are no proper conditions for self-realization of qualified personnel, development of innovative entrepreneurship, modern education and science, reproduction of national human capital.

Thus, the continued dominance of non-market forms of economic relations, state monopoly, barriers to access to resources and to economic opportunities for self-realization form the peripheral status of Ukraine's economy and strengthen its role as a donor of labor resources.

### **Conclusions.**

The historically formed model of state-to-business interaction in Ukraine defined the nature of its participation in international economic relations. For a long time, the determinants of the development of the Ukrainian economy were the absence of its own state, the centralized nature of economic management, the liquidation of private property, and the state monopoly of foreign economic activity. This conditioned the dependent status of the Ukrainian economy as a part of other countries, lack of personality in the world markets, lack of competition and motivational mechanisms for the development of foreign economic relations of enterprises. Institutional barriers to access to resources (including state monopoly and centralized distribution, as in the Soviet Union) led to the prevalence of imports of production means and the development of low-tech, labor-intensive, resource-consuming industries with an appropriate structure of exports. The economic integration within the so-called «socialist community» (1950s–1980s) reduced capabilities of Ukrainian enterprises to enter the world markets. The consequences of the historical path of Ukraine's political and economic development are, on the one hand, the economy's dependence on imports and, on the other hand – an institutional disconnect with the EEC countries.

Structural disparities significantly restrain the economic development of the country. Institutional distortions preserve economic backwardness and reduce international competitiveness. The historical path of the inefficient state-to-business interaction (weakness of market institutions, state monopoly within the economy and privatization of the state by large business) leads Ukraine to the position of an outsider within the world economy. There is required a long-term strategy of the state-market stimulation of development innovative factors.

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**PROBLEMS OF REGULATING THE STATUS OF ENTREPRENEURIAL LEGAL ENTITIES IN THE FIELD OF PROVISION OF LEGAL SERVICES**

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**Abstract.** *Globalization processes, integration of Ukraine into the European community, development of entrepreneurship, and many other factors make it advisable to comply with the world standards in all sectors of economy, both in the domestic market and in international economic relations. Therefore, it is necessary to provide quality legal services to the domestic and foreign investors. The scientific article is devoted to the research of problems of regulating the status of entrepreneurial legal entities in the field of provision of legal services. For example, such types of practice of law can be recognized in Ukraine, as: provision of legal information; legal support of the activities of legal entities and individuals; preparation of procedural and other documents of legal nature, etc. In the article, the organizational forms of legal entities entitled to provide legal assistance are analyzed. In addition, it is reasonable to stress that the issues of organizational forms of activity in the field of provision of legal services should be clearly regulated by law, and it is a mistake to allow economic entities that are not burdened with a sufficient number of requirements for them and their employees to provide legal assistance.*

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**Keywords:** *legal assistance, legal services, legal entity, bar association, law office, advocate.*

**Introduction.**

Globalization processes, integration of Ukraine into the European community, development of entrepreneurship, and many other factors make it advisable to comply with the world standards in all sectors of economy, both in the domestic market and in international economic relations. Therefore, it is necessary to provide quality legal services to the domestic and foreign investors. In Ukraine, the Law "On the Bar and Practice of Law" of July 5, 2012 (*Law of Ukraine on the Bar and Practice of Law, 2012*) [1] is in force, as well as a number of other legislative approaches, according to which the national lawmaker has substantially changed the legal regulation of the civil capacity of legal entities in the field of provision of legal services. The urgency of these issues is also exacerbated by the fact that international legal business has begun to increase its potential in recent years. There can be observed many law firms providing legal services, including in the area of international economic relations in many countries. Sometimes, such law firms create a variety of alliances and associations, thus monopolizing the legal services market in the service of entire sectors of the economy of the state or even the region. Undoubtedly, under such circumstances, sustainable economic development is impossible without proper regulation of the status of legal entities engaged in the provision of legal services.

*The purpose of this research* is to carry out a comprehensive theoretical analysis of the problems of regulating the status of entrepreneurial legal entities in the field of provision of legal services, to study the approaches to the regulation of their status, which take place in foreign countries, as well as to express the author's vision of the prospects for its settlement. Despite the research of some aspects of this problem by some scientists (I. Holovan [4], D. Muziukin [2], Yu. Yurkevych [7] and others), its analysis becomes especially relevant in the current conditions.

## Results.

### ***Legal status of legal entities in the field of provision of legal services in Ukraine.***

In Ukraine, there are no bar councils known to the Soviet law and their structural divisions – legal advice offices, in which lawyers were required to unite and conduct their business. Instead of them, there may be established bar associations and law offices as organizational forms of legal activity and independent organizational and legal forms of legal entities. However, the practice of setting up legal firms with different organizational forms of economic activity, such as limited liability companies, private enterprises, sole proprietorships, self-employed persons, and so on, is widespread. Undoubtedly, such a phenomenon cannot be considered justified because the lawyers as founders of the associations and offices are facing strict requirements and set principles of their activities, ethics rules, etc., whereas there are no such rules for other legal entities. In particular, the legislation of Ukraine imposes on each professional lawyer a number of other additional responsibilities, although it does not properly regulate the specifics of their performance or the legal consequences of the violation. In the context of the representation of business structures, in particular in international economic relations, this is of particular importance.

As D.V. Muziukin points out correctly, with regard to such form of being as a legal service, apparently, because of the low degree of scientific understanding of its social role, it is still practically unexplored; and although the term "legal service" has been and is being used in a self-evident sense, a theoretical justification for its nature, features, and legal support is needed. In particular, socio-economic conditions have set a global goal for modern jurisprudence, including for civil and business law, – to create an ideal theoretical model of legal regulation of the legal services market able to be turned into reality with the help of legislation (*Muziukin, 2007*) [2].

### ***Foreign experience of legal regulation of the status of legal entities in the field of provision of legal services.***

Compared with foreign experience, it should be noted that, for example, according to the Federal Regulation on the Bar of Germany of 01.08.1959, limited liability companies whose object of activity is to provide advice and representation in court cases may be given a permission to practice law as legal firms (*Federal Regulation on the Bar of Germany, 1959*) [3].

At the same time, in Ukraine, both in science and in practice, there are still no common views as to whether the activity of law associations as legal entities should be qualified as entrepreneurial or non-profit economic activities (*Golovan, 2020; Resolution of the Supreme Court of Ukraine in Case No. 21-302a13, 2013*) [4; 5].

For example, in Germany, only lawyers or representatives of relevant professions can participate in legal firms (*Federal Regulation on the Bar of Germany, 1959*) [3]; in accordance with Art. 4.1. of the Law on the Bar of Poland, the lawyer performs professional duties in the law office, in the law group, or in association, including on the principle of partnership or limited company (*Law on the Bar of Poland, 1982*) [6].

According to the economic legislation of Ukraine, entrepreneurship, to be understood as a separate, initiative, systematic, own-risk economic activity, carried out by business entities (entrepreneurs) with the purpose of achieving economic and social results, and generating profit.

Entrepreneurs shall have the right to perform independently without any limitations any such entrepreneurial activity that is not banned by the law; peculiarities of performing certain types of entrepreneurship shall be established by legislative acts; the list of types of entrepreneurial activity subject to licensing, as well as the list of activities, wherein entrepreneurship is banned shall be established exclusively by the law; entrepreneurship shall be conducted on the basis of: 1) free choice by the entrepreneur of a type of entrepreneurial activity; 2) independent development by the entrepreneur of his/her activity program, selection of suppliers and consumers of products manufactured, employment of material and technical, financial and other resources, the use of which is not limited by the law, fixing of prices for products and services in compliance with the law; 3) free employment of personnel by the entrepreneur; 4) commercial calculation and own commercial risk; 5) free disposal of retained profit, left after payment of taxes, fees and other payments, envisaged by the law; 6) independent performing by the entrepreneur of foreign economic activity; the use by the entrepreneur of an international currency share of proceeds at his/her own discretion.

Entrepreneurship in Ukraine shall be conducted in any organizational forms, envisaged by the law, at entrepreneur's discretion. Thus, in view of the modern industrialized society, it is necessary to support the concept of contractual regulation of the peculiarities of the practice of law within the bar association on the basis of the agreement on the establishment of a bar association, which establishes the legal regime of the property transferred to it, the peculiarities of management, the use of business reputation of individual lawyers, the definition of entrepreneurial or non-entrepreneurial status [7, p. 36], and in law offices such issues are subject to resolution on the basis of the decision of the founder-lawyer with fixation in the charter. With respect to other legal entities in the field of provision of legal services, their status (entrepreneurial or non-entrepreneurial) is conditioned by the legislative regulation of the status of the relevant organizational and legal form. Such an organization of legal entities operating in the field of provision of legal services does not in general contradict the approaches formed in most countries of the modern world. However, it should be noted that for the provision of legal assistance to entities that do not have the status of advocacy, the rules and regulations established by the Law of Ukraine "On the Bar and Practice of Law" do not apply. For example, the said Law establishes the following rules:

a) on the creation, reorganization, or liquidation of a law office (association), the lawyer (lawyers) who created them within three days from the date of entry of the relevant information in the united state register of legal entities, individual entrepreneurs and public organizations, must inform the relevant Bar Council of the region in writing;

b) the lawyer is obliged to observe the oath of the lawyer of Ukraine and the rules of lawyer's ethics during the practice of law;

c) the lawyer is legally obliged to improve his/her professional level;

d) the lawyer is obliged to execute the decisions of the bodies of the lawyer's self-government;

e) the lawyer is obliged to keep the lawyer's secret, and so on.

The following types of practice of law are recognized in Ukraine: provision of legal information, consultations and clarifications on legal issues; legal support of the activities of legal entities and individuals, state bodies, local self-government bodies, the state; preparation of

statements, complaints, procedural and other documents of legal nature; protection of the rights, freedoms, and legitimate interests of the suspected, accused, defendant, convicted, acquitted, a person for whom coercive measures of a medical or educational nature are envisaged or are being resolved in criminal proceedings, a person subject to extradition, as well as a person who is held administratively liable during the administrative offense case; providing legal assistance to a witness in criminal proceedings; representation of the victim's interests during the administrative offense case, the rights and duties of the victim, the civil plaintiff, the civil defendant in the criminal proceedings; representation of interests of individuals and legal entities in courts during civil, economic, administrative, and constitutional proceedings, as well as in other state bodies, before individuals and legal entities; representation of interests of individuals and legal entities, the state, state bodies, local self-government bodies in foreign, international judicial bodies, unless otherwise specified by the legislation of foreign states, statutory documents of international judicial bodies and other international organizations or international treaties, the consent of which is binding as provided by the Supreme Council of Ukraine; provision of legal assistance in the execution and serving of criminal sentences; protection of the rights, freedoms, and legitimate interests of the accuser in connection with the reporting of information on corruption or corruption-related offenses, etc.

In their turn, law firms and private practitioners whose activities are fully covered by civil law may be the subject of an obligation to provide legal services. Self-removal of the state from the regulation of this segment of the market has led to the fact that nowadays legal services can be provided by persons without legal education, with limited capacity, and so on. In the meantime, legal services are of no less social importance than, for example, auditing, medical, or educational activities. The society and the legal services market itself need legal control by the state for this type of activity (*Federal Regulation on the Bar of Germany, 1959*) [3].

Indeed, based on an analysis of the provisions of Ukrainian legislation, it can be argued that, for example, bar associations and law offices, are economic entities that are characterized by the specific characteristics. Such entities are created on the basis of voluntary association of interested individuals who have obtained a certificate of the right to practice law and who are not prohibited by the current legislation. At the same time, the founders (members) of the bar associations and law offices can not be persons who do not have the right to practice law. Bar associations and law offices operate on the basis of statutes.

For example, according to the Section 4 of the Model Bar Association Statute, submitted on the official website of the National Bar Association of Ukraine:

- the association includes advocates who have acquired the status of participants in the statutory procedure;
- the members of the association are assigned one of the following statuses:
  - 1) advocate, senior partner;
  - 2) advocate, partner;
  - 3) an advocate;
- the content of the rights and responsibilities of senior partners, partners and advocates of the association is determined by the statute and decisions of the governing bodies of the association;

- persons in respect of whom there are circumstances incompatible with the activity of a advocate, provided for by the Law of Ukraine "On the Bar and Practice of Law" may not be members of the association;

- members of the association - advocates are persons who have the right to practice law under the legislation of Ukraine, are hired to work in the association for a lawyer under the terms of an employment contract in accordance with the labor law or perform work under the terms of a civil contract with the association [8]. Similarly, persons with a law degree may also be employed as the assistants of advocate. Assistants work on the basis of an employment contract (contract) concluded with the association, in accordance with the requirements of the Law of Ukraine "On the Bar and Practice of Law" and the legislation on labor. An advocate's assistant is prohibited from combining work in conjunction with activities incompatible with that of an advocate.

In fact, the practice of law is carried out on the principles of the rule of law, legality, independence, confidentiality, and avoidance of conflict of interests. The same requirements should be applied to the provision of any legal services, whether paid or free of charge, and by any type of legal entity.

### **Conclusions.**

Without going into the debate about the advisability of maintaining a lawyer's monopoly on the representation of interests of individuals and legal entities in civil, administrative, and commercial matters in the courts, it nevertheless should be stressed that the issues of organizational forms of activity in the field of provision of legal services are to be clearly regulated by law. It also should be added that allowing economic entities not burdened with a sufficient number of requirements for them and their employees to provide legal assistances is a mistake and does not contribute to the professionalization of the institution of qualified legal services. After all, even in foreign countries where other forms of practice of law are envisaged (for example, limited liability companies), they are still governed by specific rules related to the peculiarities of the provision of legal services.

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**SUPPORT FOR INNOVATIVE ECONOMIC DEVELOPMENT BY THE BANKING  
SECTOR: CHALLENGES FOR UKRAINE**

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**Abstract.** *The purpose of the study is to analyse current approaches to public administration for ensuring the widespread adoption of innovations in order to provide an adequate level of economic competitiveness and justify new challenges for Ukrainian authorities. The paper analyses the current state of innovative development of the economy in Ukraine and sources of financing the creative activity of industrial enterprises. Based on the analysis of the impact of these sources and forecasting their future values, it is concluded that there is a lack of state support for the innovative development of the Ukrainian economy. The second section deals with the relationship between innovative economic development and bank lending. The main types of commercial activity to which lending by banks of Ukraine are identified. The basic directions of reforming the banking system are analysed. The ways of strengthening the support to the banking sector of innovative development of the Ukrainian economy following the priority areas of investment activity have been proposed. In particular, the emphasis is placed on the priority of investment in the development of skilled personnel and preferential lending to innovative projects, guaranteeing loans by the state, providing subsidies and grants for scientific and technological development.*

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**Keywords:** *innovative development, public administration, banking system, economy.*

**Introduction.**

Innovation is the driving force behind positive changes in the economy. Thanks to the development of science and the introduction of innovation, Japan, Germany, the United States, China and South Korea have made significant progress. In general, experts argue that the incarnation of new knowledge technologies can provide more than 50% of GDP growth [1]

That is why the Sustainable Development Strategy "Ukraine 2020", approved by the Decree of the President of Ukraine, stated that "Ukraine should become a state with a strong economy and with advanced innovations" [2]. The Innovation Development Program is included in the country's "pride vector". One of the strategic indicators for the implementation of the Strategy is the ranking of the 40 best countries in the world by the Global Competitiveness Index, calculated by the World Economic Forum (WEF). Innovation is the 12th component of the Global Competitiveness Index and covers the following: the ability to innovate; quality of research institutions; companies' R&D expenditures; cooperation between universities on the industry in R&D; public procurement of high-tech products; availability of scientists and engineers; share of patents (applications / million persons).

Cornell University, INSEAD, and the World Intellectual Property Organization publish own Global Indicator of Innovation, in which 2017 Ukraine ranked 50th out in 127 countries (the second in its group of lower-middle income countries and the 33rd in Europe). Moreover, Ukraine is ranked 77th in the world (5 in the group and 39 in Europe), while the share of innovation revenue is 40th in the world (2 in the group and 26 in Europe). Thus, Ukraine is ranked 11th in the world (2 in the group and 9 in Europe) according to the efficiency of the innovation activity [3, p.27]. The worst indicator among the component indicators for Ukraine, as well as in the Global Index of Competitiveness, is the institutional unit (101st place) [3, p.303].

On this basis, Ukraine's economic development goals can be solved only based on fundamentally new approaches to public administration to ensure widespread innovation.

### **Literature review.**

The presented research is at the intersection of several scientific fields, which necessitates the analysis of a relatively wide range of scientific publications. However, the global economic crisis (2008-2009) has forced the scientific community to reconsider the feasibility of adhering to traditional methods of supporting economic development and focusing on their transformation in the light of current technology trends. One such document is the White Paper prepared by the World Economic Forum Expert Group [4]. Also, in our view, the scientific studies carried out by A. Nicolaidis [1], G. Fagiolo [5], D. Giachini [5], A. Roventini [5], K. Rangus [6], A. Spithoven [6], M. Dabic [7], E. Vlacic [7], V. Heiets [8] (and others) ) in the field of innovative economic development in combination with the conclusions made by V. Nurboja [9], G. Marin [10], F. Vona [10], in the banking sector will be useful in the process of achieving the goal of the presented research: justify new challenges for ensuring the widespread adoption of innovations in order this provides an adequate level of economic competitiveness.

### **Results.**

#### ***The current state of innovation development of economy in Ukraine***

Over the last six years, Ukraine has come a long way: from the deep crisis of 2014–2015 to the resurgent growth that continues from 2016 to this time. The macroeconomic performance of Ukraine today is not entirely satisfactory. The losses suffered by the economy in times of crisis are not yet offset by growth – as of 2018, actual GDP is 8,6 per cent below 2013 levels [11].

In the competitiveness rating of The Global Competitiveness Report 2019, compiled by experts of the World Economic Forum (WEF), Ukraine took 85th place out of 141 participants, 57 points out of 100 possible. Compared to the 2018 rating, Ukraine has lost two positions. Jamaica, Trinidad and Tobago, Dominican Republic were among the countries that found themselves more competitive.

Singapore is the first in the ranking. In 2018, he was in second place. The United States – last year's leader – came second. In third place, improving the position by four points, came to Hong Kong. In Ukraine, according to the rating, the 78th place – in terms of technology adaptation, 104th place – in the level of development of state institutions, 133rd place – in terms of macroeconomic stability, 101st place – in the state of health care, 60 – by the level of innovative opportunities, 44 – by the level of education, 59 – by the labour market [12].

An analysis of the existing structure of sources of financing innovative activity in Ukraine proved their instability (see Table 1).

It should be noted that in support of the growth of innovation and the promotion of economic progress, the financial security mechanism performs a supportive (stimulating) and at the same time limiting function, which is explained by the current scarcity of financial resources and the need for their rational use.

**Table 1. Sources of financing of innovative activity of industrial enterprises**

Year	Costs of innovation, mln. UAH	Including at the expense of funds			
		own	budget	investors	Other sources
2000	1757,1	1399,3	7,7	133,1	217,0
2001	1971,4	1654,0	55,8	58,5	203,1
2002	3013,8	2141,8	45,5	264,1	562,4
2003	3059,8	2148,4	93,0	130,0	688,4
2004	4534,6	3501,5	63,4	112,4	857,3
2005	5751,6	5045,4	28,1	157,9	520,2
2006	6160,0	5211,4	114,4	176,2	658,0
2007	10821,0	7969,7	144,8	321,8	2384,7
2008	11994,2	7264,0	336,9	115,4	4277,9
2009	7949,9	5169,4	127,0	1512,9	1140,6
2010	8045,5	4775,2	87,0	2411,4	771,9
2011	14333,9	7585,6	149,2	56,9	6542,2
2012	11480,6	7335,9	224,3	994,8	2925,6
2013	9562,6	6973,4	24,7	1253,2	1311,3
2014	7695,9	6540,3	344,1	138,7	672,8
2015	13813,7	13427,0	55,1	58,6	273,0
2016	23229,5	22036,0	179,0	23,4	991,1
2017	9117,5	7704,1	227,3	107,8	1078,3
2018	12180,1	10742,0	639,1	107,0	692,0

Source: calculated from [13]

In particular, the total cost of innovation most accurately ( $R^2 = 0,83$ ) is described by the following step function:

$$Y = 1395,7x^{0,791}$$

The forecast for 2022, made with this trend gives the result of 16669,4 million UAH, which is only 71,8% of the best indicator (2016). The main component of the sources is the own costs of enterprises, which ranged from 52,9% (2011) to 97,2% (2015). The maximum share of budget expenditures was 5,25% (2018). Investors (non-residents) spent substantially on innovation in Ukraine for only two years: 2009 (19,0% of total costs) and 2010 (30,0%). The share of other sources ranges from 45,6% (2011) to 2,0% (2015). However, forecasting results are only possible for the enterprise's costs by using the step function with the reliability of  $R^2 = 0,816$ . For other types of damages, the reliability of trend lines is low.

The analysis of the current state of innovation activity, indicated in the "Strategy for the development of the sphere of innovation activity for the period up to 2030", shows that the ways for



successful development of national economic systems of the leading states in recent years are closely connected with the leadership in research and development, the emergence of new knowledge, the development of high-tech production and creation of innovative mass products. Therefore, the development of creative potential is not only a way for dynamic growth and success but also a means of ensuring the security and sovereignty of the state and its competitiveness in the modern world.

According to the World Bank data, the share of gross value added of the high and medium-tech sectors in the total gross value added of manufacturing in 2015 was 63,0 per cent in Switzerland, 50,5 per cent in the Czech Republic, 61,4 per cent in Germany, 42,8 per cent in Israel, 63,7 per cent in South Korea, 30,4 per cent in Ukraine. At the same time, according to the Ukrainian State Statistics Committee, in 2016 this share in Ukraine amounted to 25,7 per cent (7,6 per cent and 18,1 per cent in the high- and medium-tech sectors, respectively). If compare the gross domestic product per capita in 2016 at current prices of the named countries with the gross domestic product per capita of Ukraine in 2016, according to data from the National Science Foundation of the USA, this ratio will be from 8,5 times to 36 times (Switzerland – 79866,0 USD; Israel – 37180,8 USD; South Korea – 27608,2 USD; Germany – 42232,6 USD; Czech Republic – 18483,7 USD and Ukraine – 2185,7 USD) [14].

The government should play a significant role in stimulating the innovative development of industrial and other Ukrainian enterprises, creating favourable conditions for their research activities, introducing various types of tax and depreciation benefits. However, there is a problem that in our country, these benefits are periodically suspended. An integral part of the financial support strategy for innovative development is to create the conditions for the broadest possible involvement of various sources of financing for the subjects of the innovation process.

The main goal of the Ukrainian state innovation policy is to create socio-economic, organizational and legal conditions for the effective reproduction, development and utilization of the country's scientific and technical potential, ensuring the introduction of modern environmentally friendly, safe, energy and resource-saving technologies, production and sale of new competitive products [15]. However, in Ukraine, the institutional infrastructure for financial support for innovation has not acquired an enough level of development. Extra-budgetary sectoral funds, funds for supporting scientific initiatives and specialized financial and credit institutions did not become active participants in the implementation of macro-and micro-levels of investment and innovation policy aimed at the technical modernization of enterprises, the introduction of the latest scientific and technological developments and the revival of the country.

The efficiency of the enterprise and economy restructuring on an innovative basis generally depends on the optimal ratio of sources of financing for innovative development. Therefore, the innovative development of the Ukrainian economy requires the growth of intellectual capital, which is impossible without restructuring the labour market and, consequently, increasing the efficiency of utilization of available human resources.

#### ***The banking sector as an instrument for innovative development in Ukraine***

It is worth noting that the processes of innovative economic development and bank lending are closely interrelated. That is, the loan can serve as an alternative source of funding for science and technology projects or as an additional monetary resource needed to address current and long-

term economic needs. Ukraine's financial system is a powerful transformer of savings in investment and on this basis, a catalyst and a multiplier of economic development. At the same time, the simple redistribution of funds between different sectors of the economy does not ensure the full realization of the powerful potential of active banking operations. The role of banks in this depends on the investment and innovation activity of clients of banking institutions, the rational use of credit resources by borrowers and their financial ability to fulfil their obligations to the bank within the specified loan agreement volumes and time limits.

According to the banks' reporting to the regulator, borrowers are classified by types of economic activity (CTEA). In the five years (from December 2013 to December 2019), net loan portfolio, excluding reserves, increased from 691 billion UAH up to 744 billion UAH (see Table 2).

**Table 2. Sources of financing of innovative activity of industrial enterprises**

№	Purpose of loan	December 2013		December 2019	
		Share, %	Volume, mln. UAH	Share, %	Volume, mln. UAH
1	Agriculture, forestry and fisheries and forestry	6,3	43534	8,3	61600
2	Mining and quarrying	2,5	17571	1,0	7476
3	Manufacturing industry	19,6	135898	23,7	176412
4	Supply of electricity, gas, steam and air conditioning	3,9	27092	7,5	55657
5	Water supply; sewerage, waste management	0,4	2552	0,2	1232
6	Construction	7,3	50217	4,3	32260
7	Wholesale and retail trade; repair of motor vehicles and motorcycles	38,8	268519	35,7	266127
8	Transport, warehousing, postal and courier activities	3,6	24849	4,5	33708
9	Temporary accommodation and catering	0,7	4827	0,3	1966
10	Information and Telecommunications	1,0	6866	0,9	6469
11	Real estate transactions	7,3	50746	8,2	60797
12	Professional, scientific and technical activities	6,0	41529	3,9	28912
13	Administrative and support service activities	1,6	11409	1,3	9957
14	Education	0,0	311	0,0	39
15	Health care and social assistance	0,2	1329	0,2	1208
16	Arts, sports, entertainment and recreation	0,5	3370	0,1	445
17	Provision of other services	0,2	1285	0,1	383
	Total	100,0	691903	100,0	744648

Source: [16]

Still, in USD equivalent at the official exchange rate, it decreased from 79,9 billion USD up to 28,2 billion USD. It is worth noting that over 90 banks were withdrawn from the market during this period.

From 2019, the administrative "clean-up" of banks has led to significant losses to the private sector and the most active part of the population, as well as a heavy burden on the budget, which affects the current processes in terms of both the formation of banks' resource base and the restoration of confidence by the primary investor for economy – households.

The above dynamics of banks' credit portfolio by industry shows that the most significant segment falls in the wholesale and retail trade (35,7%). Manufacturing industry occupies the second position (23,7%). Agriculture, forestry and fisheries and forestry (8,3%) and Real estate operations (8,2%) are next. Professional, scientific and technical activities, accounting for 3,9% of the credit portfolio of the banking system, are not within the interests of the banking business.

The level of innovation support for economic development is linked to the need to find new methodological approaches that allow us to evaluate the most effective direction of research, technology, renewal of production capacity and release of new products following market requirements.

Therefore, the financial policy of innovation development should be based on the logic of the innovation product realization, namely, to include financial support of education and science (research works and programs), production and sale of innovative products. The effectiveness of financial policies for innovative development depends on the perception of the innovative product, the formation of the market for innovative technologies and the growth of demand for them.

### **3. Ways to strengthen support to the banking sector for innovative development of the Ukrainian economy**

As noted above, the process of innovative economic development and bank lending are closely interrelated. The role of banks in the innovation environment must be viewed from the perspective of two components – as an external entity (implemented through credit initiatives) and as an entity of innovative entrepreneurship (through the creation and introduction of new banking products).

In early 2020, the Financial Market Regulators, together with the Deposit Guarantee Fund and the Ministry of Finance of Ukraine approved the Financial Sector Development Strategy for 2025. The mission of the financial sector, as stated in the Strategy: "The financial sector of Ukraine is the driver of sustainable and inclusive development of the Ukrainian economy and contributes to improving the well-being of citizens by ensuring the efficient accumulation, distribution and circulation of financial resources in the economy" [17].

The financial sector development strategy is divided into five strategic areas: financial stability, macroeconomic development, financial inclusion, financial market development and innovative development. Each direction has its own strategic goals and performance indicators.

Strategic direction: Innovative development has the following strategic goals:

- 1: Developing an open financial market architecture and an overnight
- 2: Developing the FinTech market, digital technologies and regulatory platforms
- 3: Ensuring SupTech & RegTech Development
- 4: Digital economy development

Conducting research, analysing models (schemes of implementation) of working financial incubators and accelerators, developing, approving and implementing state-level financing

programs (incubators) for the development of investment start-ups aimed at attracting investments into the economy are among the strategic goals of innovative development of the country.

Implementation of the Strategy should create conditions for sustainable growth of the financial market of Ukraine, its competitiveness in terms of integration into the world economic space and will ensure the competitiveness of the Ukrainian economy as a whole.

It must be noted that the Ministry of Economy of Ukraine, with the participation of interested central executive bodies and other state authorities, has developed a draft forecast of economic and social development of Ukraine for 2020–2024. The purpose of this document is to form an understanding of the possible development trends, structural shifts and risks in the medium term related to the implementation of the priorities outlined in the Program of Activity approved by the Cabinet of Ministers of Ukraine, taking into account current trends, as well as constraints imposed by external and internal conditions. the functioning of the economy for development potential.

According to the Forecast, the priority areas of investment activity under the baseline scenario are considered, in particular, high-tech industries (IT sphere, mechanical engineering). Also, the focus will be on implementing measures aimed at improving energy efficiency and reducing the economy's resource base through the active use of innovative green technologies and technology, expanding and improving the quality of transport infrastructure, diversifying sources of energy supply, restoring infrastructure and destroying Ukraine [18].

The level of competitiveness of the modern innovation economy is increasingly determined by the quality of professionally qualified personnel and the level of their socialization. And if Ukraine does not fundamentally reform the current system of skilled training, which will be flexible to the new realities of today, and the health care system, then the country will not be able for competition in the global labour market on equal rights.

Shifting the economy to an innovative development model will help to solve the problem of competitive production. However, without the financial support of the state, creative business is practically impossible. The issue of long-term lending to investment and innovation activity remains open.

The legislation of Ukraine approved the following medium-term priority directions of innovation activity of the national level for 2017–2021:

- development of new energy transportation technologies, implementation of energy-efficient, resource-saving technologies, development of alternative energy sources;
- development of new technologies of high-tech development of transport system, rocket-space industry, aviation and shipbuilding, armament and military equipment;
- new technologies developing to produce materials, their processing and connection, creation of a sector of nanomaterials and nanotechnologies;
- technological renovation and development of the agro-industrial complex;
- adoption of new technologies and equipment for quality health care, treatment, pharmaceuticals;
- widespread use of cleaner production technologies and environmental protection;
- development of modern information, communication technologies, robotics [19].

Considering the experience of leading countries, this is necessary to introduce preferential lending to innovative projects, guaranteeing loans to the state, providing subsidies and subsidies for the purposes of scientific and technological development, promoting the preferred insurance system for risk of innovative entrepreneurship [8]. Commercial banks should consider the interests of enterprises when providing loans, that is, reduce the cost of financial and credit resources and ensure long-term loans that will help implement innovation and investment projects.

### **Conclusions.**

The revitalization of scientific and technical development necessitates the creation of a comprehensive system of financial support. This system should include reconciling the interests of the state, financial institutions and economic entities in expanding the pace, direction and mechanisms of accumulation and transformation of financial resources. These processes should take place in the context of meeting the investment needs of the economy to implement technological change and to motivate innovative entrepreneurship properly.

One of the critical policy issues is the role of government in promoting structural change and restoring innovative economic development. However, policies aimed at improving the functioning of the workforce, products and financial markets are essential, but not always sufficient. It is recognized that massive market demand and systemic failures can weaken the incentives for private investment in innovation and industrial recovery, such as:

- knowledge dissemination, that is, when competitors and other innovators can use and benefit from new knowledge created by the firm, the benefit to society from investing in innovation can exceed private profitability. At the same time, since innovators cannot take full advantage of their investments, the latter will be less socially optimal;
- information asymmetry, which is that the results of innovation efforts are uncertain, especially in the early stages, and can be very complicated, which can negatively affect the involvement of external financing firms to invest in innovation;
- rigidity and systemic failures in the functioning of economies and innovation systems can also prevent the private sector from moving independently to higher value-added activities that will stagnate the economy.

As the banking sector of Ukraine is not yet ready for the activation of real investments, the government should stimulate this activity. Therefore, according to the authors, some practical action will be to create a mechanism for preferential taxation of banks, which lend to projects in priority areas of economic development.

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## **THE EUROPEAN INTEGRATION PRIORITIES OF THE STRUCTURAL POLICY AIMED AT OVERCOMING OF UKRAINE'S COMMODITY EXPORT DEPENDENCY**

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**Abstract.** *An empirical assessment of the impact of trade with European Union and Russian countries on the structure of Ukrainian exports has been done in the article. It has been found that as for the mid-1990s Russia's share in Ukrainian exports was twice as high in comparison with the EU countries, but has gradually declined since then till the mid-2000s. Exports to EU countries are a mirror image of trade with Russia. Ukrainian exports to European countries increased dynamically in 1994-2004, then decreased by a third (in relative terms), but resumed growth since 2014. In 2018, EU countries accounted for 45% of Ukrainian exports, while Russia's share declined to 6% hardly. Using the statistical model, which takes into account the dependence of the index of structural changes on the indicators of the share of EU countries and Russia in Ukrainian exports, it has been proven that the reorientation of Ukrainian exports to EU countries has a favorable macroeconomic impact, including improvement of the quality structure of production. It has been found that the raw materials boom is favorable for improving the quality structure of exports. The effect of the geographical exports orientation on the dynamics of gross domestic product has been assessed additionally. It has been found that an increase in the share of exports to Russia had a somewhat stronger stimulating effect, but it should be mentioned that such a temporary sample of data was clearly outweighed by periods of encouraging policy of economic cooperation with Russia and other CIS countries. Empirically reversed dependence of GDP dynamics on crisis phenomena has been confirmed.*

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**Keywords:** *Ukraine, EU countries, Russia, European integration, commodity exports, structural reforms.*

### **Introduction**

The European integration-oriented vector of Ukraine development, and the entry into force of the FTA, implies further structural reforms. On the surface, the raw material orientation of Ukrainian exports does not foresee the equally significant benefits of improving price ratios in foreign trade, but the main goal of European integration is to improve the quality structure of domestic exports. Implementation of the Agreement on Association of Ukraine with EU countries in terms of creation of a Deep and Comprehensive Free Trade Area (FTA) will enable the modernization of Ukrainian industries and incorporate them into the technological chains of European companies through involvement in joint research, communication and information projects (envisaged by sections IV «Trade and Trade Related Issues», and V «Economic and Sectoral Cooperation Agreement») [16; 3]. At the same time, more favorable conditions for the deregulation of the economy and the promotion of competition in the internal market will emerge.

Some critical admonitions concerning the European integration largely resonate with the well-known arguments of structuralism of the Latin American model, and therefore have already been proven by time and unsuccessful foreign experience.

The standard argument is that EU investment mainly in raw materials and low-tech industries does not meet the objectives of structural modernization and threatens to deepen macroeconomic imbalances and further technological backwardness from developed countries [16].

If mainly high value-added technological products are imported into the EU from Ukraine, ferrous metals, cereals, ores, slag and ashes, wood and its products, fats and oils, oil seeds and fruits, residues and waste predominate in Ukrainian exports food industry. It is not taken into account that such a structure of foreign trade is formed by a low exchange rate, lack of economic freedoms, a «fear» about foreign investments and a too long reliance on trade with Russia and other CIS countries.

If to get rid of the constantly undervalued hryvnia and, for improving the price ratios in foreign trade to hinder inflation, instead (for this it is necessary to reduce budget deficits and to provide prudent monetary policy); to eliminate transfer pricing in commodity exports, to raise the level of institution environment to Georgia level, at least, then European investments will contribute to structural modernization, mitigate macroeconomic imbalances (as in Poland) and will reduce the technological gap from neighboring CEE countries.

The purpose of the article is to empirically assess the impact of Ukraine's trade with EU countries and Russia on the structure of domestic exports and to justify the feasibility of reorientation on trade with EU countries.

#### **Literature review and discussion.**

Ukraine's foreign economic orientation can be a significant factor in the dynamics of economic growth in general and structural shifts in particular. In the case of Central and Eastern Europe (CEE), it is easy to see that, as a result of EU enlargement, new member states get stable and sufficiently high GDP growth, and strengthening economic «foundations», employment increasing, improving the competitiveness of national manufacturers [14].

Orientation to the demand of the EU's single internal market facilitated the diffusion of advanced technologies, actively shaped the production of third and fourth technological units, and improved the position on world markets in general. At the same time, European technological goods became more accessible, which contributed to the modernization of the production structure. [9]. From the beginning, the main instrumental factor for the favorable impact of European integration was the diversification of exports on the modern technological basis [4].

The standard income effect in foreign trade implies that the higher the income level of the trading partner countries, the more pronounced the incentive effect for the exporting country [1]. Although Ukraine's foreign integration vector has received a clear legal definition, there has been a recent lack of controversy over the benefits of European integration compared to cooperation with the Customs Union countries (Belarus, Kazakhstan, and Russia). At the same time, one of the main arguments was that trade with Europe is mainly commodity in nature, while the countries of the former Soviet Union are in high demand for domestic engineering products.

For example, in the midst of discussions about the comparative advantages of the Association Agreement with EU countries and the expediency of Ukraine's accession to the Customs Union, some Russian experts suggested that due to the trade effect of increasing trade with post-Soviet countries, Ukraine's GDP would increase by 1%, and in the event of technological integration by 6-7% till the year 2030. Similarly, T. Tyshchuk [17] has received the result that every



percent of increase in Ukrainian exports to Russia increases the growth rate of domestic GDP by 0,24% and in the EU countries by only 0,18%.

However, V. Movchan and R. Giucci [8] found that, in the long run, the Free Trade Agreement increases Ukraine's GDP by 11,8% and accession to the Customs Union reduces it by 3,7%. V. Shevchuk and O. Yakim [13] received the result that Ukrainian GDP growth is stimulated by exports to Russia, but Russian imports have a negative impact. As demand for imports from Russia increases in the case of Ukrainian exports to this country increase, and energy prices fall, this substantially counteracts the potential benefits of increased exports.

Taking into account the economic sanctions and the decline in world commodity prices, Russia's attractiveness as a trading partner is lost [15]. This conclusion can be agreed, but it should be noted that in the event of the lifting of sanctions or the next commodity boom, the long-term benefits of trade with Russia, which can improve the technological structure of production in general and exports in particular, should not be taken into consideration.

At first glance, Ukrainian exports to Russia are more «technological» than to other countries. For two decades, Russia and Belarus have been the largest markets for the sale of Ukrainian technological products, but this was not due to the high manufacturability of Ukrainian products in a wide range, but to an even greater decline in the technological sector in other CIS countries [10].

Regardless of the state of Ukrainian-Russian relations, it is necessary to look for ways to increase technological exports by CEE economies samples (though these economies did not have a raw material orientation), or Southeast Asia samples (Malaysia, Thailand) or (to a lesser extent) Latin America (Chile), thus to move from commodity to mainly technological orientation of export. In all cases, geopolitical orientation towards Western Europe and North America was one of the success factors. On the other hand, the long-term orientation to Russia threatens to further technological structures preserve, because such orientation does not create incentives for innovative modernization.

### **Results.**

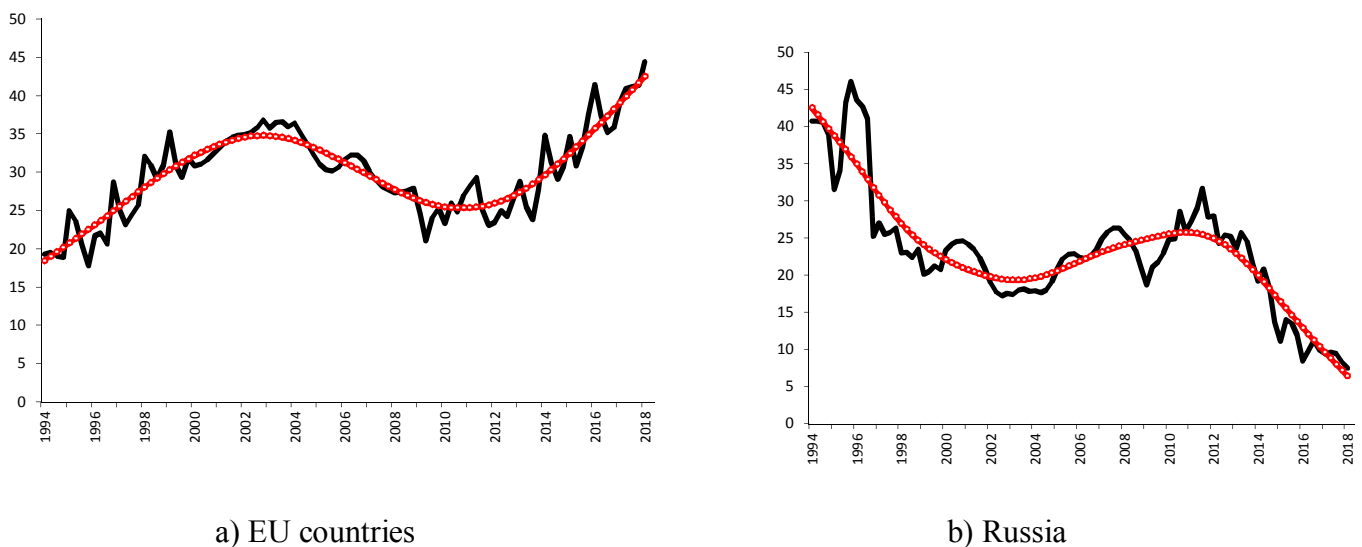
On the example of the financial crisis of 2008-2009, it is easy to see that a reorientation to the European markets has significantly facilitated a stabilization policy in Poland. Poland, thanks to its strong export sector, which is tightly integrated into the production networks of European companies, has been able to avoid production downturns and continued to exploit the potential for economic growth in Germany and other EU countries to strengthen economic «foundations».

It seems at first, that situation in the Baltic countries was worse than in Poland, but due to the exports increase, they were even more successful in dealing with the crisis (wage cuts, government spending cuts and labor taxes coupled with raising the tax rate became the tools for success) without reducing private savings (this is one of the biggest disadvantages of currency devaluation). In all cases, a necessary component of success was a high-quality export structure and easier access to European markets, which made it possible to use the price advantages created for exporters. As it has been already mentioned, the success of the European integration strategy depends crucially on the ability to use this process to strengthen economic «foundations». If not to abandon the excessive budget deficits and excessive consumer lending, then you can get the debt crisis problem.

On the other hand, several Ukrainian crises, each of which had a debt component, took place without any connection with European integration, but rather against it. If to link the mechanisms of crisis phenomena to the raw material orientation of Ukraine's economy, reorientation to the European markets should just help to create a competitive non-raw material sector, first and foremost through better conditions for foreign investment in a favorable external and internal environment. Internal investors should be at profit, at least, since Ukraine has a complementarity between FDI and domestic investments.

Although there are researchers who consider the geographical structure of Ukrainian foreign trade to be a derivative of the raw material orientation of the economy [7], in fact, it is no less reasonable to believe that everything is just the opposite. As established by V. Shevchuk and N. Cherkas [11; 12], the most effective for the development of technological exports (machinery and equipment) is the reorientation to industrial and developing countries; at the same time, the increase in the share of exports to the countries of Eastern Europe and the CIS (including Russia) has a negative impact on the structure of Ukrainian export. It was concluded at the end of the last decade, that European integration in the sense of export reorientation to the industrial countries of Western Europe is useful, first and foremost, for stimulation of the technological component of Ukrainian exports and therefore for long-term economic growth.

The evolution of the share in Ukrainian exports of the two most important foreign trade partners – the EU and Russia – is illustrated in Fig. 1. As of the mid-1990s, Russia's share of Ukrainian exports was twice as high as that of the EU, but since that time to the mid-2000s it has gradually declined. In the future, there is a local renaissance of exports to Russia, which was interrupted by the financial crisis of 2008-2009, but not for long. In 2012, Russia's share in Ukrainian exports exceeded 30%, but it has been sharply declining since then. It is natural to associate this result with Russia's annexation of Crimea and the onset of aggression in the Donbas, but it is noteworthy that the decline in exports to Russia began as early as 2013, a year before the Ukrainian-Russian armed conflict began.



**Fig. 1. Graphical visualization of EU and Russian share in Ukrainian exports volumes (%) (created by the author, using the IMF data [5])**

*Note: Trend values were obtained using the Hodrick-Prescott filter.*

Exports to EU countries are a mirror image of trade with Russia. Ukrainian exports to European countries increased dynamically in 1994-2004, then decreased by a third (in relative terms), but resumed growth since 2014. At the beginning of 2018, EU countries accounted for 45% of Ukrainian exports, while Russia's share declined to 6%. It is quite common in Ukraine to believe that the restriction of trade relations with Russia will be marked by deterioration of exports quality structure, since the CIS countries have traditionally been the priority sales markets for technological products of domestic manufacturers [2]. Instead, the facts are quite the opposite. As O. Kramar recently remarked [6, p. 20-23], the dynamics of exports to the EU countries dispelled significant skepticism as to the low competitiveness of Ukrainian goods in the European market and the persistent stereotypes of recent years (they say, «our value-added goods won't break through»).

According to the data from the first half of 2018, in 12 out of 25 Ukrainian regions, the share of exports to the EU ranges from 50 to 90% including Donetsk and Luhansk regions. Most importantly, exports of finished goods and components, particularly for mechanical engineering, grew more rapidly than the raw materials export. In our opinion, this result is the main advantage of the reorientation of exports to EU countries, because it is not only a matter of export volumes mechanical increase, but it is also the improvement of its qualitative structure. Although the data of the last few years may be quite optimistic, more empirical estimates are needed to arrive at more convincing conclusions. To check the hypothesis of a favorable effect of trade with EU countries on the structure of Ukrainian exports used a statistical model, that takes into account the dependence of the structural index  $STR_t$  on the indicators of the share of EU countries and Russia in Ukrainian exports. The empirical estimation was performed on the basis of quarterly data for the years 1994-2018, using the method of two-step least squares (2SLS). The obtained results explain 91% of changes in the dynamics of the dependent variables.

Influence of exports geographical orientation on the structural changes was as follows:

$$STR_t = 0,630STR_{t-1} + 0,279STR_{t-2} + 0,0032STREU_t + 0,183BOOM_t$$

$$(5,41^{***}) \quad (2,48^{**}) \quad (1,76^{**}) \quad (3,15^{***}) \quad (1a)$$

$$R^2 = 0,91 \quad ADF = -9,24^{***}$$

$$STR_t = 0,643STR_{t-1} + 0,284STR_{t-2} + 0,0031STRRU\$_t + 0,169BOOM_t$$

$$(5,40^{***}) \quad (2,47^{**}) \quad (0,89) \quad (2,89^{***}) \quad (1b)$$

$$R^2 = 0,91 \quad ADF = -9,31^{***}$$

$$STR_t = 0,618STR_{t-1} + 0,270STR_{t-2}$$

$$(5,20^{***}) \quad (2,37^{**})$$

$$+ 0,0030STREU_t + 0,0021STRRUS_t + 0,189BOOM_t,$$

$$(1,62^*) \quad (0,60) \quad (3,19^{***}) \quad (1c)$$

$$R^2 = 0,91 \quad ADF = -8,74^{***}$$

where  $STR_{t-1}$  and  $STR_{t-2}$  are the one and two-quarter structural change indices, respectively,  $STREU_t$  and  $STRRUS_t$  are the share of EU and Russian countries in Ukrainian exports (%),  $BOOM_t$  is the dummy variable for the commodity boom (1 – for 2003Q4: 2004Q2, 2006Q1:2008Q2, 0 for

the remaining quarters). Z-statistic is given in brackets; \*, \*\*, \*\*\* means statistical significance at 10, 5 and 1% respectively.

In equations (1a) and (1b) the factors of the geographical structure of exports are taken into account separately, and in equation (1c) both variables are included –  $STREU_t$  and  $STRRUS_t$ . When considering both variables of the geographical structure of exports separately, the magnitudes of the regression coefficients for  $STREU_t$  and  $STRRUS_t$  do not differ (in both cases, the increase in the share of exports indicates an improvement in its quality structure), but the regression coefficient for  $STRRUS_t$  is lacking in statistical significance. This means that the impact of Ukrainian export orientation on Russia is unstable. Other is the focus on exports to EU countries. As the corresponding coefficient is statistically significant at the level of 5%, it means stability of influence on the structure of domestic exports. Thus, are confirmed the findings from previous studies for CEE countries – that reorientation to EU countries has a favorable macroeconomic impact, including an improvement in the quality of production.

The raw material boom is favorable for improving the quality structure of exports, which demonstrates the stability of the results obtained to changing the regression model specification. Similarly, the impact of a variable  $BOOM_t$  does not change in the specification, taking into account both variables of the exports geographical structure. Similarly, it concerns the impact of variables  $STREU_t$  and  $STRRUS_t$ . The coefficient for  $STREU_t$  is virtually unchanged, although its statistical significance is reduced to 10%. The coefficient for  $STRRUS_t$  lessens and is not statistically different from zero.

In addition, the impact of the geographical orientation of exports on GDP dynamics was assessed (this is important in view of analyzing the relevant variables in a broader analytical context):

$$\begin{aligned} \Delta Y_t = & 0,989\Delta Y_{t-1} & - 0,300\Delta Y_{t-2} & + 0,067STRRUS_t \\ & (8,53^{***}) & (-2,79^{***}) & (2,13^{**}) \\ & + 1,539BOOM_t & - 2,749CRISIS_t, & \\ & (1,62^*) & (-2,37^{**}) & \\ & R^2 = 0,76 & ADF = -9,13^{***} & \end{aligned} \quad (2a)$$

$$\begin{aligned} \Delta Y_t = & 0,974\Delta Y_{t-1} & - 0,292\Delta Y_{t-2} & + 0,048STREU_t \\ & (8,33^{***}) & (-2,73^{***}) & (2,25^{**}) \\ & + 1,646BOOM_t & - 2,016CRISIS_t. & \\ & (1,33) & (-2,47^{**}) & \\ & R^2 = 0,76 & ADF = -9,25^{***} & \end{aligned} \quad (2b)$$

where  $\Delta Y_t$  – GDP growth rate of Ukraine (%), (all other variables have been saved).

An increase in the share of exports to Russia has a somewhat stronger incentive, but it should be remembered, that such a temporary sample of data, where periods of economic cooperation encouraging policy with Russia and other CIS countries distinctly prevail. It has been noted that such cooperation intensively developed not only in 2010-2012, immediately after the administration of V. Yanukovich came to power in Ukraine, but also in 2005-2006, when it was

believed that the Orange Revolution would lead to quite opposite changes in the geographical structure of exports.

Empirically intuitively reversed dependence of GDP dynamics on crisis phenomena has been confirmed. In the average, crisis phenomena cause the GDP growth rate to decrease by 2,5% (in annual terms). The commodity boom of 2003-2004 and 2006-2008 was stimulating in the real sector, which is also quite predictable, given earlier estimates for the first differences in the GDP logarithm. The autoregressive coefficients for  $\Delta Y_t$  exhibit high inertia with a lag in the quarter, but after two quarters a fairly significant corrective effect occurs.

### Conclusions.

The obtained results add persuasiveness to the numerous analytical arguments in favor of reorienting Ukrainian exports to EU countries. It has been empirically proven that the impact of Ukrainian export orientation on Russia is unstable, while absolutely the opposite situation is observed in the case with EU export orientation. Thus, it has been confirmed that reorientation to EU countries has a favorable macroeconomic impact, including the improvement of the production quality structure.

An empirical assessment of the effect of geographical orientation of exports on GDP dynamics has made it possible to confirm that increasing the share of exports to Russia has a somewhat stronger stimulating effect, but it should be remembered that it concerns only a temporary data sampling, with the clearly prevailing periods of promoting economic cooperation with Russia and other CIS countries. Empirically reversed dependence of GDP dynamics on crisis phenomena has been confirmed.

On the whole, it can be affirmed that the increase in the share of EU countries in Ukrainian exports is marked by an increase in the share of non-commodity exports compared to exports of commodities and is accompanied by an acceleration of GDP dynamics. Increasing the share of exports to Russia also leads to an increase in the rate of GDP growth, but in this case there is no sustainable positive impact on the commodity structure of exports. Importantly, the boom in global markets of raw materials contributes to improving the export structure.

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## FINANCIAL ASPECTS OF NATIONAL MIGRATION PROCESSES

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**Abstract.** *Intensification and deepening the processes of globalization and integration in the world economy, interdependence and diffusion of national economies, transnational character of mobile factors of production (including labor flows) determine the inclusion of Ukraine in the international labor market. The increase of financial income from Ukrainian citizens working abroad is traditionally considered to be one of the positive effects of this process. The article deals with studying the financial performance of national migration processes. Trends, dynamics, structure and distribution of private transfers of Ukrainian migrants are analyzed by the author. A comparative analysis of financial benefits and losses for the national economy from migration processes is performed. The need of adjusting private transfer flows to the amount of potential GDP losses and tax revenues to the country's budget are emphasized. Tax revenues arise from the inclusion of the part of the working population in the international migration process, as illustrated by author's calculations. At the same time, the counterbalance to the positive financial consequences (at first glance) of migration processes for the national economy of Ukraine as a number of significant risks that will occur in the long-term perspective is pointed out in the article.*

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**Keywords:** *migration, international labor mobility, migration processes, private transfers.*

### Introduction.

Significant, but ambiguous, factor of labour migration processes intensification is financial income sent to Ukraine by citizens working abroad. Private remittances from abroad, which can be roughly compared to FDI, are not only one of important sources of foreign exchange incomings to Ukraine, but also quite stable source of foreign capital attraction. In the short-term and medium-term period, remittances have a positive impact on Ukraine's macroeconomic stability, contribute to financing trade balance deficit, fiscal consolidation and national currency support.

At the same time, it should be noted that when calculating “net” profit of national economy from financial income of labour migrants, it is necessary to take into account potential losses of national GDP and tax revenues for state budget of home country. It should also be remembered that country’s loss of its employment potential might cause long-term and, at first glance, non-economic risk, but which will eventually threat national economic security directly.

The aim of this article is to study financial aspects of migration processes, to make expert calculation of “net” profit from financial income of labour migrants and to evaluate their impact on national economy.

### **Literature review.**

The study of main trends and dynamics of private remittances was based on official data of National Bank of Ukraine regarding status and dynamics of balance of payments [1, 2, 3]; State Statistics Service of Ukraine [5] regarding macroeconomic indicators of national labour market and State Employment Service of Ukraine [4] regarding number of citizens employed abroad.

Methodological aspects regarding necessity of adjusting financial income from labour migration to amount of potential losses of GDP and tax revenues are outlined in publications by I. Kolesnyk and N. Serohina [6].

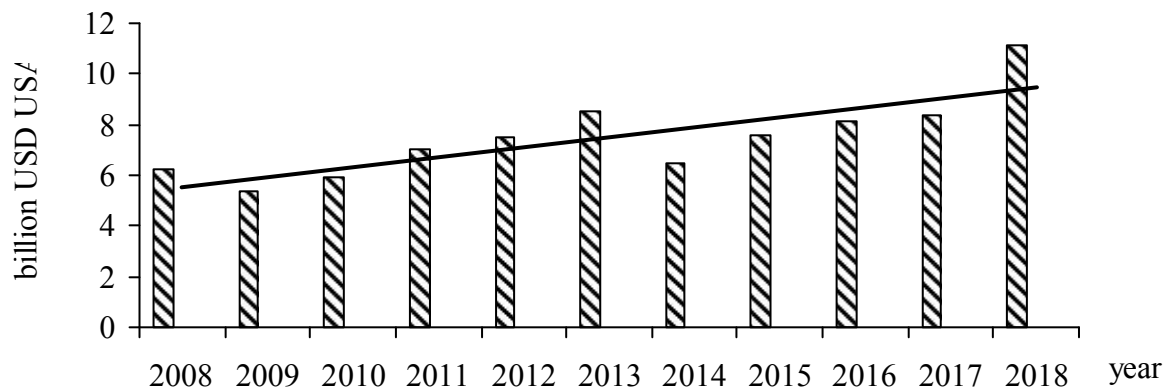
Cost policy and structure of funds received from labour emigrants, including potential development of entrepreneurial activity, were investigated in publications of State Center for Social Reforms together with State Statistics Service of Ukraine [7], International Organization for Migration [8] and O. Malynovs'ka [ 9, 10].

### **Results.**

#### ***Trends in financial income from labour migration.***

Private remittances of labour migrant are economically significant for many countries, including Ukraine. Such remittances share in Ukraine’s GDP during the period 2010-2012 was about 4.1%. Since 2013, this trend has grown rapidly to 4.5%, and by 2018 it had already been 8.5%, which is significantly higher than the same indicator of traditional world labour donors, including India and Mexico. According to National Bank of Ukraine data, total volume of private remittances sent to Ukraine by citizens working abroad amounted to about 81.6 billion USA dollars in 2008-2018 (Fig. 1), more than two-thirds of which came from foreign countries and the CIS [1-3]. It should be noted that because of complication of Ukrainian-Russian foreign policy as a result of military events in the east of Ukraine, during 2015 - 2018, short-term migrants from Russia moved to Poland, which has now become the main destination for Ukrainian labour migrants with corresponding rapid growth of remittances to more than a third in total [2].





**Fig. 1. Dynamics of private remittances**

Source: [1-3]

When conducting comparative analysis of financial profit and losses for national economy from labour migration, GDP of Ukraine is calculated as a result of the fact that certain part of able-bodied population, included in process of international labour migration, does not participate in its creation. During calculations we have used official statistics of State Statistics Service of Ukraine (gross domestic product), National Bank of Ukraine (official rate of Ukrainian hryvnia against foreign currencies), State Employment Service of Ukraine (number of Ukrainian citizens employed abroad). The results are presented in Table. 1. The calculation was made by the formula:

$$LGDP, m = \frac{GDP}{S_l} \times S_m,$$

where, LGDP, m – GDP loss due to labour emigration;

GDP– gross domestic product created during certain period;

$S_l$  – average number of employed population for relevant period;

$S_m$ – average number of labour emigrants for relevant period.

Thus, for the period 2008-2018, total losses amount from labour emigration is estimated to more than 7 billion USA dollars. Employment of these citizens on the territory of Ukraine would give an annual increase of national GDP of about 0,5-0,6%. Potential loss of tax revenues of state budget revenue of Ukraine in calculated period amounted to about 4.8 billion USA dollars (Table 2). When conducting the calculations, official average monthly salary, 15% (from 2016 - 18%) tax rate on personal income and number of Ukrainian citizens who are officially employed abroad were taken as the basis [6].

**Table 1. GDP losses of Ukraine from labour emigration**

Year	GDP, thousands USD	Busy population, thousands people	Number of citizens employed abroad, thousands people	GDP loss, thousands USD	Share of GDP, %
2008	188110366,8	19251,7	80,4	785596,8	0,42
2009	121552183,3	18365,0	74,5	493092,2	0,41
2010	136012461,8	17451,5	80,4	626616,7	0,46
2011	163160432,8	17520,8	84,5	786896,5	0,48
2012	175780733,8	17728,6	86,7	859638,6	0,49
2013	183310146,4	17889,4	83,4	854588,0	0,47
2014	133503866,2	17188,1	78,0	605843,7	0,45
2015	90615000,0	15742,0	76,9	442656,2	0,48
2016	93270000,0	15626,1	79,2	472733,7	0,50
2017	112154000,0	15495,9	83,8	606515,6	0,54
2018	130832000,0	15718,6	97,1	808200,9	0,61

Source: [4-5]

Based on above mentioned, in the period from 2008 to 2018, “net” financial profit of Ukrainian economy from labour emigration amounted to about 69.6 billion USA dollars. However, it should be noted that during the calculations we have taken into account only statistics of official labour emigrants. Considering that considerable part of Ukrainian labour emigrants is not covered by national statistics, it can be assumed that financial losses of national economy are substantially higher and “net” financial profit lower.

**Table 2. Fiscal losses of state budget revenue of Ukraine from labour emigration**

Year	Average monthly salary per person, USD	Fiscal contributions to budget (15% rate) **, USD	Number of citizens employed abroad, thousands people	Fiscal losses of state budget revenue, thousands USD
2008	342,8	51,4	80,4	49620,9
2009	244,6	36,6	74,5	32805,4
2010	283,5	42,5	80,4	41032,6
2011	332,3	49,8	84,5	50550,1
2012	380,5	57,0	86,7	59388,9
2013	410,6	61,5	83,4	61640,7
2014	292,7	43,9	78,0	41104,2
2015	159,3	23,9	76,9	22054,92
2016	172,9	31,1	79,2	29557,44
2017	196,4	35,4	83,8	35598,24
2018	269,5	48,5	97,1	56512,20

\* 18% rate since 2016

Source: [4-5]

International economic institutions rank Ukraine ninth in the world among middle-income countries receiving remittances, and first in the post-Soviet space. According to official estimates, annual remittances, including remittances made through official and informal channels, are increasing simultaneously with increasing number of labour emigrants.

***Impact of financial revenues from migration processes on national economy.***

At individual level, remittances play an important role in overcoming poverty and providing means of living for migrant families. But above all, their role and share in supporting sustainable development and investment in context of benefits for national economy is interesting.

About 80% of long-term labour migrants are in EU countries (Poland, Czech Republic, Italy, Germany), as well as in low-income CIS countries. Considering this, average cumulative income of Ukrainian families with labour migrants, due to US and European standards, is quite low, and is within the range of \$ 2,000.

In general, like other traditional labour donor countries, such as Mexico, Ukrainian labour migrants and their families keep careful and conservative policy for their savings. In 2009, State Center for Social Reforms, together with State Statistics Service of Ukraine, conducted a survey, according to which cost structure of funds received by labour emigrants was as follows (survey provided for several options): satisfying daily needs (purchase of food, clothing, payment for services) – 72.0%; purchase of durable goods - 39.3%; purchase, reconstruction and construction of new housing - 29.1%; payment of tuition fees for labour migrant families members – 12.4%; debt repayment – 10,4%; savings – 9.7%; payment for medical services – 6,5% [7].

Based on studies published in 2016 by International Organization for Migration, which was dedicated to distribution structure of remittances sent to Ukraine, it should be noted that their main purpose is still consumption (including durable goods) and savings.

Regarding using private remittances as source of investment, it should be noted that the biggest part of these investments (94%) is mainly focused on purchase or repair of real estate. Productive investments in business, farming, etc. are allocated 6% of all investments or 1% of total average amount of remittances [8]. Such low level of productive investment can be explained by the same factors, which also lead to negative tendencies towards reduction of direct investments - geostrategic challenges facing Ukraine, high level of corruption, difficulties in running business.

At the same time, comparative characteristics of labour emigrants with other people give grounds to conclude that migration is in some way connected with development of entrepreneurship. Study results conducted in border areas showed that, compared to other employed population, share of people with migration experience was 1.5 times higher among self-employed people and by one third among employers [9-10]. Consumption cash also has an economic impact. For example, housing investment of migrants has led to increase of housing construction in regions with significant labour migration.

These investments have contributed to employment growth, which is of great importance, especially for rural areas. In addition, they have caused increase in demand for building materials, furniture, plumbing, etc., which has positive impact on economic situation in general.

However, in regions with significant emigration, private remittances impact has led to rapid and economically unreasonable increase of prices for residential real estate and formation of speculative “bubble” at real estate market, which turned into a serious threat to stability of financial institutions of Ukraine during crisis in 2009. Although the economic impact of inflow of private remittances by Ukrainian labour migrants is ambiguous, investing it in human capital, including education and medicine, improvement of families’ life quality should be estimated as positive.

### **Conclusions.**

Summarizing above mentioned, it should be noted that private remittances from abroad, which can be roughly compared to FDI, are not only one of important sources of foreign exchange incomings to Ukraine, but also stable source of foreign capital attraction. Steady tendency in increasing remittances to Ukraine’s GDP has been observed in Ukraine since 2013. Conducted comparative analysis of financial profit and losses for national economy from labour migration showed that in the period 2008-2018 total losses from labour emigration amounted to about 7 billion USA dollars.

Employment of citizens leaving abroad on their own territories would give annual increase of national GDP of about 0.5-0.6%; potential loss of tax revenues of state budget revenue of Ukraine in calculated period amounted to about 4.8 billion USA dollars. During the same period, net financial profit of Ukrainian economy from labour emigration amounted to about 69.6 billion USA dollars. Considering that significant part of Ukrainian emigrants is not covered by national statistics, it can be assumed that financial losses of national economy are substantially higher and that net financial profit is lower. According to official estimates, annual remittances of labour emigrants sent through official and informal channels are increasing simultaneously with increasing number of labour emigrants. Regarding geography of labour emigrants outflows from Ukraine, overwhelming majority (80%) are looking for work in EU countries as well as in the CIS countries with low income. In general, Ukrainian emigrants and their families keep to careful and conservative saving policy, spending received money for daily needs requirements, purchase of durable goods, purchase, reconstruction and construction of new housing. The biggest part of labour migrants’ investments is mainly focused on purchase or repair of real estate. Investments in business, farming, etc. account for only 6% of all investments, or 1% of total average amount of remittances. Housing investments of migrants have led to increase in housing construction in regions with significant labour migration, which has contributed to employment growth, especially in rural Ukraine.

Considering ambiguous economic effect of inflow of private remittances by Ukrainian labour migrants, it should be emphasized that investing private funds in human capital, in particular education, medicine, improvement of families’ life quality, has positive impact on development of the whole civil society.

At the same time, contrasting above mentioned positive results of external labour migration there is a number of risks, quantitative and qualitative manifestations of which, unfortunately, will occur in long term period, in particular: disintegration of economic and degradation of social space of the state; decomposition of state space and deformation of demographic space of our country.

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## **DIAGNOSIS OF HUMAN CAPITAL IN THE CONDITIONS OF SOCIO-ECONOMIC CRISIS**

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**Abstract.** *In an information society and knowledge economy, a person's unique professional skills, personal qualities, acquired knowledge and information transform him into a universal factor of production and source of opportunity, and his accumulated skills and qualities are considered as human capital. The results of diagnostics of human capital of Ukraine are presented in the article and the peculiarities of modern socio-economic conditions of its components formation are analysed. The purpose of the study is to identify the current achievements of Ukraine along the path of formation, development, and use of human capital. It is emphasized that human capital is formed by investments in improving the standard and quality of life of the population, which depends on many factors, in particular on ensuring economic and social security, freedom and democracy, political and social stability, on the functioning of education, science, upbringing and health protection, on the development of entrepreneurial skills and motivation to work, national culture, etc. The diagnosis is based on data from the United Nations, the World Economic Forum, the World Bank, the National Academy of Sciences of Ukraine and the State Statistics Service of Ukraine. A comparative analysis of the methods of diagnosing human capital and its elements, which are currently used in scientific literature and analytical research, is conducted.*

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**Keywords:** *human capital, integral evaluation, method of diagnostics.*

### **Introduction.**

Innovative processes taking place in society and economy in some way are changing human role and place in the system of modern socio-economic relations and productive forces. Human being is the main owner of resources - information and knowledge, which are the most important for new stage of society and economy development. Information technology development and computer technology expansion require a person of relevant professional skills and personal qualities that are formed and determined by: appropriate level and quality of general and professional education; ability for logical and analytical thinking, creative problem solving, personal expression and self-development; ability for quick adaptation, decision making and choosing the best ways to solve problems; ability to maintain adequate physical, psycho-emotional, intellectual health, etc.

Human's acquisition of these skills and qualities (important "values" for society and economy) transforms him into universal factor of production and source of any opportunities, and also gives reason to consider them (accumulated skills and qualities) as human capital.

According to some estimates, human capital accounts for huge share of national wealth of many developed countries (from 2/3 to 3/4 of total national wealth) [1]. Development of human capital in Ukraine is recognized as one of key objectives identified by Medium-Term Government Priority Action Plan up to 2020 [2]. In connection with this, the most relevant scientific task is to diagnose the peculiarities of formation and state of human capital in national economy. The purpose of the study is to identify the current achievements of Ukraine along the path of formation, development, and use of human capital.

**Methods of diagnosing human capital.**

Human capital diagnosis should be performed taking into account that it is formed or developed as a result of investment and human’s accumulation by a certain stock of health, knowledge, skills, abilities, motivations, which is purposefully used in one or another sphere of social production, contributes to the growth of labor productivity and therefore affects the growth of income (earnings) of its owner [3, p. 34].

In modern scientific literature and in current analytical researches, quite a great number of different methods of diagnosing human capital and its elements are used. Peculiarities of integral assessment of human capital development based on world economic rankings introduced by the United Nations, World Bank and World Economic Forum are given in Table 1.

**Table 1. Peculiarities of integral assessment of human capital development based on world economic rankings**

Integral assessment	Number of parameters (sub-indexes) and number of indicators	Peculiarities of accounting and diagnosis of human capital components
Human Development Index. It has been methodologically calculated and published in United Nations Development Program Annual Report since 1990	3 sub-indexes, calculated on basis of 4 indicators	General purpose: to measure country’s achievements in the context of health, education and actual income of its citizens. Allows to diagnose performance of country’s education and health systems, and to obtain general indicator “quality of life” and level of well-being
Global Human Capital Index. It has been methodologically calculated and published in reports of World Economic Forum in the period 2015-2017	sub-index groups for 5 age groups (44 indicators in total): group 1 - 3 sub-indexes, 6 indicators; 2 - 5 and 13; 3 - 4 and 10; 4 - 2 and 7; group 5 - 2 sub-indexes and 7 indicators	General purpose: to determine complete country’s profile of how well it develops its human capital by four thematic dimensions (education, skills and their implementation, development and advanced training, level of using special skills at work) and five different age groups (0- 4 years; 15-24 years; 25-54 years; 55-64 years; above 65 years)
Human Capital index. It has been calculated according to World Bank methodology and published since 2018	three components (sub-indexes) calculated on basis of 6 indicators	General purpose: to measure human capital volume that might be accumulated by a child from its birth to 18th birthday. Allows to determine health and education contribution to productivity of next generation workers, and shows how productive a child will be in future (considering risks of poor health and education)

Source: [4-7]

Human capital diagnosis in Ukraine is carried out at regional level. Firstly, State Statistics Service of Ukraine has annually published (since 2001) calculation results of regional human development. Calculations are performed according to methodology developed by specialists of Ptoukha Institute for Demography and Social Studies of the National Academy of Sciences of Ukraine together with specialists of State Statistics Service of Ukraine [8]. To determine regional index of human development, 33 indicators are used, which are grouped into 6 blocks (sub-indexes): population reproduction, social status, comfortable life, well-being, decent work, education [ibid, p. 3]. Thus, regional index of human development allows to diagnose practically all important components of human capital and their peculiarities in regions of Ukraine. Secondly, human capital diagnosis in regions of Ukraine is also envisioned by Government's assessment method, which has been implemented in 2017, for socio-economic development of regions, based on annual measurement of regional human development index. This method of calculating human capital index is very close to method of calculating UNDP Human Development Index according to the results of 2016. [9].

### **Results.**

#### ***Factors and trends of human capital development in Ukraine.***

In addition to factors mentioned above, human capital development of our country and its regions also depends on ensuring economic and social security, freedom and democracy, political and social stability, and national culture. Additional favorable conditions for human capital development are determined by presence of highly productive agrarian sector of economy (providing food, raw materials for light industry), favorable demographic and migration processes (which lead to increased population reproduction and growth in the number of human capital carriers).

Formation and development of human capital in modern Ukraine are adversely affected by:

increased threats to national security, instability of internal and external political situations, including government and parliamentary crisis, Russia's hybrid political and economic aggression, and military conflict in the East, which lasts for sixth years;

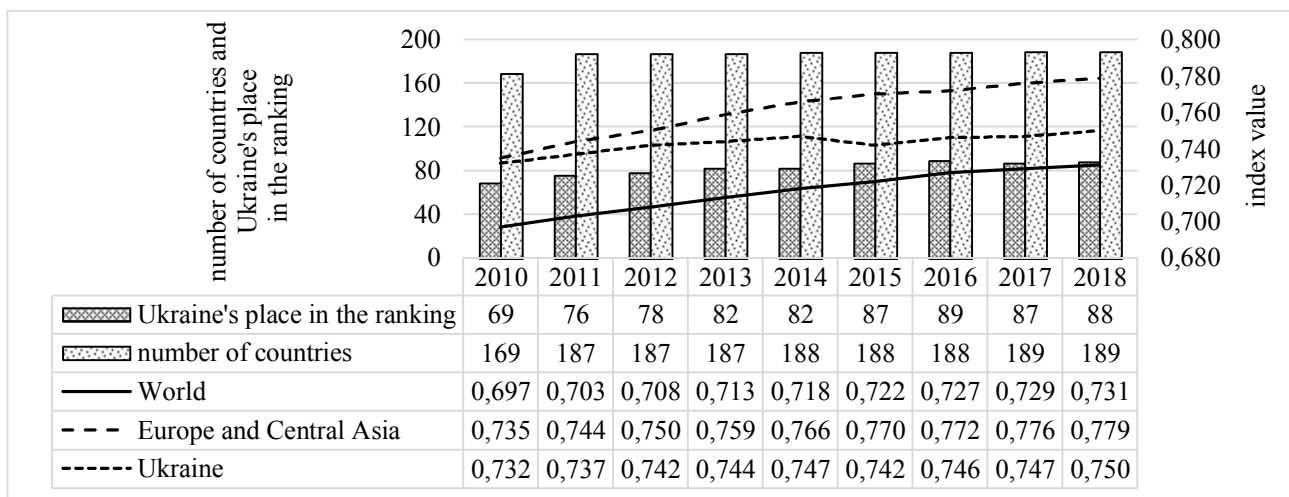
large-scale national socio-economic crisis, which can be seen as prolonged confrontation between different political forces and incompetence of individual high-ranking officials, and which is increased by pandemic and forced introduction of quarantine measures;

weakness of democratic institutions, as well as incompleteness of initiated reforms, in particular reform of local self-government bodies (decentralization), medical reform, and educational system reform;

threatening demographic and adverse migration situations, imbalances in labor market, leading to rapid decline in country's population number, outflow of skilled professionals and young workers and leakage of intellectual capital.

First of all, level and trends of human capital development in Ukraine can be determined in comparison with other countries. Figure 1 shows dynamics of Human Development Index on average for countries around the world, Europe and Central Asia, as well as for Ukraine for the period 2010-2018.



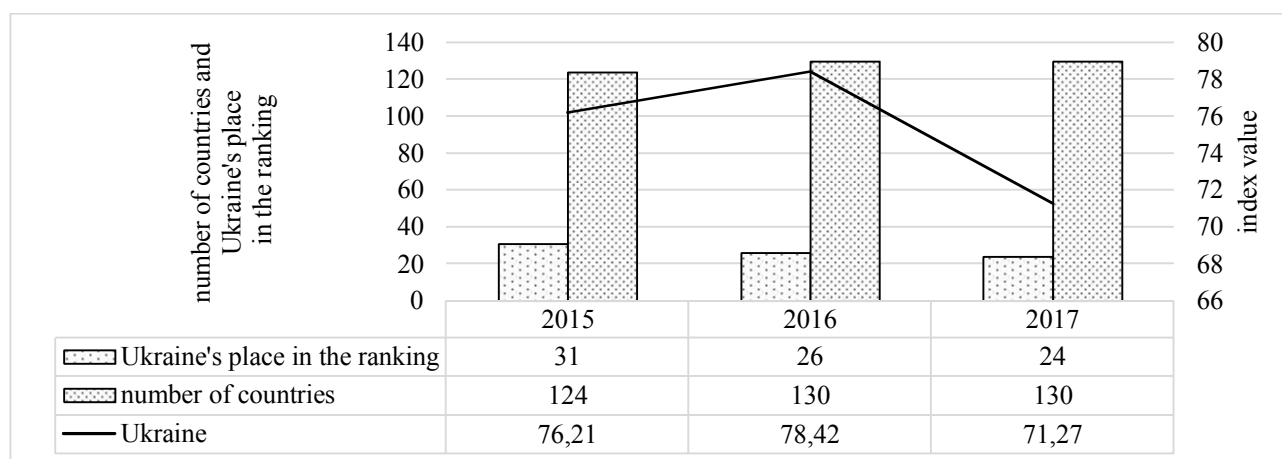


**Fig. 1. Value of Human Development Index on average for countries around the world, Europe and Central Asia, as well as for Ukraine, according to UNDP, 2010-2018**

Source: [10]

During the analyzed period, Ukraine has changed (worsened) its position in Human Development Index from 69 in 2010 to 88 in 2018. According to the results of 2018, Ukraine with index value of 0.750 according to UNDP, is in the group of countries with high level of human capital development (index value of countries from this group falls in the range from 0.700 to 0.799). During the period from 2010 to 2018, global average Human Development Index increased from 0.697 to 0.731, while the countries of Europe and Central Asia increased it from 0.735 to 0.779. Thus, in the period from 2010 to 2018, the level of Human Development Index of Ukraine exceeded average world index, but was lower to the index of countries of Europe and Central Asia [10].

Figure 2 shows dynamics of Ukraine’s position in Global Human Capital Index in the period from 2015 to 2017 (the entire observation period). During the period under review, Ukraine’s place in the ranking has changed (improved) from 31 in 2015 to 24 in 2017, although the index in 2015 was 76.21%, in 2016 - 78.42%, and in 2017 - decreased to 71,27%. According to the World Economic Forum data of 2017, the world (130 countries) has averagely used human capital and their development opportunities (measured by Global Human Capital Index) only by 62% (i.e. nations neglected or lost 38% of their talent and human capital development opportunities): only 25 countries of the world have used human capital by 70% (or more); index values of another 50 countries ranges from 60 to 70 (percent); index value of 41 countries falls within the range of 50 to 60; 14 countries show index below 50 (these countries currently use less than half of their human capital). Thus, Ukraine is in the group of countries with rather high level of human capital usage (the country indexes of this group are 70 and above).



**Fig. 2 Value of Global Human Capital Index for Ukraine, according to the World Economic Forum, 2015-2017**

Source: [5; 7, c. 32; 11-12]

According to the World Bank's 2018 Human Capital Index, Ukraine ranks 50th place among 157 countries in the world. Quantitative values of main sub-index components and indexes of Ukraine are shown in Table 2.

Considering peculiarities of Human Capital Index methodology and economic content of its components, these tables verify the following: a child born in Ukraine (in 2018), by the age of 18, has a chance to accumulate only 65% of that amount of human capital (productivity), which could be obtained in the case of improvements in current performance of national education and health sector; current disadvantages and defects of our country's education and health care systems are reducing productivity of next generation workers born today: for the next 18 years, the skills of these workers will depend on current educational opportunities and current health risks which will result in loss of their productivity by 35% [6, p. 49-68; 13].

**Table 2. Values of Human capital index and its components for Ukraine, according to the World Bank, 2018**

Component	Score
Human Capital Index	A child born in Ukraine today will be 65 percent as productive when it grows up as it could be if it enjoyed complete education and full health
Probability of Survival to Age 5	99 out of 100 children born in Ukraine survive up to age 5
Expected Years of Schooling	In Ukraine, a child who starts school at age 4 can expect to complete 13 years of school by its 18th birthday
Harmonized Test Scores	Students in Ukraine score 490 on a scale where 625 represents advanced attainment and 300 represents minimum attainment
Learning-adjusted Years of School	Children in Ukraine can expect to complete 13 years of pre-primary, primary and secondary school by age 18. However, when years of schooling are adjusted for quality of learning, this is only equivalent to 10.2 years: a learning gap of 2.8 years
Adult Survival Rate	Across Ukraine, 81 percent of 15-year olds will survive until age 60
Healthy Growth (Not Stunted Rate)	Data on stunting are not available for Ukraine

Source: [13]

Ukraine's place in Human capital index ranking can be considered quite high: according to World Bank research, 56% of all children born in 2018 worldwide will grow up to 18 years without receiving (in the best case) 50% of their productivity and 92% of children (also in the best case) will be able to reach 75% of their potential productivity [13].

### Conclusions.

Summarizing above mentioned, it should be noted that despite powerful influence of negative political, social, economic and other factors, Ukraine manages to retain sufficient potential for human capital formation, as evidenced in particular by world rankings. Availability of educated able-bodied human resources remains a competitive advantage of national economy, but the state of its usage and development cannot be considered effective.

In order to increase efficiency of human capital usage and development, Government of Ukraine in 2017 has identified the following medium-term priorities of its work: improving quality of services of health care systems, education, pension and social support; creating new health care organization; reforming educational system.

Generally agreeing with necessity of reforms in these areas for the development of human capital, it is necessary to solve the following problems: creation and provision of conditions for increasing overall well-being of Ukrainian population, primarily due to state policy of regulating level of income on the basis of scientifically grounded assessment of labour cost, tariff system of labor payment, professional and social norms and standards; overcoming labour market imbalances by means of: constant monitoring and forecasting of labour market demand and supply (by economic sectors and employment sectors, by professional groups); enhancing effectiveness of state migration policy through measures to stimulate return of Ukrainian immigrants and attraction of highly-skilled immigrants to Ukraine.

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**BUSINESS SOCIETY: ADVENT OF NEW SOCIAL REALITY**

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**Abstract.** *The key issues explored in the article are the notions of business society, social reality, creativity of business activity, as well as research into the driving forces of society's development and the impact of business on future social progress. The purpose of the study was to find the ideal model of business activity. The culture of life is proved to be the key to the development of a new social reality of business society. The comparative method of research made it possible to understand the polyphonic nature of the concept of post-industrial society. The international nature of consciousness and its role in the development of business society is revealed through a phenomenological approach. The dialectical method reveals the social meanings of business activity. Thus, a business society is identified as a social being that is generated by a market economy and represented by a community whose subjects are defined by the creative nature of life.*

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**Keywords:** *business society, wealth, welfare, human being, cyberman.*

**Introduction.**

In the 70's of the twentieth century, Daniel Bell argued for the coming new post-industrial society. Today, in the early 2020s, just few people doubted the post-industrial paradigm. The main contradiction of post-industrial society is the relationship between culture and the economy. The decisive principle of culture at the stage of post-industrial society is the idea of community self-realization. Such a community (or communities) is formed in a post-industrial society through new roles, places, meanings of such phenomena as knowledge, information, human, globalization, consumption, and so on. Accordingly, the understanding of post-industrial society becomes polyphonic in nature, since the absolutization of these phenomena has led to the emergence of a number of the following concepts: "knowledge society", "information society", "mass society", "consumer society", "globalized society", etc. The emergence of these concepts is reasonable and entirely fair, because behind each of them stands a community which is distinguished by its vital activity associated with the production and dissemination of information (information society), or the transformation of science into a direct productive force (knowledge society), or function a unified culture (mass society), or relation to the use of goods as a process of production (society of consumption), as well as the interpretation of oneself as a community in direct connection with nature and the population of planet Earth (globalized society).

The presence of such diversity in the understanding of the modern socio-historical process, the realities of current economic, political, cultural and other transformations, the rapidity and inevitability of social change are the cause of the problem of introducing and using a new concept of "business society".

The key questions about this problem are: How is the concept of business society defined? What is social reality? What is the business as social reality and concepts? The concept of "businessman", what does it mean? What is the "creative" nature of business activity? Why is business a driving force for social development? What is the business of the future of the social process?

According to the key questions, the *purpose of the study* is to find the ideal business model. And the main goal is to prove that the life culture is the key to the development of a new social reality - business society.

### **Literature Review.**

A number of theoretical sources have been used to solve the problem of the need to use the term "business society". First of all, it is D. Bell's idea [3] to periodize historical development through the notion of post-industrial society. Moreover, it has been taken into account that, depending on the main role of one factor or another, new concepts naturally emerged: "information society", "knowledge society", "consumer society", etc. Since business activity is at the forefront of historical progress, the introduction of the concept of "business society" becomes quite reasonable.

Since the concept of wealth emerges as the basis for the interpretation of "business society", the works of such researchers as A. Toffler & H. Toffler [14], F. Fukuyama [6], E. Felps [5], J. Coleman [4] have been elaborated.

Understanding "business society" as a new social reality is impossible without revealing the essence of life in this aspect of human research. In this aspect the researches of G. Arendt [1], G. Becker [2], P. Kotler [11] is very informative and useful for this study.

### **Methods.**

A complex of methods was used during this study. The comparative method make it possible to understand the polyphonic nature of the concept of post-industrial society. The method of structural and functional analysis is used to understand the penetration of business into the sphere of functioning of science and information. The phenomenological approach is used to reveal the intentional nature of consciousness and its role in the development of a business society. The dialectical method helps to uncover the social meanings of business activities.

### **Findings.**

For the first time, the concept of "business society" was introduced by the author of this publication in the article "The Fundamentals of Philosophical Education in the Context of Contemporary Social Challenges" [12]. Although it has not received a sufficient level of distribution, it is representative of the fact that it is fully visible and present in all developed countries. This is the existence of such a social reality as a market economy, which, with all its advantages and disadvantages, seeks to enter a truly civilized space, based on a particular kind of vitality, which is commonly known as "business".

Economist scholars almost unanimously argue that business is an organization of economic activity on the basis of various forms of ownership for profit. Practitioners state that business is an entrepreneurial, commercial, exchange or any other activity that is not contrary to the law, carried out for its own purpose and aimed at profit.

However, as the real life of man and society in today's globalized space shows, the polysemantics of the concept of "business" makes it possible to interpret its meaning, ranging from satisfying the desires and lifestyles of an individual to a particular social system. And such an interpretation of business takes on a philosophy, because it deals with the categorization of thinking forms. First of all, philosophy states that there can be no unambiguous conceptual definition of any phenomenon, including a business process. Therefore, the claim of economic definitions is limited to the number of definitions which characterize business (most often "entrepreneurship" and "commercial activity"). Moreover, the philosophy holds that business activities shouldn't be restricted solely because of their relationship to legitimacy and profit. The philosophy states that in the most elementary form of understanding, at the level of everyday consciousness, the concept of business is vulgarized, identified with various kinds of "economic robbery", racketeering, raiding, arbitrariness, deception of partners in business and commercial activities, etc. Then the logical conclusion is that the business must show its attitude not only about legitimacy and profit, but also its morality, individual and social efficiency and effectiveness. And, lastly, basing on the philosophical categories of opportunity and reality, cause and effect, regularity and chance, etc., attention was drawn to the fact that business is associated with risk, the limiting situation in life and, of course, both with success and with crisis, catastrophic events [2].

Therefore, in the most general, philosophical terms, it's worth to give the following definition. Business - is a special manifestation in the life of man and society, cultivated in various areas of social organism (economic, political, artistic, legal, cultural, etc.), operates at the individual, family, socio-group levels, occurs in conditions of risky relations creator of goods and user, aimed at making a profit from the product manufacturer and meeting the needs of the consumer, defined by the appropriate morality and determined by the degree of legitimacy of the implementation of the relationship of individual and social rims. That is, business is the lifeblood of society for wealth creation.

This definition of business requires a philosophical interpretation of the wealth concept. The simplest "wealth" can and should be defined as the level of "survival" of man and society in a relatively closed field of life. This field is an integrated entity, the components of which are the levels of development of social efficiency and effectiveness of the person in various spheres of life (economic, political, legal, moral, religious, household, psychological, spiritual, aesthetic, cultural, etc.). Such an understanding of wealth inevitably leads one to believe that this category is capable of reflecting not only the property or financial position of a person, but also relationships in the family, the collective, attitudes toward production and consumption, culture and art, the level of spiritual rise or fall, etc. And, of course, from a philosophical point of view, spiritual wealth is the highest, the most powerful manifestation.

It should also be emphasized that wealth cannot be talked about, without paying attention to what poverty is. Poverty is not just the antithesis of wealth, it is, above all, the point of reference from which the path to wealth begins. Therefore, at the very beginning of the interpretation of the concept of "wealth" it was defined as a level of "survival", because to survive is to go the hard way from life to prosperity, from poverty to wealth and vice versa.

Thinking about business, wealth and poverty are closely connected with the understanding of the concept of "businessman". Quite often, the term "businessman" is interpreted based on

etymological sources: "business man", "man doing his thing" and so on. However, even from the etymology of the word, there are some caveats. First of all, any translation from a foreign language is not straightforward. All categories of translation, except semantic translation, have a mental load. The combination of semantic and mental allows us to claim that a businessman is a person who does his own, no stranger's business. In addition, the businessman is a creative personality. In addition it is a creative actor. At the philosophical and categorical level, a businessman is conceived as an ideal who materializes through creative activity aimed at wealth creation. A creative businessman acts because he relies primarily on intuition and insight. A businessman really comes to any logic only when a businessman becomes an entrepreneur [8].

So, if the concept of a businessman is differentiated into the ideal image (what he should be in a civilized dimension) and the real manifestation in the modern civilization process, it becomes clear that the ideal image and the real manifestation are not the same thing.

Ideally, a businessman is the driving force behind society's development. To do this, in the realm of the unconscious, a powerful intellect, intuition, ability to illuminate, talents, educational, cultural and other values, the ability to risk, sublimate uncertainty, failure, and the like must be laid. In the sphere of the conscious, the businessman must think critically and on a large scale, demonstrate professional literacy, set identified goals, be able to keep a distance in relation to public power, and so on. And finally, in the realm of the superconscious, or in the spiritual dimension, a businessman must be imbued with an unbridled will to win, faith, hope and love for his cause, honesty, honour (not to be confused with honesty), dignity and, most importantly, individual freedom which rises to the level of acceptance by its society [13].

However, the ideal needs to materialize, whether it is desirable or not. After all, in our case, business, businessman, types and forms of business activity exist as social reality. So it is time once again to speak out loud about the emergence of a business society.

The concept of "business society" not only reflects the reality of the current stage of development of social life. This concept strongly accumulates the intentional nature of social consciousness, which gives the opportunity to focus on such a thing as a special kind of human activity in which the form (profit) is meaningfully determined in all spheres (economic, political, scientific, cultural, religious, moral, artistic and especially technical and technological). Business does not just penetrate all spheres of society. Nowadays it becomes the determinant of the development of society. After all, in a market environment, it is not only because of its nature (profit orientation) that it undertakes to satisfy the needs and interests of the consumer, it begins to intensify another (new) image of economic attractiveness, political expediency and cultural identity. The concept of "business society" allows to draw a demarcation line between business and politics, the political elite, between business and government, the state, between business and civil society [3].

The concept of "business society" allows to rethink the penetration of business in the field of science and information. First of all, the business society differentiates scientific heritage: business seeks to take in science what brings maximum, and, most importantly, immediate result. Knowledge is the bearer of this "immediacy". And knowledge is used not simply as an epistemological (theoretical-cognitive) image, but as a symbol of concrete practical action.



Knowledge as a symbol is capable of forming a person's creative ability, because it is endowed with inexhaustible ambiguity of the image, the background of which allows the subject of business activity to create its own, unique, original, related phenomenon. Therefore, in the dimensions of the business knowledge society, it is not only a powerful resource in the form of a relatively complete image of reality, which a person uses acting competently, professionally, constructively, at the level of modern technologies and so on. Knowledge, if accepted by the idea of business society, is a source of multivariate individual and collective creativity, it is a justification of a person's faith in his own intellect and talent, this is a love for his needs and interests, it is a hope for efficiency and effectiveness of success in his own business.

### **Conclusions.**

The idea of a business society leads to a rethinking of the social content of the phenomenon of information. The idea of the twentieth century, accumulated in the slogan "Who owns information, who rules in the world" is gradually losing its constructiveness, although it remains attractive enough to the general public. In today's cyberspace, anyone who is more or less proficient in computer technology has access to an infinite information field. Therefore, any cyberman considers himself the "master of the world", in fact, falling into a special virtual world, often without even knowing what bondage he finds himself in. Understanding of the meaning and role of information through the concept of "business society" leads to the following idea. In the 21st century the understanding of human-information interaction should be: "Not one who rules the world who owns information, but one who, in a boundless and continuous flow of information, finds confirmation of his creative ideas". And here comes one more remark about business ideas. First, any idea is a starting point for a particular action. Second, business is the creative activity of the entity to create wealth. And third, wealth is a measure of the social productivity of a business society.

Foundations about business society as a new social reality are, of course, incomplete. It would be advisable to offer a detailed look at the relationship between business and politics, business and morality, business and culture, and so on. However, these brief justifications already lead to the following conclusions. In particular, if the most general definition of a society cultivated in modern literature that "society is a natural-social, self-sufficient community of people" is taken as the basis, then the following generalization can be made accordingly: A business society is a social being that is generated by a market economy and represented by a community whose subjects are defined by the creative nature of life.

Such definition would be appropriate and scientifically valid given that it has two dimensions: abstract and concrete.

The abstract (rather idealized) dimension emphasizes that business society is represented by a community that chooses work as the source of wealth creation as the basis of its vital activity. In addition, this community seeks to cope, often at risk, with social change, in order to create the economic foundation for an effective and productive society. In order to cope with the inevitable social changes, this community chooses not just a job but a team that operates under civilized rules. In turn, civilized rules require political, legal, moral, artistic and even religious support. And such support will only emerge when society is convinced the business community is the main driving force for social progress.

Concerning the specific (rather real at the moment) dimension of a business society, the following should be noted. Today's business communities have many unresolved issues. They are known and noticeably weighty. First of all, it is the uncivilized character of business activity, confrontation with the state, different strata of society, moral and religious principles. However, these issues will definitely be overcome.

The fact remains that business society is a new social reality. In a civilized, progressive form, it is already born and inevitably emerges as an inexhaustible source of success for the individual in particular and for society as a whole.

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## **MAIN DETERMINANTS OF HUMAN CAPITAL FORMATION IN CONTEXT OF GLOBAL SUSTAINABLE DEVELOPMENT GOALS**

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**Abstract.** *The expediency of the state's focusing on human development and reforming of education, healthcare, and social security, aimed at human capital formation, was substantiated. A methodological approach was proposed for classification of the regions of Ukraine by the level of using human capital in accordance with the Sustainable Development Goals (SDGs). With the help of the hierarchy analysis method, a tree diagram (dendrogram) of clusters of the Ukrainian regions has been built, taking into account the level of achievement of the SDGs that have an impact on human capital formation. It is noted that based on the conducted cluster analysis it is possible to make diagnostics of the bottlenecks in introduction and implementations of SDGs at regional level, establishment of a structure of cluster interconnection with a view of making considered universal public-administrative decisions for homogeneous region groups. As a result of the research it has been proved that at the present stage of state formation there is a need to modernize the system of public administration, to overcome regional differences in ensuring human capital development. Proposals have been elaborated to strengthen the state influence on human capital formation in Ukraine.*

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**Key words:** *human capital, regions, clusters, sustainable development.*

### **Introduction.**

The economic development of a vast majority of countries is increasingly dependent on the development of knowledge-intensive activities, creative industry, and the service sector. The modern concept of Industry 4.0 envisages the deepening of processes directed towards information technologies, automation of production, and innovative solutions. In knowledge-based economic systems, human capital turns into the main development driver. In recent years, the world has witnessed the high priority attached to studies promoting structural reforms in which human capital has a significant role to play.

The advent of new technologies and formation of future trends involve the adaptation of skills, abilities, and competences of specialists to the urgent needs of the labor market, and the need to increase labor productivity. Thus, introduction of high-tech industries in the short term should be ensured through forming human capital in a variety of ways (development of education, science, healthcare, guaranteeing a safe environment, ensuring social protection of the population).

According to the Organization for Economic Co-operation and Development (OECD), human capital is to be understood as a totality of knowledge, competence, skills and other human qualities that play an important role in economic activity [9]. In today's context, human capital is characterized by intelligence, innovation, a propensity for partnership, and learning mobility. Human capital develops over lifetime due to continuous investment at the level of the individual, enterprise and state. In terms of human development, real progress can be achieved through quality education and healthcare systems and other areas related to human development [2].

The objective of the research is substantiation of the expediency of applying the hierarchy analysis method for grouping the regions of Ukraine by the level of achievement of the Sustainable Development Goals, determining regional disproportions and making effective public-administrative decisions as to human capital development.

### **Analysis of recent research.**

#### ***Areas of human capital formation.***

Sources that determine the level of human capital development are investments in education, healthcare, and their related infrastructures [18]. A broader understanding of human capital expands the investment area: science, innovation, labor market stimulation, migration processes [11, p. 8]. The said areas of human capital formation are reflected in state programmes and legislation that regulates the respective spheres. Issues related to the growth of indicators characterizing human capital are on the agenda of any country's economic development policy. Increasing investment in human capital (education, healthcare) can help remove barriers to productivity growth. The capacity of the education system to adapt to the needs for certain skills has become a key determinant of productivity and distribution of technological change impact [1].

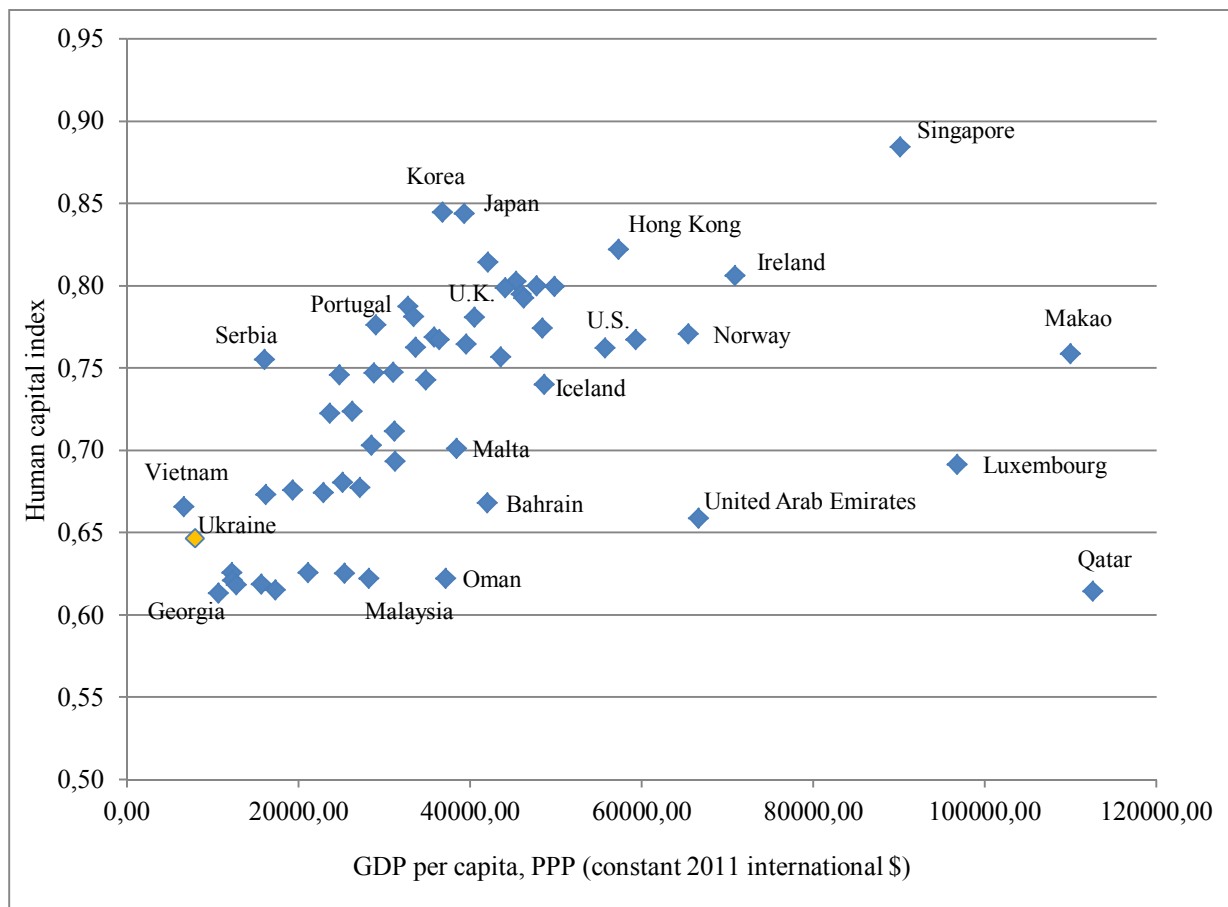
Each area of human capital formation of a region has a significant impact on its economic growth. Education affects productivity, the level of innovation, healthy lifestyles, and innovative technologies. Strengthened knowledge increases productivity in both the market and consumer sectors. Productivity growth has the effect of increasing wages, facilitating access to healthcare services, which ultimately leads to faster growth and overall improvement in general standards of living [3, p. 122].

Similar findings were made public in the study [8] that considered a relationship between spending on education and healthcare, and economic growth. An empirical analysis has shown that education and healthcare are crucial for economic growth. Research into the link between higher education, human capital development and economic growth proves that higher education is a prerequisite for training of highly competent experts, which contributes to the development of the economy as a whole. Higher education is expected to play an important role in the development of human capital of any country and will remain the basis for human capital development and the economic growth of any nation [4].

There exist different approaches to determining the level of a country's human capital. One of the well-known indicators is the Human Capital Index (HCI), developed by the World Bank experts and released in 2018 with the aim of improving indicators that affect human capital formation.

The index assesses the human capital of the next generation, which is defined as the amount of human capital that a child born today can accumulate, taking into account the risks associated with poor health and education in the country of residence.

HCI includes three components: survival; length of schooling, adjusted by learning outcomes; and health status. The Human Capital Index which determines the results of the human capital of the next generation shows how human capital, depending on education and healthcare, differs in different countries [18]. The correlation between GDP per capita and values of full education and sound health indicators in the countries with HCI above 0.6 provides a remarkable example (Fig. 1). A significant GDP per capita is not necessarily a guarantee of a high level of human capital formation.



**Fig. 1. Productivity relative to benchmarks of full education and sound health**  
 Source: [7; 18]

The Bangkok Charter states that policies and partnerships aimed to empower communities and improve people’s health should be the focus of global and national development [19]. The state is responsible for creating an environment that stimulates educational institutions to innovate, respond to the needs of the globally competitive knowledge economy, and the labor market demands – to prepare highly developed human capital. The system of higher education forms the human capital needed for the effective functioning of state power, economic development, and training of specialists [16].

### ***Sustainable Development Goals.***

The development programmes of the United Nations Organization and the World Bank [17], aiming at a gradual comprehensive growth of countries' economies, improving living standards, and enhancing security, have been translated into the sustainable development concept. The concept of sustainable development, recognized by the United Nations as the consensus official paradigm of economic development, determined an obligatory participation of all countries in solving a variety of social and environmental problems, transforming modern business models and strategies for society, nature and people [2].

In 2015, the Sustainable Development Goals (SDGs) were formulated to determine the set of goals and targets to be achieved by 2030. The development goals are an integral part of the 2030 Agenda which is an official declaration adopted by UN members and the Global Action Plan for achieving sustainability in all countries. The Agenda contains 169 targets and diverse indicators for monitoring, based on the 17 Sustainable Development Goals for managing economic, environmental and social aspects [6; 15].

The Sustainable Development Goals are set out in a resolution adopted by the UN General Assembly [14]. Goal 1 (No poverty) is related to other goals regarding health and well-being (Goal 3), clean water and sanitation (Goal 6), affordable and clean energy (Goal 7), and the climate (goal 13). Food security (Goal 2) is linked to the goals of decent work and economic growth (Goal 8) and reducing inequalities (Goal 10), which will contribute to poverty eradication (Goal 1) [5]. The United Nations Conference on Trade and Development (UNCTAD) [13] recommends that better opportunities should be created to attract foreign capital in order to address these challenges. Human capital is a major generator of regional capacity development, and consequently, of a steady growth in developing countries' economies. A key role in formation of a top-grade human capital is played by the development of quality social, transport and engineering infrastructures, namely: housing, kindergartens, schools, universities, hospitals, sports and entertainment complexes, cultural sites, transport, energy facilities, utility networks that make people's life comfortable and fulfilling [10]. The formation of human capital has its own regional features and possibilities. According to the results of the analysis of indicators related to healthcare, education, social security, labour market and life quality, taking the regions of Ukraine as an example, a conclusion can be made that there exists a certain territorial differentiation which demonstrates a non-uniform achievement of the main determinants of human capital formation.

### **Methods.**

The grouping of regions by the criteria of their achievement of SDGs was performed with the aid of the hierarchical clusterization algorithm. The assessment of the level of human capital formation across the regions of Ukraine according to the author's methodology is as follows. To model the level of human capital formation in the regions, it is proposed to select criteria based on 24 indicators that are part of the 5 Sustainable Development Goals adapted for the regions of Ukraine, which allows making a sufficiently detailed analysis of the determinants of human capital formation at the regional level in the context of the global Sustainable Development Goals. The indicators that characterize Goal 1 (No Poverty); Goal 3 (Good Health and Well-Being); Goal 4 (Quality Education); Goal 6 (Clean Water and Sanitation); Goal 8 (Decent Work and Economic Growth) were taken into account (Table 1).

**Table 1. Indicator values for each Sustainable Development Goal [19]**

SDG	SDG indicator
Goal 1	1.1.1 (a). Share of the population whose average per capita equivalent money income per month is lower than the actual minimum subsistence level in the total number of population, %
	1.3.1. (a). Share of households which report themselves as poor while assessing their material well-being, %
	1.3.2. Share of food expenditure in total household spending, %
Goal 3	3.2.1. Mortality of children under 5, cases per 1.000 live births
	3.3.1. Number of patients diagnosed with HIV for the first time, per 100.000 persons
	3.3.2. Number of patients diagnosed with active tuberculosis for the first time, per 100.000 persons
	3.5.1. (a). Average expected lifespan for men upon reaching age of 15
	3.5.2. (a). Average expected lifespan for women upon reaching age of 15
Goal 4	4.1.1. (a) Share of attendants of secondary education institutions in total permanent population aged 6-17, %
	4.2.1. Net pre-primary education institutions coverage for number of children of relevant age, %
	4.4.1. (a). Number attendants of higher education institutions (III-IV accreditation grade) per 10.000 persons of population
	4.4.2. (a) Number of higher education institutions (III-IV accreditation grade), per 100.000 persons of population
	4.5.1. (a). Number of persons who attended educational institutions (I-IV accreditation grade), per 10.000 persons of population
	4.7.1. Share of rural full-time secondary schools with Internet access, %
Goal 6	6.1.3. (a). Rate of communal drinking water sources compliance with health and safety regulations, %
	6.1.5. Share of the rural population with access to centralized water supply utilities, %
	6.1.6. Share of the urban population with access to centralized water supply utilities, %
	6.2.1. (a). Share of the rural population with access to centralized water drain, %
	6.2.2. Share of the urban population with access to centralized water drain, %
Goal 8	8.1.2. Share of capital investment to GRP, %
	8.1.4. (a). Share on innovation costs in GRP, %
	8.2.2. (a). GRP per one employed person, UAH thousand
	8.2.3 (a). Share of intermediate consumption in sold region's product, %
	8.3.1. (a). Employment rate among persons aged 15-70, %

**Results.**

Indicators with different dimensions and measurement units have been standardized in STATISTICA, version 10. The standardization is performed according to the formula:

$$z_{ij} = \frac{x_{ij} - x_i}{\sigma_i}, \tag{1}$$

where  $x_{ij}$  is the value of i-th variable for j-th population;

$x_i$  – mean level of i-th variable;

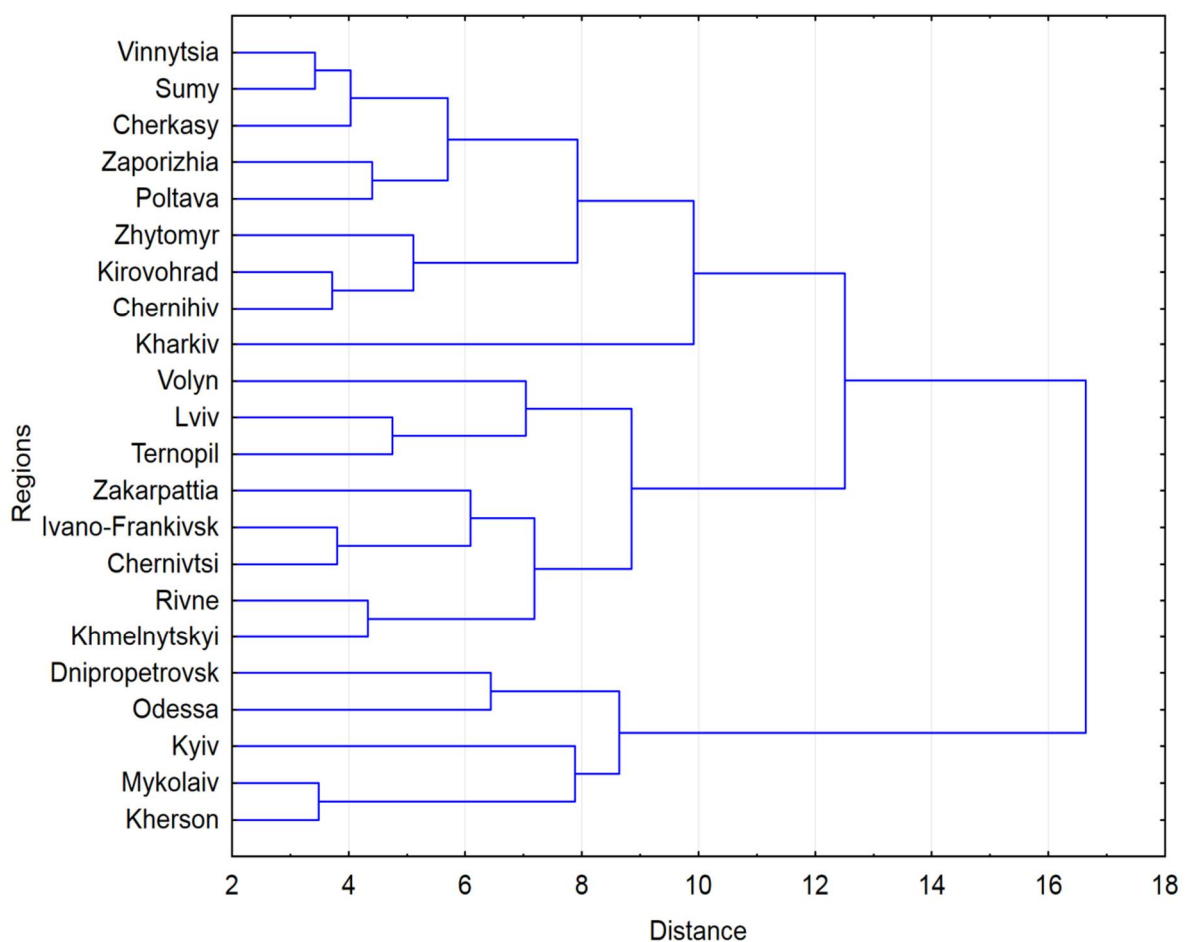
$\sigma_i$  – root-mean-square deviation of i-th variable.

Classification of the regions was carried out by a hierarchical clustering method using the Euclidean distance. The Euclidean distance is calculated by the formula:

$$d_e(x,y)=\sqrt{\sum_i(x_i-y_i)^2} \quad (2)$$

where  $x = (x_1, x_2, \dots, x_i)$ ,  $y = (y_1, y_2, \dots, y_i)$  – vectors of variable values of two observations.

To conduct clusterization of the regions, one of the most effective methods was used – the Ward's method which differs from all other methods in using variance analysis for assessment of distances between clusters. The method minimizes the sum of squares for any pair of clusters that can be formed at each step. For visualization of the cluster analysis results, a horizontal dendrogram was built (Fig. 2).



**Fig. 2. A dendrogram of clustering of the regions of Ukraine**

As a result of cluster analysis, three groups of regions were obtained (Table 2).

Regarding the specificity of the clusters identified, it should be noted that the achievement of the Sustainable Development Goals by the regions is rather uneven. Cluster 1 is characterized by high rates of achievement for Goals 6 and 1. Goals 3 and 4 need greater attention to speed up implementation of the required measures. Kharkiv region should be singled out, as it demonstrates some of the best rates of achievement of Goals 4 and 6, and high achievement rates for Goals 1 and 8, the specified feature being shown by the dendrogram of clustering (Fig. 2).



The 2nd cluster groups the regions that have high rates of achievement of Goals 6 and 3. In contrast, the achievement of Goals 1, 4 and 8 rates below the national average. The 3rd cluster is characterized by values of achievement of Goals 1, 6 and 8, mostly exceeding the Ukrainian average. At the same time, the regions included in this cluster have relatively low rates of achievement of Goals 4 and 3.

**Table 2. Groups of the regions of Ukraine according to the level of achievement of SDGs**

<b>Clusters</b>	<b>Regions</b>
1	Cherkasy, Chernihiv, Kharkiv, Kirovohrag, Poltava, Sumy, Vinnytsia, Zaporizhia, Zhytomyr
2	Chernivtsi, Ivano-Frankivsk, Khmelnytskyi, Lviv, Rivne, Ternopil, Volyn, Zakarpattia,
3	Cherson, Dnipropetrovsk, Kyiv, Mykolaiv, Odessa

With regard to individual indicators, attention should be paid to the worst values of achievement of the Sustainable Development Goals. As for indicator 1.1.1 (a) (Share of the population whose average per capita equivalent money income per month is lower than the actual minimum subsistence level in the total number of population), the highest percentage was recorded in Rivne region. The worst value of indicator 3.2.1 (Mortality of children under 5, cases per 1.000 live births) belongs to Zakarpattia region, while the highest value of indicator 3.2.1 (Number of patients diagnosed with active tuberculosis for the first time) is in Odessa region; Kirovograd region has the lowest indicator 4.5.1 (a) (Number of persons who attended educational institutions (I-IV accreditation grade)); Chernivtsi region is characterized by the lowest value of indicator 6.1.3 (a) (Rate of communal drinking water sources compliance with health and safety regulations); the worst value of indicator 8.3.1 (a) (Employment rate among persons aged 15-70) is shown by Ternopil region. This situation requires an in-depth analysis of the problems of these regions and research of factors that preclude creation of the adequate conditions for human capital formation.

### **Conclusions.**

The use of the cluster method of analysis has allowed discerning the groups of regions, characterized by different levels of achievement of individual Sustainable Development Goals which have an impact on human capital formation. Based on the carried out cluster analysis, it is possible to perform diagnostics of the weaknesses in the implementation of the SDGs at the regional level. The tasks of the state authorities are to accelerate the implementation of the state strategy and programmes of regional socio-economic development; to increase access to vocational education; to strengthen resource- and energy-saving measures; to ensure the development of education and science, an adequate level of healthcare; to improve the quality of life and local government efficiency; to intensify social dialogue as a tool for interaction between civil society and the state; and to increase labor market opportunities.

Therefore, at the present stage of state formation, there is a need to modernize the public administration system, to overcome regional unevenness in ensuring the development of human capital, and to strengthen state impact on human capital formation in Ukraine. The achievement of the SDGs at the regional level should provide the necessary opportunities for a purposeful formation of human capital.

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## Section 4. Public Administration and Entrepreneurship Education

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## **ANALYSIS OF THE SYSTEM OF PROFESSIONAL DEVELOPMENT OF TOURIST SUPPORT SPECIALISTS IN UKRAINE**

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**Abstract.** *In this paper it is stated that the gap between the existing system of professional development of personnel and the real needs of tourist establishments in Ukraine is a major problem in tourism industry. The main problems of professional development are the lack of programs aimed at updating practical knowledge and skills needed in the tourism business; the absence of teachers who have experience in tourism and high theoretical and methodological special, as well as pedagogical training. The paper also presents some theoretical aspects of organization of training and retraining of tourist support specialists in Ukraine, as well as a generalized brief analysis of the programs of training and retraining of guides in Ukraine, including an example of one typical program of training and retraining of tourist support specialists (guides) in one of the regions of Ukraine.*

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**Keywords:** *tour guide, tourist support specialists, training of specialists, continuing education courses.*

### **Introduction.**

Currently, almost all over the world, tourist institutions feel the need for professional tour guides. Changes in the sociocultural sphere require experts in the field of excursion to have great plasticity, the capability of mobile reorientation within the profession with minimal adaptation time.

Specialists in the field of excursion must not only acquire theoretical knowledge and practical skills in the field of creation and conduct of excursions, but also to acquire a complex of broad professional skills in the field of the most effective social technologies.

Introduction of new subjects at all levels of continuous tourism educations of particular importance for improving the qualification and professional retraining of specialists in tourist support (guides), in the development of interests, inclinations, motives for choosing a profession, gaining experience of excursion activities.

The gap between the existing system of professional development of personnel and the real needs of tourist establishments in Ukraine is a major problem in tourism industry.

The main problems of professional development are the lack of programs aimed at updating practical knowledge and skills needed in the tourism business; the absence of teachers who have experience in tourism and high theoretical and methodological special, as well as pedagogical training.

To determine the content of the programs of professional development of guides, it is necessary to analyze: what the current normative bases of advanced training in the education system in tourism are; what is needed to ensure the quality work of the guide, and what the content of the training courses in Ukraine is.

We believe that any program of study courses for guides should provide a solid basis for obtaining and improving the professional knowledge of the guide, to allow organic connection with the excursion activity, general tourist, recreational, cultural, historical, psychological and pedagogical knowledge that will allow the tourist support specialists to combine both the direct work of the guide in the tours, and the work of the tour organizer.

### **Results.**

#### ***Problems and prospects of the excursion tourist services market in Ukraine.***

In today's context, the tourist services market is a large and well-developed branch of the economy. In the entire tourism industry, the first place is given to tourism services. Elements of the tourist services market include establishments and enterprises aimed at meeting the needs of tourists (comfort, content, attraction, and others). In general, the tourist services market is considered to be an inter-sectoral economic complex, which is based on the creation of a tourism product that meets the needs of the population [3].

In the last decade, there has been a lot of positive things in the field of excursion tourism services [1]:

- understanding of the importance and need for joint discussion of development of excursion tourism services has been reached at all levels, including media, as well as the need for creation of a modern tourism industry in the country, which is one of the priority sectors of the economy, since it has a significant multiplied effect and stimulates the development of related industries;

- positive practices of state regulation in the sphere of tourist services, in terms of using an effective mechanism for attracting investment in tourism, based on public-private partnership, the formation of a civilized market for excursion tourism services, including the implementing of legal rules aimed at protection of the rights and legitimate interests of consumers of excursion tourism product, quality and safety of these services, implementation of new standards and classification of tourism industry objects, new information technologies, creating regional tourism development programs;

- legal normative documents that form the basis for civilized market for excursion tourist services in our country have been adopted.

At the same time, factors of both objective and subjective nature continue to affect the current state and further development of the excursion tourist services market.

Development of domestic tourism will undoubtedly have a significant impact on development of international tourism and its services market. Forecasts for the next decade show that the leading role in tourism will belong to countries such as China, USA, France, Spain, Italy, United Kingdom, Turkey, Egypt [4; 10].

The underdevelopment of inbound tourism, in turn, will lead to the fact that the resource base of domestic cultural excursion tourism in Ukraine will be used by only 10 – 15% of its potential. Also, in the field of domestic tourism there will be no complete commodity-money exchange as a basis for economic development of this industry. The main reason and answer to the question: ‘Why do Ukrainian citizens not want to vacation in their home country or travel so little?’ – is low wages of the main part of the population and insufficient level of material well-being of the mass consumer, especially the elderly, i.e. pensioners. High prices of rail and air travel do not allow long trips in our country. These factors significantly reduce the demand for excursion and tourist services [2].

The development of excursion tourism services is hampered by a small proportion of domestic tourist companies represented at international exhibitions. This creates another problem — insufficient promotion of domestic excursion and tourism product in the domestic market. It should be noted that Ukrainian tourism enterprises find it difficult to compete in promoting their product in the global tourism market, while their western competitors enjoy numerous tax and foreign economic benefits, which Ukrainian enterprises and organizations are deprived of.

The most significant problems that require the formation of a complex of state support measures in the regions also include [5]:

- insufficient investment in the development of regional tourism infrastructure;
- insufficiently active promotion of the excursion tourist product in the regions with excellent potential and natural base for the development of excursion tourism;
- problems in training and advanced training of personnel in the field of tourist support services in Ukraine and these problems are more complicated than just a shortage of graduates.

Training and retraining, as well as professional development of staff in the field of tourist support services can be one of the main advantages of tourism market development, because the quality of services provided depends directly on the skills of the staff, and the satisfaction of guests in the service sector is achieved due to the efficiency of tourism specialists.

#### ***Theoretical aspects of the organization of advanced training of guides.***

The purpose of professional development is to provide psychological and pedagogical support to the students in their social self-determination in practical life, professional career in the conditions of dynamic social changes. In Ukraine, the training of specialists of tourist support (guides) is carried out at the courses of advanced training centers. Depending on the goals and objectives of these courses, students are offered a variety of training programs: long-term and short-term. Principle tasks of professional development are: education and practical training of a free, functionally competent citizens, capable of cooperation in the interests of the individuals, society and the state; further improvement of the educational process; change of forms and methods of educational work; extensive use of interactive educational and new information technologies.

Today, the content of the professional development of guides embraces the connection between the following aspects: excursion activity, general tourist-recreational, cultural, historical, psychological-pedagogical and local history, which allows the tourist support specialists to organically combine the work of excursion guide, tourist group leader and organizer of excursions [9]. Professional development of specialists of tourist support (guides) is carried out mainly by the block-module courses, which are divided into several special courses.

Each block is considered as a separate special course, the goals and objectives of that are determined by the motive of students' training or a specific request of a tourist-excursion institution. Generalized analysis of advanced training courses for tour guides in Ukraine showed that the content of the first special course mainly includes such disciplines as general tourism studies, legal bases of tourist activity, as well as the regional component. Students complete training by preparing a business game or presentation. The students are given the homework: to create a model of a tour company, a tour department, to study the touristic potential of a region, excursion objects that allow to create a thematic excursion [9].

The organization and methodology of conducting the first special course is of great importance for increasing the motivation to study. Homework always includes teacher-student collaboration to provide guidance on how to complete the homework.

The second special course is usually held in a month. The main content of it – the study and improvement of the methodology of excursion. The course work starts with presentation of homework. In the process of advanced training different forms and methods of training are offered: analysis of life situations, field trips, study trial excursions and the like. At the end of the course, preparation for the development of a new thematic excursion begins, with further preparation of technological documents, students receive homework.

A month later, students are usually offered a third special course; its main content is related to the professional skills of the guide. The beginning of this special course includes presentation of the prepared homework. To improve the professional skills of the guide and to achieve success, active training methods are used.

So, summarizing all of the above, we can say that block-modular courses existing in our country for professional development of guides provide the opportunity to gain both theoretical knowledge and experience of practical activity and to increase the motive for learning.

#### ***Analysis of professional development programs and retraining programs for guides in Ukraine.***

Having analyzed the various study program plans for training and retraining of specialists in tourist guides (guides) in our country, we have made the following general analysis and conclusions, which are presented below.

Courses are held on the basis of higher or secondary vocational education. The curriculum is approximately 300 hours. Duration of study – 3-4 months. Form of study – evening, 3 times a week, practical classes – on weekends. The course program includes the following disciplines: the basics and techniques of conducting excursions, the basics of religious studies, architecture, history, culture and technology of language, the basics of psychology of communication and conflictology. As well as preparing the theme and route of the excursion. Form of knowledge control – exam and test tour.

During the preparation of the following courses:

- 1) study of the theory and practice of excursion;
- 2) formation of a system of theoretical knowledge and practical skills for students to prepare and conduct excursions of different types and for different groups of excursion participants;
- 3) formation of students' complex understanding of the field of organization of excursion service and exhibition activity at the enterprises of tourism and hospitality industry on the example of international and domestic practices.

The main tasks of preparation for professional development courses are as follows: 1) to learn the step-by-step design of the excursion; 2) to master the basic methodological techniques and technology of conducting excursions; 3) to work out the basic methodological techniques and technologies of conducting excursions during practical classes; 4) to promote the formation of professional skills of future employees of the tourism industry; 5) to form skills and to develop technique of transmitting the information during bus excursions [7].

Upon completion of the courses a certificate on the specialty “Tour/excursion guide” is conferred, which gives the right to engage in professional activities.

Professional courses and retraining courses for those who love and are interested in the history, cultural heritage, natural features of their region, as well as for those who are sociable, ready to expand their horizons, continuously update and improve their knowledge and would like to get new a profession that can become a source of both basic income as well as additional income, while combining hobby with work.

The courses provide information on how to select, formulate and effectively communicate their knowledge to a broad audience, select the necessary factual material, prepare individual text of the excursion, using methodological techniques [8].

Further, we consider it necessary to review as an example the typical specialized training courses for guides, which are conducted in one of the regions of Ukraine, namely in Sumy region. These courses were designed for those who love and are interested in the history, cultural heritage, natural features of Sumy and Slobozhanshchyna; for those who are ready to broaden their horizons, to continuously update and improve their knowledge; for those who have a basic higher or secondary education and would like to get a new profession that can be a source of both basic income and additional income, while combining hobbies with work.

Courses include not only mastering theoretical knowledge of the legal framework of tourist activity in Ukraine, local history, excursion methods, pedagogy and psychology basics, but also mastering practical skills and real experience of excursions with different categories of participants, the ability to hold groups attention, as well as how to make excursions unique and informative.

The course students are provided with all the prerequisite for mastering the necessary amount of practical knowledge and skills of the guide, which allows them to realize themselves in the process of communication and to receive daily assessment of their work.

The short course program for guides consists of the following topics [6]:

1. Labor protection;
2. Labor legislation and legal regulation of excursion activities;
3. Basics of excursion and organization of excursion services. Professional mastery of tour guide;
4. Professional ethics and psychology. Fundamentals of conflict in the professional activity of tour guide;
5. Methods of preparation and conduct of excursions: choice of theme; work with sources; historiography; creating a route; technological map of the route; selection of objects; control and individual text of the excursion; methodological techniques and technology for conducting excursions; quality of the excursion, means of its evaluation;

6. Organization of transportation: the classification of the vehicles and their types; choice of transport and legal support of transportation; transport safety;

7. Sumy Region tourist resources and local history: defining cultural monuments, archeology and history of Sumy region and historical events related to them; main stages of settlement and development of Sumy region; founding of the city of Sumy; historical figures; cultural heritage of the region; architecture of Slobozhanshchina;

8. Study of tourist routes of Sumy region;

9. Imitation of excursions with participating students;

10. Final lesson and exam.

Each student prepares the author's excursion and conducts it first in the classroom (virtually) and then in real conditions on the route.

### **Conclusions.**

So, summarizing all of the above, we can draw the following conclusions that our analysis of the training system of guides in Ukraine showed the following: in the courses of training and retraining of specialists in tourist support in Ukraine students can obtain not only theoretical knowledge from the legislative and regulatory framework of tourist activities, local history, excursion methods, pedagogy and psychology basics, but also practical, real experience of excursions with different categories of participant, ability to hold the attention of the group to act in non-standard situations, and most importantly - how to make a tour the most unique and informative. The principle and at the same time the main task of such courses is to help everyone to acquire the necessary amount of practical knowledge and skills of the guide's profession, this unique attractive and prestigious profession, which allows individuals to develop professionally in the process of communication and receive daily evaluation of their work.

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## **CHALLENGES AND ISSUES IN DEVELOPING UKRAINIAN STUDENTS' FINANCIAL LITERACY AND ENTREPRENEURIAL SKILLS**

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**Abstract.** *The article deals with the actuality of a problem of the development of students' financial literacy and entrepreneurial skills as key life competencies in the context of European integration and education reform in Ukraine. The purpose of the study is to identify innovative teaching methods of the development of students' financial literacy, entrepreneurial skills, and consumer culture, which will contribute to the formation of a competitive person (Homo Economicus) under market economy conditions. The main principles and approaches (competence, personal oriented, and gender) of the financial education of students are methodologically determined. The role of partnership between a family, educational establishment, and business for the development of Ukrainian students' financial literacy and promotion of entrepreneurship education is revealed. An effective training kit (a programme "Financial Wisdom of Family Pedagogy" and a manual "Open Family Studios: "Financial Wisdom of Family Pedagogy") taking into account the Ukrainian economic mentality and family educational potential are developed (within the framework of the project "Financial Sector Development Program (USAID/FINREP-II)").*

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**Keywords:** *financial literacy, entrepreneurial skills, entrepreneurship, "Open Family Studios", students.*

### **Introduction.**

A market economy and European vector of Ukrainian educational policy require the formation of a competitive and financially literate person (Homo Economicus) by the international living standards, economic stability and security of the country. According to the normative educational documents (Law of Ukraine "On Education" [1], Concept of the New Ukrainian School [2]), the priority tasks of the educational system are the development of ten key competencies of students, in particular: financial literacy, initiative, and entrepreneurship as a necessity for their successful future life.

The challenge of time is to promote adult education among parents and teachers who are the main agents of economic socialization of a child. Their influences on developing children's financial literacy, entrepreneurial skills, forming non-stereotypical economic thinking concerning the relationship between the human and money, and projecting the creative models of financial behaviour are undeniable.

### **Problem Statement.**

The relevance of the problem is confirmed by the sociological research on the financial literacy of the population, and knowledge about protection of consumers' rights, conducted over the last ten years in Ukraine [3–5]. According to the survey results that U. S. Agency for International Development (USAID), and the National Bank of Ukraine has released on June 6, 2019, 41% of Ukrainians have a lack of financial literacy, low economic and financial awareness, little interest in financial news, etc. The overall financial literacy index in Ukraine showed big differences across age, income levels, and education [6].

The National Bank of Ukraine has developed its vision on developing financial literacy of the population on the national level, which is presented in the Strategy for Financial Literacy (2019). The vision of the Strategy is forming “a financially literate European Ukrainian”. The Strategy is developed taking into account European values and includes 5 priority decisions: **a) change the financial culture** (forming financially responsible behaviour of Ukrainians); **b) make Ukrainians more European and more financially aware** (the citizens are expected to share European values and be ready to live according to European standards and values); **c) focus on youth** (youth aged from 10 to 24 years (generation Z and Alfa) is the target audience; increasing financial awareness in the family and among peers, defining a model of financial behaviour and financial safety); **d) introduce a central communication platform**; **e) build a financial literacy hub for the Ukrainians** (the Information and Communications Centre) [7]. The specificity of the financial education of children and youth in Ukraine is still an under-researched topic. Today there is the question “Will the school and family be able to form a financially literate person?”

### **Research Questions.**

European countries have relevant experience in implementing educational programmes to improve the financial literacy of the population (UK, Germany, and Austria). Similar international programmes are implemented in Latvia, Luxembourg, Slovenia, the Netherlands, France, and Poland. It should be mentioned that children and youth are the target audience for all programmes.

Theoretical and applied aspects of the problem of developing student' financial literacy are presented in foreign studies N. Ahmad, R. Yusof, A. Ahmad, & R. Ismail [8], M. Bacigalupo, P. Kampylis, Y. Punie, & G. Van den Brande [9], N. Plakalovic [10]. E. Garman & E. Fogue [11] explain a content “financial literacy” as a complex of knowledge, facts, concepts, and principles, as well as technological tools which are the basics of management of income and savings. Within the EntreComp study, M. Bacigalupo [9] interprets entrepreneurship as a transversal key competence which applies to all spheres of life and helps citizens to develop their ability to actively participate in society, to manage their own lives, careers, and to start value-creating initiatives. Researcher N. Plakalovic [10] notes factors affecting the development of students' financial literacy: school achievements and individual cognitive ability which acts as the key factor that contributes to good financial management.

Having such knowledge allows them to make a smarter and wiser financial decision based on the given information which then will help them live free of financial problems.

The problem of developing financial literacy and entrepreneurial skills is presented in scientific works of Ukrainian scientists. Researchers at the Social Psychology Lab of G. S. Kostyuk Institute of Psychology of the National Academy of Pedagogical Sciences of Ukraine investigate social and psychological aspects of economic socialization of youth (N. Dembytska, O. Lavrenko, T. Melnychuk, V. Moskalenko, & I. Zubiashvili [5]). Gender aspects of economic socialization of children and youth are investigated by T. Hovorun, O. Kikinezhdi, & I. Shulha [12], and Ya. Vasylykevych [13]. O. Kiz [14] studies the problem of developing boys and girls' financial literacy, who are brought up in the conditions of deprivation of parent-child relationships. Scientist mentions that socialization without the necessary social models in a boarding school is directly connected with personal helplessness in self-solving financial problems in adulthood period; and causes passive behaviour, and "waiting" position in behavioural strategies.

Professor T. Smovzhenko [15] points out that financial literacy helps to understand key financial concepts and use them to make decisions about income, expenses, and savings. Financial literacy provides the ability to choose the required financial instruments, budget planning, and saving money for future goals, etc. According to Z. Filonchuk [16], financial literacy allows a person to analyse and evaluate the basic tendencies of the economic life of the state and determine models of their financial behaviour and financial security depending on circumstances.

#### **Purpose of the Study.**

Today there are lots of studies focussing on the financial education of children and youth. However, researchers are still searching relevant innovative pedagogical technics, forms and methods of partnerships in the triad "family – children – educational institutions" for developing entrepreneurial skills of children and youth and popularization of financial education in society. That's why *the purpose of our study* is to identify innovative teaching methods of the development of students' financial literacy, entrepreneurial skills, and consumer culture, which will contribute to the formation of a competitive person (Homo Economicus) under market economy conditions.

#### **Conceptual Models.**

The Concept of Forming Financial Literacy in General Educational Institutions determines that the purpose of financial education is to develop economic thinking of secondary school students; create the conditions for their effective socialization; improve psychological, spiritual, and social health [17].

According to the Concept and within the framework of the project "Financial Sector Development Program (USAID / FINREP-II)", programmes and teaching kit of the educational course "Financial Literacy" (for students of grades 2–10) have been developed and tested on general secondary and higher education institutions (2012–2019). T. Smovzhenko was a project manager. The implementation of this educational course helps to develop not only economic thinking but also financial literacy and financial culture of students, parents, and teachers.

From our point of view, developing financial literacy and entrepreneurial skills would be best to start at the primary school as the "foundation" of personality formation. Because junior school age is the most favourable for learning life knowledge and skills in family economics, elementary financial concepts (financial alphabet), which is the basis for developing economic thinking in adulthood [18].

Scientific research and pedagogical practice have shown that educational institutions and teachers are insufficient sources for economic information. Thus, the peculiarities of inclusion of a child to the family economic subsystem should be studied. Family is a place where the role of money in the parent's value representations is determined. Children learn elementary economic concepts; their basic economic and psychological qualities and financial consciousness are formed here. A family becomes an important platform for entry of junior children to a difficult, unknown and interesting financial world.

At the same time, parents very often do not have the necessary basic financial knowledge and pedagogical management skills in the financial field that causes inefficient economic socialization of children in the family, and difficulties in their further life in the world of the "real" economy.

### Research Methods.

An empirical study of the economic attitudes of junior students' parents, who are the main agents of economic socialization of a child, has been conducted. A psychodiagnostic toolkit included such techniques as questioning, interviewing and incomplete sentences. The author's survey "Parents' Economic Attitudes" included a list of 40 economic categories, among them the parents would chose the ones they understood the best, the definition of which they could provide (continue as incomplete sentences), and explain how average citizens encounter with them in everyday life. All categories are grouped into the following groups: the public sector and the family sector. The frequency of choice and fullness of characteristics of economic concepts in an indirect way illustrated the level of economic attitudes of junior students' parents.

### Findings.

As Table 1 shows, 67.5% of the parents have some economic knowledge related to the public sector.

**Table 1. The Study Results "Parents' Economic Attitudes"**

	Concepts	Answers (in %)
Public Sector	Market economy	52.5
	Entrepreneurship	72.5
	Corruption	87.5
	Inflation	87.5
	Unemployment and poverty	95.0
	Taxation	37.5
	Pricing	40.0
	<b>The average indicator</b>	<b>67.5</b>
	Family Sector	Deposit
The cost of a family shopping basket		40.0
Credit		45.0
Family budget categories		67.5
Family savings categories		52.5
Income, expenses, and profits		60.0
Pension and subsidies		48.8
<b>The average indicator</b>		<b>51.3</b>

The highest percentage belongs in the category of “Unemployment and Poverty” (95.0%), while knowledge about taxation (37.5%) and pricing (40.0%) is quite low. Only 51.3% of the parents are well aware of the economic categories of the family sector, which demonstrates their ability to clearly plan the family budget and manage money rationally.

Overall, the study results showed that a large proportion of parents are not interested in economic functioning. They do not know how to make economic decisions in the public and private spheres. This means a low psychological readiness of parents to participate in social and economic life, which is affected negatively the process of developing the financial literacy of children.

All of the above cause conducting educational work which aims to increase parents’ level of economic knowledge and to develop their economically correct behaviour.

In the framework of the project “Financial Sector Development Program (USAID/FINREP-II)” (2015), a training kit for parents has been developed. It include a training programme of educational course for parents on financial literacy for children “Financial Wisdom of Family Pedagogy” (O. Kikinezhdi & O. Sampara [18]) and training manual for parents “Open Family Studios: “Financial Wisdom of Family Pedagogy” (expert group, led by T. Smovzhenko [19]).

The training kit has been developed by the above-mentioned the Concept of Forming Financial Literacy in General Educational Institutions, taking into account the Ukrainian economic mentality and family educational potential; and based on humanistic pedagogical heritage (V. Sukhomlynskyi, S. Rusova, and others) [18].

“Open Family Studios” is a model of non-formal adult education that has become the basic platform provides periodic meetings of parents or other family members, children, teachers, and professionals. Meetings aim to exchange views and experiences on the financial education of children, discussing urgent problems of increasing their financial literacy [20].

All activities of “Open Family Studios” are based on the following principles:

- *“peer-to-peer” – “family-to-family”*: I tell what I know, do not have the higher or lower status, right or wrong experience; every person has his/her experience and it is valuable for everyone;
- *voluntariness and tolerance*: every participant has the right to disagree with other speakers, but the speaker has the right to respect his/her ideas and opinions;
- *informative content and easy presentation*: a speaker should create his/her presentation in a way that its content will be easy and interesting for every participant;
- *free to join*: anyone can participate in the activities of the Studios either as a speaker or as a listener [20].

The author’s training programme “Financial Wisdom of Family Pedagogy” includes thematic and problematic meetings, related to the content of the educational course “Financial Literacy” for junior students: “Financial Alphabet”, “Financial Arithmetic”, “Financial Behaviour”, and “Financial Culture”. The main directions of educational work with parents are financial literacy, financial behaviour, financial culture, and financial and social initiative.

The purpose of the training programme is to identify and activate the educational potential of the parents towards to the formation of key life competencies of children, in particular, financial and economic thinking, entrepreneurial skills and consumer culture; to increase the economic

awareness of parents, their financial literacy; to organize a joint event for a family, school, community, and business for promoting financial education at the society.

*Programme Goals:*

- to promote a partnership in the triad “family – children – educational institutions” as an important factor of effective economic socialization of junior school children;
- to develop an educational potential of the family through providing cooperation between parents, teachers and other specialists to promote financial knowledge;
- to provide psychological and pedagogical support, professional consultations on the problem of developing financial literacy and economic socialization of junior school children;
- to spread financial education among participants of the educational process through partnership with public NGO, and business (volunteer context).

The methodological basis of the Programme: humanization and democratization of education; unity of national and human; continuity of education; differentiation and individualization; harmonization of family and public education; competence, personal oriented and gender approaches.

The Programme structure includes 30 parental meetings, presented in five chapters.

Chapter 1. Our Family (Meetings: “Financial Literacy as an Important Component of Family Pedagogy”, “Literate Citizens is Pride for the Motherland (creating a family financial portfolio)”, “Career is Your Own Plan of Success”, “Time-management is the Art of Managing Your Time”, “Risks and Fraud: How to Protect Yourself”, “Family Culture and Money: from Poverty to Wealth”, “Money as a social Measure of Wealth”, “Financial Well-Being of a Family”, “Circle of Our Family’s Income”, “Family Budget list”, “Family Finance and Children”, “Family and Money: Recipes for Financial Well-Being of a Family”).

Chapter 2. We and Other People (Meetings: “Company as a Team of like-minded people”, “Human Dimension of Entrepreneurship”, “Lessons of Corporate Culture”, “Charity and Patronage”, “Volunteering as an Innovation Movement in Ukraine”, “From Common Experience to Personal Financial Independence”).

Chapter 3. We are Citizens. State Institutions (Meetings: “Equal Rights and Opportunities for Men and Women under Market Economy Conditions”, “Economic Violence: Causes and Consequences”, “National Bank and Banking System in Ukraine”, “Non-Bank Financial Services”, “Taxes, Their Purpose in the State”, “Excursion to Public Financial Institutions”).

Chapter 4. We are Consumers (Meetings: “Advertising as a Way for Attracting Attention to a Product (Service)”, “Product, its price”, “Consumer as a “King“ of the Market”, “Green consumption” is a Guarantee of Environmental Protection”).

Chapter 5. Our Victories (Meetings: “Successful People of Ukraine and Their Role in the World Community”, “Successful Family is a Rich Country”).

The main teaching methods of interaction with parents and children are parental meetings; clubs; thematic evenings; interactive training methods; case study; round tables; film- and video lectures; modelling, didactic, business and role-playing games; workshops; and leisure activities (quest, fair, opening day, auction, flash mob, etc.).

### Conclusion.

Approbation of author's training kit was held in Ternopil Ivan Franko Ukrainian Gymnasium (2016–2019) has testified to its effectiveness. In particular, psychological and pedagogical parents' support of economic socialization of their children in the family through their example of a reasonable attitude to material and spiritual values has been provided; the ability to coordinate the needs of children with family financial resources has been formed; parents' civic position by overcoming the stereotypes of social and financial activities has been activated.

During meetings ("Open Family Studies"), parents' activity in the educational process has been increased through the co-organization of various educational events on economic theme and activities of the initiative groups (patron families, philanthropist families, and volunteer families). The information portal "Financial Education for Parents" and the integrated educational model "Financial Well-Being of the Family" have been created. The author's training kit is an effective tool for promoting the democratization of the national education system; developing civil society and partnerships between educational institutions, families and business for the formation of a competitive person (Homo Economicus) under market economy conditions in Ukraine.

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## **ASSESSMENT OF ENGINEERING STUDENTS ON THE FORMED FOREIGN LANGUAGE PROFESSIONAL COMMUNICATION CULTURE**

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**Abstract.** *The study intends to contribute to the issue of developing in engineering students the ability to apply gained knowledge in future professional activities. Generalisation of practical experience of foreign languages teaching at engineering faculties of Ukrainian universities has made it possible to distinguish particular problems: insufficiently developed teaching and methodological provision; inefficient organisation of classroom and independent work of students; poor motivation of non-language faculty students for the foreign language professional communication, etc. In this study it has been proved that the following pedagogical conditions impact the formation of foreign language professional communication culture of engineering students: organisational and managerial support of its formation process; integration of communicative-context and competency-based approaches in the educational process; professional-ethical and social-cultural orientation of its formation process. The results of the study have demonstrated the positive dynamics of indicators of foreign language professional communication culture formation of engineering students. If at the beginning of our experimental work 12.7% of students of the experimental group demonstrated the high level of formation of culture, then at the end of the forming experiment this indicator increased almost twice – 23.6%. At a low level, the proportion of students of experimental group decreased by 14.5%.*

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**Keywords:** *culture, foreign language professional communication, engineering students.*

### **Introduction.**

The process of modernisation of the Ukrainian education system actualises the problem of improvement of higher education quality. There seems to be no reasons to disagree that to improve its quality the only increasing of the scope of students' knowledge in the specialty is not enough. The centrality of this issue is also the ability of graduates to apply their knowledge in future professional activity, the ability to communicate in foreign languages with professionals from other countries, as well as to carry out professional activities in the foreign language environment. Thus, Government Science and Engineering [4], Lawlor [7], Stewart [13] put the claim that foreign language competence becomes a significant component of professional competence of future specialists.

In recent years, the methods and technologies of educational process and training of specialists in Ukrainian universities have significantly changed. The training of a modern engineer is aimed to develop the cognitive abilities, outlook, morality, and professional culture of an individual. As confirmed by Davis [2], Morozova [9], National Academy of Engineering of the National Academics [11], Weichert and Rauhut [15] the essence of linguistic-educational process in domestic and foreign universities is to integrate the study of subjects in specialty and foreign language, which serves as a means of education and formation of readiness of future engineers for professional activities in the united information environment.

Alexandrov [1] puts forward the view, based on the results of survey of the International Charitable Organization for the Improvement of Education in Ukraine, that 70% of employers believe that graduates of universities have no sufficient skills to use a foreign language for professional communication. On logical grounds, the growth of the role and significance of a foreign language in conditions of the European integration educational space contributes to the defining of priority tasks in the content of engineering students training, among them – the formation of culture of foreign language professional communication (CFLPC).

Despite the considerable interest of scientists (Gordienko [3], Makoyed [8], Rukas [12], Sukachova [14]) to the above-mentioned problems, it is believed that the further research in this area may include the issue of realisation of pedagogical conditions necessary for the formation of CFLPC of engineering students.

In the latest research on the problem under consideration (Kish & Kanyuk [6]) pedagogical conditions for the formation of CFLPC in engineering students (organisational and managerial support of the process of its formation; integration of communicative-context and competency-based approaches in the educational process; professional-ethical and social-cultural orientation of the process of its formation) have been defined and the model of CFLPC formation has been provided. The *purpose* of this study is to substantiate and experimentally verify the effectiveness of the proposed model of formation of CFLPC of engineering students under selected pedagogical conditions.

### **Research Methods.**

A mixed methods design has been applied in this study that is the class of research where researchers mix or combine quantitative and qualitative research techniques, methods, approaches, concepts or experiments into a single study, providing a comprehensive analysis of the phenomenon under study (Johnson & Onwuegbuzie [13]). Methods of analysis, synthesis, generalisation have been used to clarify the nature and components of the structure of CFLPC, to define the criteria and indicators for the determining of the levels of CFLPC formed. Interviews, testing have been used to define the level of CFLPC formed in engineering students. Pedagogical experiment was used to verify the effectiveness of pedagogical conditions chosen. Statistical methods were used for quantitative and qualitative analysis of results obtained and their processing.

The experimental work has been carried out in stages:

- 1) clarified the components of the structure of CFLPC, defined the criteria, indicators and levels of formed CFLPC (January 2017 – February 2017);
- 2) defined the content, specific forms, methods and means of teaching, drew up the experiment programme, selected control and experimental groups (March 2017 – September 2017);

3) carried out the pedagogical experiment on provision of the learning procedure to students aimed at formation of CFLPC under proposed organisational and pedagogical conditions (September 2017 – May 2018);

4) defined the level of formed CFLPC in students and processed the data obtained (May 2018).

Data have been collected from 102 engineering students of Uzhhorod National University, Ukraine. 47 students of specialties “Building and construction”, “Electronic devices and systems” formed the control group (CG); 55 students of specialties “Engineering mechanics”, “Instrumentation” – the experimental group (EG). The educational process in CG was carried out with traditional methods of teaching, in the EG – under defined pedagogical conditions.

### **Research Results and their Discussion.**

In the study the CFLPC is understood as an integral quality of a future specialist, which reflects the degree of possession of peculiarities of speech / non-speech behaviour of native speakers in certain professionally adequate situations of communication.

Mozharovska [10] has generalised scientific approaches to the determining of structure of readiness of specialists for foreign language communication. Thus, in this study the structure of CFLPC of engineering students has been defined as having the following *components*:

– motivational-value competence – implies the possession by a student of: value orientations, positive motivation and attitude towards the study of a foreign language, interest in it; understanding its importance in future professional activities; desire for professional and personal growth in the process of studying a foreign language;

– linguistic competence – reflects knowledge of vocabulary, grammatical forms formation; construction of meaningful phrases; ability to choose grammatically correct forms and syntactic structures, to understand semantic language segments, to use them the way native speakers do;

– professional foreign language – is based on knowledge of professional terminology, on ability to use it to solve professionally directed tasks in a foreign language environment;

– social-cultural competence – reflects knowledge of customs, traditions, culture of people whose language is studied; ability to use this knowledge in adequate situations of interaction;

– cultural-ethical competence – foresees knowledge on cultural-ethical norms and rules, which regulate the professional interaction in a foreign communication environment; ethics of business communication; experience of such interaction in situations close to professional ones.

The determined components of the structure of CFLPC have given the grounds to provide pedagogical conditions of its formation, which optimise: – the content of foreign language teaching, related to the realisation of goals and objectives of formation of CFLPC of engineering students (development of methodological provision: curricula, manuals, methodological recommendations, etc.); – the procedural component of formation of CFLPC and self-training of future engineers, which involves the use of innovative teaching methods; – the management of the process of mastering of knowledge system by students. Thus, in this study the view, that the following pedagogical conditions impact the formation of CFLPC of engineering students, has been put forward:

1) organisational and managerial support of the process of formation of the CFLPC. Implementation of *the first pedagogical condition* is connected with the formation of professional-value motives of future engineers through the implementation of organisational and pedagogical support of the process of formation of CFLPC: development of teaching and methodological

provision; management of educational and cognitive activities of students; organisation of independent search work, etc. Qualitative and quantitative assessment of the formed CFLPC of future engineers, based on the motivational-value criterion, allows checking the effectiveness of the implementation of the first condition.

2) integration of communicative-context and competency-based approaches in the educational process. The implementation of *the second condition* involves the organisation of the educational process by the communicative-context and competency-based type, which is intended to ensure the dialogisation of teaching in the professional sphere. Main condition for the foreign language communication is linguistic competence. Main indicator and the result of contextual education is the possession of foreign professional terminology and the ability to use it in situations of professional communication. Thus, qualitative and quantitative assessment of the formed CFLPC of future engineers, based on the criteria of linguistic competence and professional foreign language competence, allows checking the effectiveness of the implementation of the second condition.

3) professional-ethical and social-cultural orientation of the process of formation of CFLPC of future engineers. Implementation of *the third condition* includes the enriching of the material in modelled situations of foreign language professional communication with social-cultural and cultural-ethical content. Thus, qualitative and quantitative assessment of the formed CFLPC of future engineers, based on the criteria of social-cultural and cultural-ethical competencies, allows checking the effectiveness of the implementation of the third condition.

The verification of the effectiveness of substantiated and implemented in the educational process of above-mentioned pedagogical conditions involves the selection of criteria and indicators that allow assessing the formation of CFLPC of future engineers at the specified levels (Table 1).

**Table 1. Criteria, indicators and methods of formed CFLPC of engineering students**

Criteria	Indicators
motivational-value competence	awareness of the need to: study a foreign language; deepen interest in the profession chosen; possess the CFLPC for the future successful employment, incl. abroad; demonstrate the possession of cognitive and socially significant motives, settings, value orientations
linguistic competence	correct verbal and written speech; stylistically competent processing of papers, presentations; comprehension of texts and reproduction of main content; correct use of tense forms.
professional foreign language competence	possession of: professional terminology, vocabulary; ability to use it in situations close to professional; communicative tactics of foreign language professional communication and their use in solving of professionally-directed tasks.
social-cultural competence	possession of: knowledge on culture, customs, traditions, outstanding personalities, cultural differences of the country, the language of which is being studied; speech for the disclosure of social-cultural information; the culture of foreign language written and oral communication with the use of social-cultural information.
cultural-ethical competence	possession of: knowledge of ethics and culture of professional communication, skills of communicative tactics and their use in oral and written forms of business communication; skills of organising the foreign language communicative interaction in modelled situations of foreign language professional communication

Source: developed by authors.

Under the levels of CFLPC a certain degree of development of the communicative ability of an individual is understood in terms of effectiveness of implementation of foreign language professional communication in modelled situations of interaction. The evaluation of effectiveness of proposed pedagogical conditions for the formation of CFLPC according to criteria chosen has involved the selection of the following levels.

Students with the *high level* (almost perfect) possess:

- literate oral and written speech (correct word formation and construction of sentences, tense forms use; logical connectivity in statements; lexical richness; monologue, dialogical speech);
- social-cultural knowledge (countries and cities; famous domestic and foreign personalities, national heroes, scientists, inventors; the life of students – future engineers; national symbols, traditions, important historical events; proverbs and sayings);
- professional terminology (names of parts, mechanisms, devices, installations, technological processes, schemes, models, etc., in: analysing and explaining the features of a particular device or installation; explaining the essence of diagnostic procedures for elimination a variety of malfunctions in the work of technical objects; in the process of work on an individual project or in the fulfilment of the tasks of independent work, participation in group forms of work);
- knowledge of ethics and culture of professional communication, skills of communicative tactics and their use (in writing: a resume, annotations to course projects, referencing on the theme of the course project, an application, an explanatory note, a cooperation agreement, any other business correspondence; in an interaction while working on group projects; in the presentation of individual projects; in decision taking on solving the professionally directed problems in a business game);
- expression of social (awareness of the role and importance of learning a foreign language for the further professional activity, career development, employment, internship abroad, participation in joint Ukrainian-foreign projects) and cognitive (activeness in educational and cognitive activity, initiative, aspiration to succeed in all kinds of foreign-language activities, a responsible attitude to the tasks of various levels of complexity, including creative ones) motives, value orientations (focus on self-perfection attitude, on creative level of expression of cognitive activity).

Students with the *average level* possess:

- literate oral and written speech (see *high level*), at the same time a student makes minor mistakes (sometimes mechanical, sometimes non-blunder spelling and stylistic mistakes), but correct them independently;
- social-cultural knowledge (see *high level*), nevertheless, knowledge possessed is rather unconvincing;
- professional terminology (see *high level*), but make mistakes in using the terminology both in the process of work on an individual project, the performance of tasks of independent work, during participation in the group work;
- knowledge of ethics and culture of professional communication, skills of communicative tactics and their use (see *high level*), but make minor mistakes, experience difficulties in expressing arguments or logical evidence; when using the communicative tactics of business and professional communication, students make mistakes in the choice of speech strategy, in the construction of dialogical speech;

– developed expression of social and cognitive motives, value orientations. These students possess the ability to learn a foreign language relatively quickly, but need to study hard due to the lack of diligence, responsibility, discipline, time-management.

Students with the *sufficient level*:

– make systematic mistakes in both oral and written speech, do not operate sufficient vocabulary, and the possession of professional terminology is difficult;

– do not fulfil the tasks foreseen by the curriculum, and therefore experience difficulties both during the work on individual projects and in the process of group interaction;

– generally possess social-cultural knowledge, but during compilation of narrations, complex sentences are avoided, simple constructions are used, tense forms are used with inaccuracies;

– possess knowledge of ethics and culture of professional communication, skills of communicative tactics and their use, but make numerous mistakes in the practical application of theoretical knowledge;

– give preference (in the motivational sphere) to the motives of the material-household significance; their cognitive activity is not marked by the high activity;

– perform tasks for marks, for rating, select tasks of reproductive level, very rarely – productive;

– are not responsible, disciplined, diligent. Their failures in the study of a foreign language are explained by the lack of time-management, skills, focus on the study of professionally specialised disciplines only.

Students with the *low level* are characterised as students who cannot (due to lack of ability to study a foreign languages) and do not want to work on themselves, do not systematically perform the tasks foreseen by the curriculum, possess a poor lexical vocabulary, do not know how to write and read competently, understand texts poorly and display superficial social-cultural knowledge. These students do not associate their future professional activity with the study of a foreign language and therefore do not attempt to master the systematic knowledge of ethics of business communication and CFLPC. There is a close connection between the low level and the sufficient level of education and low general culture of speech. In the motivational sphere, the pragmatic motives dominate (to have a positive mark or higher rating). Professional interests are reduced to obtaining a diploma. Educational activity is carried out at the reproductive level. Among personal qualities we see lack of: responsibility, discipline, diligence; ability to concentrate on tasks or on oneself. To this level we refer students who because of lack of general educational skills, low level of foreign language proficiency at the time of entering the university do not succeed in learning a foreign language in general, and the assimilation of CFLPC content in particular.

It is worth while mentioning the particular feature of experimental work in the process of learning a foreign language – it is obvious, that it is almost impossible to precisely define the boundary between the levels of CFLPC possession. If to compare the study of a foreign language with other disciplines, then each of discipline has certain thematic sections, after studying of which the future specialist can assume that he/she knows them. When studying a foreign language, this situation is impossible, because a student is to have the necessary sum of knowledge for professional communication.

Another feature is that the mastery of a foreign language involves the formation of automatisms, on the basis of which complex types of speech activities (listening, speaking, reading, and writing) are carried out in the absence of linguistic environment and real foreign language communication needs. The selection of qualitative criteria and indicators of the effectiveness of implementation of pedagogical conditions for the formation of CFLPC establishes the prerequisites for the transition to quantitative characteristics. The distribution of the levels of CFLPC formed during recording and forming experiments for each of criteria selected is presented in the Table 2 and Table 3.

**Table 2. Recording experiment**

Criterion	High level		Average level		Sufficient level		Low level	
	CG	EG	CG	EG	CG	EG	CG	EG
motivational-value competence	10.6	16.4	38.3	43.6	38.3	27.3	12.8	12.7
linguistic competence	8.5	10.9	23.4	25.5	36.2	32.7	31.9	30.9
professional foreign language competence	6.4	7.3	29.8	30.9	34.0	38.2	29.8	23.6
social-cultural competence	10.6	12.7	27.7	27.3	42.6	45.5	19.1	14.4
cultural-ethic competence	2.1	3.6	29.8	30.9	42.6	43.6	25.5	21.8

Source: developed by authors.

**Table 3. Forming experiment**

Criterion	High level		Average level		Sufficient level		Low level	
	CG	EG	CG	EG	CG	EG	CG	EG
motivational-value competence	14.9	21.8	42.6	58.2	34.0	20.0	8.5	0.0
linguistic competence	8.5	34.5	27.7	36.4	34.0	12.7	29.8	16.4
professional foreign language competence	8.5	21.8	34.0	41.8	36.2	30.9	21.3	5.5
social-cultural competence	12.8	25.5	31.9	40.0	40.4	25.5	14.9	9.1
cultural-ethic competence	4.3	20.0	38.3	41.8	44.7	38.2	12.8	0.0

Source: developed by authors.

Generalised results of the experimental work on the formation of CFLPC of engineering students are provided in the Table 4.

**Table 4. Dynamics of the levels of CFLPC formed of engineering students**

Levels	Groups	recording experiment		forming experiment		Dynamics %
		number of students	%	number of students	%	
High	CG	5	10,6	7	14,9	4,3
	EG	7	12,7	13	23,6	10,9
Average	CG	10	21,3	14	29,8	8,5
	EG	15	27,3	26	47,3	20
Sufficient	CG	16	34	17	36,2	2,2
	EG	16	29,1	7	12,7	-16,4
Low	CG	16	34	9	19,1	-14,9
	EG	17	30,9	9	16,4	-14,5
Total	CG	47	100	47	100	
	EG	55	100	55	100	

Source: developed by authors.

### Conclusions.

In the course of this study it has been proved that the pedagogical conditions chosen positively effected the CFLPC formation of engineering students. The processing of the results of the forming experiment demonstrated that a large proportion of engineering students of EG possessed high (23.6%) and average (47.3%) levels of CFLPC formed. The proportion of students in the EG with sufficient level (by 16.4%) and low level (by 14.5%) decreased. Thus, experimental work was proved to be effective, the process of CFLPC formation of engineering students gave positive dynamics in the level of success of students in the EG. Further research in this area may include the issue of improvement of content and tasks of independent work in mastering of the CFLPC formation.

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## **MANAGEMENT OF TEACHER'S IMAGE FORMATION IN A COMPETITIVE ENVIRONMENT IN THE EDUCATIONAL SERVICES MARKET: PROGRAM-TARGETED APPROACH**

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**Abstract.** *The article identifies the role of image as a resource of efficiency in providing competitive advantages in market conditions; the peculiarities of the personal-professional image of the foreign language teacher as a factor of competitiveness are determined; the possibilities of application of the program-targeted approach to formation of the image of the teacher in the context of general secondary education institution are revealed; the stages and content of the joint work of the principal and the teacher during the program activity which provide business success and stress resistance lead to reduction of dependence on economic factors are determined. It is highlighted that program-target management involves the integration of goals, objectives and appropriate design steps. Program-target management of the formation of the image of a foreign language teacher implements the systemic principles of this process, promotes the effective implementation of a set of components of the image, leads to an increase in the level of professionalism, reputation, competitiveness of the teacher.*

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**Keywords:** *competitiveness, resource efficiency, program-targeted management, complex-purpose program, image, personal-professional image, foreign language teacher.*

### **Introduction.**

In the context of economics, image is seen as a trademark, a resource of development. Marketing research on the image object and its advertising seeks to find the ways of the most profitable sales. Improving the image ensures the production efficiency and employment. At the same time, the development of human capital is very important for creating competitive advantage. The image of the personnel belongs to the intangible assets of the enterprise. One area of the economy is education. School in the broad sense is a large industry, the products of which are knowledge, skills, development of pupils. Their producers are teachers. The quality of educational services depends on teachers' professional skills. Therefore, the image of the teacher should be considered as a resource for the quality of education and school development. Strategies of the New School in Ukraine envisage not only an increase in the teacher's competence, but also a new attitude to the image as an integral part of the profession of a new formation of a teacher.

It is now a question of raising the prestige of the teaching profession in society and establishing a high social status of teachers. A teacher becomes a key resource in the development of education in general and in each education institution. The process of creating a coherent image of a teacher, which becomes a necessary attribute of socio-professional relations, becomes relevant.

The processes of European integration have led to an active and interested study of foreign languages by students. In this context, the responsibility of a foreign language teacher has increased and the attitude of the education subjects to their professional image has changed.

The relevance of the study is exacerbated by the need to eliminate the contradiction between the objective needs of education institutions in the personality of a foreign language teacher focused on successful professional activity and the spontaneity of the processes of forming their image.

### **Research Questions.**

The issues of the essence of the image, its components, management of the formation process are dealt with by P. Bird [1], E. Hoffman [2], Yu. Palekha [3], A. Panasiuk [4], G. Pochepcov [5], T. Khomulenko [6]. In the course of the theoretical analysis of the problem of formation of the personal and professional image of a foreign language teacher it is taken into account the scientific and practical developments on the use of program-targeted management in the education of H. Dmytrenko [7], O. Marmaza [8], O. Moiseiev [9].

Problems of formation of the image of a foreign language teacher were successfully investigated by O. Horovenko [10], A. Kaliuzhnyi [11], M. Navrotska [12], N. Tkachenko [13].

An analysis of the works of Ukrainian and foreign scientists shows that this problem does not exhaust all the important aspects of the study of purposeful formation of the personal and professional image of a foreign language teacher in the school. This makes it important for the systematization and integration of existing scientific views on the construction of a theoretical model of the image of a modern foreign language teacher, program-targeted management of the process of its formation.

### **Purpose of the Study.**

The *purpose* of this article is to highlight the theoretical and methodological foundations of a program-based approach to managing the formation of a personal-professional image of a foreign language teacher as a factor of competitiveness in the context of a general secondary education institution. The main tasks are to define the role of image as a resource efficiency in providing competitive advantages in market conditions; to identify the stages and content of a comprehensive programme aimed at forming a personal-professional image of the teacher with a brief description of them.

### **Research Methods.**

Analysis and generalization of social, psychological, managerial, pedagogical scientific and methodical literature – to compare different views on the problem under study and formulation of basic provisions on the specified topic; theoretical modeling – to develop a comprehensive programme for the formation of teacher's image.

### **Findings.**

The desire of business for prestige, professional reputation and image has become an axiom a long time ago. Today the process of image is an integral part of the management of the education institution.

The quality of educational services is traditionally influenced by such economic factors as the level of teachers' salaries, the solvency of parents, the dynamics of prices in the country, the demand of the subjects of educational activity. Today's market conditions require the education institutions to create an attractive image, the face of which is the teacher.

For the high level of competitiveness of the teacher in the conditions of turbulence of the economy, the processes of European integration, reform of the education system, the image-creating activity is of great importance. Accordingly, each principal should look at the teacher as an object of image, because the investment attractiveness of the education institution is the result of successful image-making activity. For an innovative, professional team with a positive image and high reputation, there will always be sponsors. Positive image gives access to information and financial resources, consumer loyalty, attracts media attention, provides security and additional income, facilitates the introduction of new services in the educational market.

The development of industrial interaction between countries, the strengthening of scientific and cultural ties, and the spread of tourism have become the hallmarks of the world today. Under these conditions, a foreign language has become a very popular subject in the education institutions. It becomes evident that the foreign language teacher, their image, has become the focus.

A foreign language teacher not only teaches students of a particular country. It is an intermediary between different cultures, traditions and peoples. Through the teacher, students perceive the country, its national features, mentality. It shapes their communicative competence, engages in national studies, creates a circle of interaction with native speakers. A foreign language teacher develops internationalism, tolerance, humanity, and a broad outlook [13].

In this regard, it is necessary to draw the attention of the principal and the foreign language teacher to the problem of purposeful formation of positive personal-professional image.

The most common is the definition of image as an image that has developed in the mass consciousness and has the nature of a stereotype.

Teacher's image is a complex concept. On the one hand, it is a personal image that is related to the intrinsic qualities and characteristics of the person. On the other hand – a professional image that determines professional requirements. According to A. Kaliuzhnyi, "The teacher's image is an emotionally colored stereotype of the perception of the image of the teacher in the minds of students, colleagues, social environment, in the mass consciousness" [11].

The personal image of the teacher is predetermined by external and internal factors that reveal their image on the basis of specific individual qualities and contribute to improving the effectiveness of pedagogical activity. Teacher's professional image is a set of features and characteristics that shape their image as a specialist in the process of interaction with students, colleagues and social environment.

Professional image of the foreign language teacher is characterized by multiculturalism, openness and communicative orientation. It is formed in the minds of students, colleagues during the execution of the professional and pedagogical functions.

The teacher of a foreign language is the carrier of linguistic and regional potential, which leads to their multiculturalism and is reflected in teacher's communication, outlook, manners and appearance. The openness of the teachers is connected with the constant study of the peculiarities of a foreign language, improving tenure, renewal of pedagogical techniques and use of innovations.

The communicative orientation is ensured by using a foreign language in the teaching and research activities, while informal communication with native speakers, targeted participation in clubs, centres, diasporas and the like.

Professional-personal image of the teacher – a complete image of the personality of the teacher, which includes a set of external (habitatny, verbal, kinetic, environmental) and internal (knowledge, skills, abilities, attitudes, values, self-esteem) factors, personal qualities (natural qualities; qualities that are the result of education and training; quality associated with life and professional experience) and means of self-presentation, which purposefully addresses the teacher with the aim of achieving the best results in their teaching activities [10].

In the process of research the content and characteristics of personal-professional image of the teacher of a foreign language was developed by various scientific and methodological sources that helped to identify the components and indicators of personal-professional image.

The motivational-value component reflects the level of motivation of a teacher for pedagogical activity and includes the following indicators: motivation for professional development and self-development; value attitude to professional-pedagogical self-realization; a socially active life and teaching position. The competence component reveals the system of teacher's professionalism and is characterized by such indicators, as: a productive collaboration with various social groups; the availability and acquisition of knowledge in pedagogy, psychology, imageology; creativity and initiative. Activity orientated component reflects the system of personal norms for the regulation of behavior and includes the indicators: the pursuit of the goal setting activities; the ability to self-organization and self-control; the ability to reflect. The communicative component is characterized by a constructive professional-pedagogical communication and includes the following indicators: speech; communicative behavior; emotional stability [10].

M. Navrotska defines the development of the professional image of the teacher as “a purposeful process during which positive changes to appearance, inner image, the manner of communication of the teacher with students, colleagues, parents through the use of a complex of forms, methods and means used in the system of teachers' training in course, intercourse periods and during the self-educational activity of the personality” [12].

Depending on the manifestation of the totality of the indicators formation of personal-professional image of the foreign language teacher is characterized by high, medium and low levels.

So, at a high level the teacher is committed to professional development and self-development. It is guided by their own goals and motives, determines and changes personal attitudes and values; be independent in judgment and actions. The teacher constantly self-improve, capable of redefining themselves, understanding the course of life in interdependence and integrity, the ability to create opportunity for the potential realization of their professional actions. The teacher acts creatively; constantly seeks and uses new tasks, methods, ways, forms and means of training; has a sense of moral responsibility; has an independent skilled ability for goal setting, planning their own personal and professional development; organises their professional activity, responsible attitude to their results, performs duties in good faith [10].

High level is also characterized by a clear and thorough knowledge about the image of the individual, modern requirements, principles, approaches, methods and forms of its formation; constant desire to deepen the knowledge on the formation of a modern image in the framework of their professional responsibilities and competencies.

The teacher has strong artistic inclinations, prone to search the original methodological and technological solutions to professional problems of any complexity. The teacher has a deep and solid knowledge of Ukrainian and foreign languages; has extensive vocabulary, knows how to navigate the situation of communication, perceive and analyze someone else's speech and to produce their own statements. Their facial expressions, gestures aesthetically expressive, owns the technology and culture of speech, its logic, credibility and emotion. Communicative actions are prompt, appropriate, adequate to the situation and characteristics of the partner, unique in form and content. Mastering the various techniques and methods of performing the communicative actions of the teacher are at the skill level. The teacher is able to manage their emotions in all phases of pedagogical work, in the changing circumstances of activities.

Teacher activity, being public, places particular demands on such professional skills as self-presentation, which acts as a kind of image mechanism.

On the basis of the analysis of the psychological and pedagogical literature on the problems of imageology, several views on the definition of the concept of self-presentation, integrating the sociological and psychological directions, have been singled out: 1) a means of organizing one's own behavior by a person; 2) a means of self-disclosure in the interpersonal communication of their thoughts, character, etc. ; 3) the process of managing attention through the involvement of specific mechanisms of social perception related to the appearance of the person, their behavior and image as a whole.

Self-presentation of a person is regarded as a phenomenon of personal behavior that arises in the context of subject-subject relations. Self-presentation acts as a difficult organized process of regulating the impression that the subject makes, taking into account the specifics of social situations and expression of ideas about themselves.

Teacher's self-presentation is viewed as a process of managing the impression of others that emerges through a set of attitudes directed at the teacher by engaging social perceptual mechanisms related to the teacher's appearance, personal and communicative behavior and speech, during which their personal-professional image is formed [10].

The basic forms of self-presentation of a foreign language teacher are: oral presentation; written presentation; photo presentation; paper version of the portfolio; electronic version of the portfolio; video; computer presentation; mentoring; competitions "Teacher of the Year", "Class Teacher of the Year", etc; the management of schools, pedagogical experience and professional skills, teaching laboratories; model lessons, master classes; creative reporting; creative competition (fair ideas, craftsmanship salons, festivals of pedagogical creativity); publications.

The conditions of formation of personal-professional image of a foreign language teacher by means of self-presentation in the education institution is – motivation of a teacher for successful professional activity and scientific and methodological support of the process of formation of personal-professional image of the teacher.

The methods of motivation of the teacher for successful professional activity are: the development of a comfortable learning environment; the implementation of the personality-oriented approach to teachers by the principal. Thai approach is based on the internal and external motivation, needs and interests, assistance in resolving professional conflicts, etc.; the use of active forms of training of teachers, business games, development of mechanisms for professional

reflection; integrating methodologists, psychologists, school administrators, social pedagogues to create support services to provide assistance to the teacher in the development of professionalism and the formation of their personal-professional image.

Methodological support of the process of formation of the image of a foreign language teacher is manifested in the individual system of pedagogical activity of the teacher, a combination of individual and collective forms of methodological work, improvement of means of self-presentation, image management in the teaching activities of teachers.

The objective need of the modern school teachers of foreign language, which would be oriented to the improvement of their image and successful self-presentation in professional activities, is in conflict with the lack of attention of the principal in creating the adequate conditions.

In this context, underutilized capabilities of program-target management. It can be represented as an integration of goals, objectives and corresponding steps of the design process. Program-target approach involves the formulation and implementation of planned management decisions, based on a comprehensive analysis of the problem and building a systemic set of measures and actions (in the form of programs) to achieve the goals, solving the target stemming from the problem [8].

Program-target approach makes it possible to bring together the available resources (the formation of material and technical resources; personnel, methodological and financial support; the relationship between the participants of education process) not only the single methods in the system of scientific and methodical work of school, and comprehensively and purposefully to influence the growth of image of the teacher.

Program-target approach involves the development of complex-purpose program and embodies an extensive methodology for the solution of many problems arising in various areas of purposeful activity. Complex-purpose program of activities with clearly defined goals, objectives, projected results, which are balanced with staff and other conditions, available resources and untapped reserves [8].

The program for the image formation should include clear objectives for the development of personal-professional qualities of foreign language teachers, the task system according to the objectives contain the contents of the work plan of activities (events).

Training program on forming of positive image of the teacher and its implementation should be carried out according to management support the principal of the education institution.

The conceptual basis for the complex-purpose program of formation of personal-professional image of the teacher of a foreign language in the system of scientific and methodical work of education institutions are: 1) approaches: personality-active, systematic, competence-based, reflective; 2) the leading ideas of the program: determinism; understanding of needs, professional interests and capabilities of teachers; a consideration of the actual conditions of the education institution; 3) principles: based on individual personality characteristics; variety (granting of the right of choice of forms of personal-professional image, learning tools and forming image skills); the continuity of professional development: the unity of effort of the principal and teachers.

According to the certain components of the image a complex-purpose program for formation of the image of a foreign language teacher should consist of four sections: motivational-value; competency; activity; communicative.

Implementation of complex-purpose program is carried out in stages: analytical, planning and predictive, organizational and content, regulatory and corrective.

Analytical stage involves diagnosis of personal-professional image of a foreign language teacher and is associated with the identification of the initial level of development; motivational-value relations of the teacher; the content of scientific and methodical work of education institutions on the formation of professionalism of teachers in general; the enrichment of the representations of teachers about the content and significance of the image, the strategy and tactics of its formation, the conditions and technologies of image.

Planning and predictive stage (based on the established level of the image of the teacher, analysis of their competence, the system of attitudes, values, goals) involves planning ways to further development and formation of personal-professional image, develop a complex-purpose program as an individual trajectory of image improvement.

The logical continuation is the organizational and content stage, which involves the transformation of the image of the teacher through the implementation of integrated programs.

The correctional stage is defined as a stage of regulation and correction of formation of personal-professional image of the teacher. It includes a re-diagnosis and self-diagnosis of the level of personal-professional image of the teacher; analysis of the results of monitoring of the process of image formation for the period of program activities; predicting goals and objectives of its further formation. The implementation of the objectives and content of the sections of a program to form personal-professional image of the teacher occurs through a number of different events.

Thus, at the analytical stage is advantageously carried out in the main event of a diagnostic nature. Questionnaires, polls, interviews, testing, attending classes, analysis of school documentation, which are aimed at clarifying the initial state of the implementation of teacher professional features; existing level of motivation of teachers to implement their educational activities; the establishment of the existing value system of the teacher; the level of formation of communicative knowledge, abilities and skills; definition of objectives the performance of each individual teacher and the teaching staff in general and to bring these goals into alignment. Part of the activities should be aimed at establishing the main existing directions of scientific and methodical work of the school on addressing the gaps in teacher's activity: individual interviews, observation of activities, development of diagnostic card activities, attending classes and extracurricular activities.

At the planning and predictive, organizational and content stages of the program implementation, a set of measures is implemented, aimed at the direct transformation and enhancement of the personal-professional image of the teacher. The system of measures is constructed in accordance with the results obtained at the information and analytical stage of the program. Involvement of a foreign language teacher in creative groups, permanent pedagogical workshops; teacher's self-presentation during roundtables, workshops, seminars, conferences.

The regulatory and corrective stage involves, first of all, establishing an increase in the level of personal-professional image of the teacher and their individual components at the end of the program activity; identification of the factors that most influenced the development of personal-professional image. Teachers, students and parents are interviewed for this purpose; factors of positive influence on the change of the image of the teacher are studied.

During the organization of methodical measures, it is advisable to move away from the traditional forms of their conduct and give priority to such active forms of learning as: dialogue, forms of interpersonal interaction, immersion in the situation, business and story-role games, kaleidoscopes of pedagogical ideas, round tables, creative trainings, presentations etc. It is the program-purpose management of the process of forming a personal-professional image of a foreign language teacher that stimulates them to carry out self-presentation activity, self-development and self-improvement.

### **Conclusions.**

The policy of the administration of the education institution for teachers should be aimed at creating a system of economic and moral incentives, developing their professional careers, providing conditions for image-creating activities. The personal-professional image of a foreign language teacher is the result of their self-presentation and the object of managerial influence of the principal of the general secondary education institution where they work.

Program-target management of the formation of the image of a foreign language teacher provides the systematic basis of this process, contributes to the effective implementation of a set of components of the image, leads to an increase in the level of professionalism, reputation, competitiveness of the teacher. The study does not exhaust all aspects of the problem. Areas of scientific research are promising: comparison of domestic and foreign models of teacher's personal-professional image formation; development of diagnostic tools and means of forming the image of the teacher depending on their specialty, tasks of activity.

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**BUSINESS EDUCATION IN THE GLOBALIZED WORLD**

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**Abstract.** *The necessity of continuous improvement of professional knowledge in the conditions of fierce competition in the labor market for accelerating economic development is substantiated in the article. The influence of leading economic centers on the formation of the demand for professional knowledge in the fields of scientific knowledge is shown. The problems that education systems face in the globalized world are shown. In particular, migration of workers from developing countries in search of better education and jobs opportunities; unemployment and appearance of “unnecessary class” in the economy, that are high-skilled workers no longer needed in the economy due to automation process; challenges that countries face in the knowledge economy; threats to national security in the form of poor business education; affects of new technologies on education, such as online learning etc. influence greatly upon business education. It is shown in the article that above mentioned challenges put a great pressure on the education systems and demand addressing.*

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**Keywords:** *business education, globalization, labor migration.*

**Introduction.**

In the twentieth century requirements for the qualification of workers increases drastically, which in turns provokes the need in quality education. Globalization poses real challenges to education systems of many countries that need addressing. The role of educational institutions in the formation of active citizenship was studied by Hurd W. [1], who linked this to the national security of the state. Rice C, Levy J. [2], Ruchir S. [2] raised similar issues in their research, and emphasized that spending on the formation of civic identity is as appropriate as spending on the defense of the country. The theories of education were studied by Kovalyuk Y. [4]. The problems associated with of education sphere such as international mobility are highlighted by Bystrova B., Nemliy L., Paziura N. at al. [5].

The problem of transformation of foreign research universities in the entrepreneurial institutions is analyzed by Romanovskiy O. [6]. Practical aspects of teaching using contemporary methods are discussed by Bodnar S., Mirkovich I., Koval V. [7]. A system analysis and role of education as one of the components in the information economy development is made by Shkarlet, S., Kholiavko, N., Dubyna, M. and Lagutin V., Yasko Y. [8, 8]. The theoretical foundations of process and rationale for the use of the cluster approach in the management of strategic development of the national educational system are determined by Gryshova, I., Zamlynskyi, V., Shestakovska, T. [9]. The main stages of entrepreneurial activity of research universities are considered in this context, the role of educational institutions in shaping the worldview of citizens is hardly covered in economics, which determined the specificity of the analysis in this work.

### **Results.**

#### ***The formation of a "global" man (citizen).***

The growth of technical opportunities increased mobility of people. By comparing living and working conditions in different countries and making conclusions about the feasibility of acquiring the professional knowledge and skills necessary for further career growth, regardless of the needs and interests of native country, *many people migrated. This trend has gradually become more evident in the EU. As countries with relatively high opportunities for self-realization of the individual became the "center of gravity" for young creative people who did not necessarily associate their fate with work in the country where they were born [10].*

The idea of benefits that can be gained from education has gradually become a decisive factor in the choice of place and forms of obtaining professional knowledge and skills. *If the educational institutions of a particular country were not able to provide the education of the appropriate quality, quite often the preference was given to educational institutions of another country.* At the same time, in a number of cases, the needs of the person, and not the state interests, interstate relations or historical memory of the interethnic interaction in the past were prioritized. Thus, the Poles often preferred to work in Germany, and Ukrainians - in Poland. The Germans, in turn, like the work in France. Despite the economic confrontation between China and the United States, many immigrants from China work for the needs of the American industry, and the migration of workers from former colonies to the former metropolises has become massive.

*Globalization offered a set of values that acted as universal, which contributed to the formation of a "global man", able to work where the conditions of work were better.* The needs of the world labor market have also shaped the idea of the feasibility of introducing dual citizenship. All this has led to an increase in threats to countries that could not offer their citizens similar conditions for self-realization. At the same time, it is noted that the set of values that was proposed by the "American" globalization turned out to be rather broad. Newcomers from different countries of the world have successfully socialized in American society. At the same time, it is difficult to imagine that immigrants from other countries were able to socialize in China on the same scale.

#### ***Education as an important tool for providing national security.***

*In the modern world education has become a key social institution, making children and young people an integral part of building peace and security.* It is recognized that education has the potential to "spread new values, skills and behavior, as well as help promote new social relations that will contribute to conflict resilience."

This statement is particularly relevant given the spread of international terrorism and extremism. *Effective education has become part of the infrastructure that allows building a security architecture. Education contributes to the reversal of threats to national security, creating citizens' conviction that conflicts, violence, hatred, extremism are not the only way to impose*[12].

A successful patriotic upbringing gives birth to a person who identifies himself first and foremost with his own country, who loves and is faithful to his country, and who relates it all with the belief that his country has a special character. However, patriotic education can sometimes lead to self-deception of a person, due to the assimilation of false information about the role and place of its state in the world [13].

The process of globalization can be seen as one of the options of "response" of mankind to the challenges faced by it in the twentieth century. The need for consolidation to confront threats of global character (world wars, environmental problems, the economic development of poor and rich countries, etc.) has contributed to deepening the process of globalization.

However, globalization in turn has placed on the agenda a number of problems related to the formation of a civic identity in the conditions of the development of the world labor market, means of communication of the world scale, large-scale intensification of migration processes, interethnic interaction and politicization of ethnicity while preserving differences in religious beliefs, ideas about geopolitical interests of individual countries and their associations. World economic crises actualized not only the development of a set of measures aimed at regulating the economy, but also the search for part of entrepreneurs to "get around" unwanted barriers to economic activity [14]. The emergence of offshore zones, expanding the means of encouraging foreign investment not only increased the movement of capital, but also objectively could contribute to the dominance of corporate interests of the leadership of transnational corporations (TNCs) over civil obligations, regional interests. It was TNC's leadership that was one of the first manifestations of the so-called "global man". However, over time, the development of the labor market has led to the emergence of many of its manifestations due to the increase in the number of those who sought of self-fulfillment outside the home country [15].

*J. Stiglitz notes that the most significant justification of state support for higher education is the fact that it leads to a more even distribution of income.* However, critics say the opposite is true: the greatest beneficiaries of state support for higher education are those who are in a better position. Since the average income of college students will exceed the income of people deprived of such opportunities, helping them (subsidizing higher education) is actually aided and provided. The net effect of income distribution assistance is controversial: as richer pay more taxes, a larger share of costs falls on their shoulders, but they also account for a larger share of benefits. Moreover, according to the researcher, subsidizing education leads to excessive "consumption" of higher education [16, p. 459].

J. Studwell argued that the state's role was to accumulate funds and use them further to achieve strategic goals [16]. And the development strategy should envisage realization of long-term tasks with an emphasis on accelerated technological training, and hence on the fate of high income in the future, instead of short-term returns and individual consumption. This often creates an abyss between the state and many businessmen and consumers who have less important strategic objectives [18].

### ***High skilled workers in the modern world.***

*In the modern world, focusing only on the training of high-tech technicians can lead to the fact that a significant part of them will work outside of their own state only because others can offer more attractive working or studying conditions. Leading countries in the world contribute in every way to the growth of student mobility.* It remains an effective means of internationalization, which has become a sign of quantitative and qualitative changes in higher education. The number of students studying abroad is growing by 7% every year, especially from China, India and South Korea. More than half of the students who want to receive education abroad are from Asia. Most students go to the US and Canada. China has a special position as the most important country of origin, which simultaneously accepts about 7% of foreign students [19, p.108-128]. The impact of the demographic factor is, first of all, that the decline in the growth rate of workers leads to a decline in economic growth by 1%. This is what happens over the last decade. The growth rates of world GDP tend to fall. At the same time, starting from 2005, the growth in the number of working people aged 15-64 has slowed down in the world from 1.8% to 1.1%. The population of able-bodied age declines in China and many European countries [2, p. 29-30].

*Over the past years, the Silicon Valley companies have drawn attention to the fact that the United States closes its doors to highly skilled workers, which reduces the country's competitiveness in the struggle for talent.* In this case it is actually about global competition for talent. One way to determine winners is to find countries in which immigrants make up the majority of graduates every time. The leaders here are Great Britain, Canada and especially Australia, where immigrants account for 30% of the total population (40% of university graduates). It is these 10% and is an indicator of "brain inflow". In the United States and Japan, the share of immigrants in the total population and among others is the same, and therefore their impact is lower. In Germany, the Netherlands and some other European countries, the proportion of immigrants with higher education is lower than the local population. Such differences are significant, since Chinese and Indian families traveling to Australia and Canada carry high educational standards [2, p. 56-57]. Today's economic growth in the United States requires talented, well-trained staff capable of taking on a variety of risks. The insufficient number of such personnel limits the entrepreneurial risk that is needed to expand the employment opportunities of low-skilled personnel at high-paying jobs. As a result, the influx of low-skilled immigrant workers leads to an increase in the employment of low-paid workers. At the same time, the influx of low-skilled labor creates a diminutive pressure on the salaries of the personnel with low qualification [19, p. 21-22].

### ***New technologies and business education.***

*Despite the emergence of a large number of new jobs for people, humanity can come across an increase in the so-called new "unnecessary" class. There can be both high unemployment and a shortage of skilled workers at the same time. No occupation of people will ever be guaranteed to be protected from the threats of future automation, because machine learning and robotics will continue to improve [21].* The labor market in the field of information technology is undergoing transformation as a result of increased automation associated with the trend of cloud computing as well as off-shoring [22]. In addition, the emergence and development of cyberspace transforms the idea of the expediency of patriotic education of citizens. The emergence of the theory of digital sovereignty, the content of which is that each structure receives digital sovereignty when it comes to creating interoperable interactions between the substructures on which it depends.

Political consequence of interoperability is often called the strengthening or weakening of modern states. And often the criterion of such strengthening or weakening is the position of citizens, their attitude towards the country where they were born, their level of mobility and the dependence of employment on the powerful players on the world international arena.

The emergence and improvement of artificial intelligence, the modernization of teaching (the absence of direct communication between a teacher and a student) can pose to humanity the most important challenge in all its history of development. Already, a lot of people are enlisting to online courses, and therefore they will become a powerful engine for the application of automated methods for both learning and evaluation of its results. EdX, a consortium of elite universities, founded in order to provide online courses, announced in early 2013 that it would make a program for evaluating an essay free for every institution willing to use it. In other words, the algorithmic evaluation system has become another example of a program-based structural unit based on the internet network, which will help accelerate the inevitable advancement of increasingly automated skilled human work. Since mass open courses continue to evolve and improve, there can finally be hope that they will be the driving force behind a global revolution that brings quality education to hundreds of millions of poor people around the world. If assumed that potential employers consider a diploma from the open-course institution as a weighty qualification document, this, in the end, will lead to a sharp destabilization of the whole sphere of higher education [21, p. 181].

### **Conclusions.**

The research findings show that the problem of migration of working force becomes urgent especially the EU as the countries with relatively high opportunities for self-realization attracting young creative people who do not necessarily associate their fate with work in the country where they were born. This trend has eventually led to a creation of "global man", able to work where the conditions of work were better.

The research also proved that education contributes to the reversal of threats to national security, creating citizens' conviction that conflicts, violence, hatred, extremism are not the only way to impose. In the modern world business education has become a key social institution, making children and young people an integral part of building peace and security.

The study showed that leading countries in the world contribute in every way to the growth of student mobility. It remains an effective means of internationalization, which has become a sign of quantitative and qualitative changes in higher education. Today, many educational institutions focus only on the training of high-tech technicians that lead to the fact that a significant part of them work outside of their own state only because others can offer more attractive working or studying conditions. Despite the emergence of a large number of new jobs for people, humanity can come across an increase in the so-called new "unnecessary" class that are skilled workers no longer needed in production due to automation. So, globalization poses a lot of challenges to a modern education systems that need a concentrated will of states to solve.

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**SENSE AND PLACE OF LEAN-LOGISTIC OF THE STUDENTS EDUCATION AT THE PROFILE LEVEL**

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**Abstract.** *The article actualizes the expediency of forming a competent school graduate by means of teaching lean-logistics in geography lessons. Deals with some aspects of the introduction of lean logistics in the educational process of geography, as an example of integration of knowledge content and competence approach in education. The importance of the place and the role of economical logistics in the formation of a competent graduate in general and the Ukrainian school in particular are reflected. The modern peculiarities of logistic education in school are analyzed and the introduction of the developed and tested by the author course «Lean-logistics in geography» is introduced in the process of teaching students at the profile level in general secondary education institutions. The content component of the course «Lean-logistics in geography» developed by the author is reflected. The curriculum of the course, which is of a framework nature, is based on the principles of continuity and of school geographic education, integration of internal and cross-curricular links. The attention is paid to the urgency of the development of educational and methodological provision of profile training geography of students at the current stage of development of education in Ukraine in the context of competence approach and implementation of cross-cutting content lines.*

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**Keywords:** *lean-logistics, geography, students, teachers, general secondary education institutions, profile level.*

**Introduction.**

At the present stage of development of school geographic education, the content of current methodological research presents scientific substantiation of ways of improving the quality of education, which corresponds to a competent approach in education, which is a response to the demands of time and requires the participants of the educational process to be able to adapt quickly and to apply their knowledge flexibly to new requirements: from students ability to competently-solving non-standard situations, from teachers to organize students' learning activities and effectively manage it.

The introduction of the competence approach as the theoretical and methodological basis of modern general secondary education implies significant changes in the learning process: its goals, content, organizational forms and methods, means, results, etc., given its integrated nature.

Society now needs advanced pedagogy with an effective system of intellectual and psychological development of the individual, which contributes to the formation of: creative, critical style of thinking; ability to analyze any problems, establish cause and effect relationships, identify contradictions, predict probable variants of learning (integrated, differentiated, K-directed) tasks, behave sparingly in society, positioning yourself as a conscious citizen, and also an early citizen preferences, giftedness – for the purpose of conscious choice of the direction of profile training, professional self-determination.

### **Formulation of the problem.**

The modern stage of development of education in the world in general and in Ukraine in particular is characterized by improving its content, increasing the amount of required information and at the same time reducing the time spent on its assimilation, when the level of education of students and educators is determined not by the amount of knowledge but by the readiness to develop and identify problems of varying complexity (based on skills, attitudes), competences, including global ones, to which the process of teaching geography at the profile level in general institutions of education [1].

However, according to the practice and results of our study among 102 respondents – 10-11th. grade students of general secondary education in Ukraine who have mastered the content of geographical subjects, only 52 % of them heard about logistics, while only 14 % of them could explain the meaning of the word, however, no student could interpret the concept of «lean-logistics», while saying that thrift is a trait that is essential to our contemporaries in all spheres of their lives. In this context, in our opinion, geo-centric content of education and compulsory introduction to the content of geography educational material, which are presented in curricula, school textbooks, various thematic blocks of civic, local lore, professional orientation in all courses of basic geography, are appropriate (propaedeutic level) and senior (profile) school (study at profile level).

### **Analysis of recent research and publications.**

As our original analysis proves, the question of Lean-Logistics in geography has largely not been considered by scientists at an angle view of teaching at the profile level students of general secondary schools education.

For the most part, logistics was considered as well as by foreign and native scientists at different times, from the perspective of logistics management (E. Krykavsky [2], N. Chukhray [2], etc.), marketing logistics (M. Kristopher [3], H. Peck [3], etc.), logistics management (T. Lepeyko [4], V. Ponomarenko [4], K. Tankov [4], etc.) and others.

However, despite the abundance of research, it is currently lacking methodology, methods of teaching logistics and studying lean-logistics by students of educational institutions at the profile level, which has led to the interest in this problem and prompted the justification for the implementation of logistics strategies in practice of teaching geography students at the profile level, generalization methodological tools for the implementation of the elective courses of logistics direction to the practice of general secondary education institutions for the purpose of formation a competent graduate.

The purpose of the article is to substantiate the importance of studying lean-logistics in the process of teaching geography at the profile level in institutions of general secondary education and to form a competent graduate.

### **Formulating the purpose of the article.**

In spite of the considerable number of scientific publications on this topic, the problem of justifying the implementation of logistic strategies in the practice of teaching geography of students at the profile level remains poorly understood. Hence, – the purpose of our article is to substantiate the importance of studying lean-logistics in the process of teaching geography at the profile level at school in order to form a competent graduate.



### Results.

Improving the system of teaching geography at the profile level on the basis of lean-logistics is important and requires refinement of scientific and practical aspects, development of appropriate methodological and organizational tools for implementation in pedagogical and educational practice. In this way, in our opinion, it would be expedient, to supplement 10-11th classes with the elective courses of geography (profile level), special courses, elective courses of relevant, modern and interesting for the students of the upper classes of subjects, the study of which will facilitate mastering their sections, topics of study programs at a high theoretical level.

Thus, with the choice of a student of vocational direction of study in high school, studying geography, it is advisable, in our opinion, to carry out while mastering the content of elective courses, special courses, electives close in content to the future profession, such as: «Road transport», «Geography of banking», «Geography of economic systems of the world», «Geographic information systems», «Geography of European Union countries», «Cooking geography», «Fashion geography», «Shipping geography», «Textile geography», «Tourism geography», «Geoecology», «Ethnography», «Historical geography», «Local history», «Literary geography», «Man and the world of professions», «Medical geography», «Marine geography», «Political geography», «Nature of the native land», «Professional attempts», «Social geography», «Sports geography», «Sewing business», etc.

In turn, under the conditions of academic orientation of teaching in high school to help students in the study of geography at the profile level, for example, the following may be called elective courses, electives, special courses: «UNESCO world heritage», «Geographic culture», «Geography», «Geography with the basics of ethnography», «Geographic information systems», «Geography of Israel», «Geography of native land», «Geomorphology», «Hydrology», «General geography», «Cartography», «Climatology», «Countries of Europe on the political map of the world», «Landscape», «Mineralogy», «Fundamentals of geoinformation systems and technologies», «Fundamentals of topographic knowledge», «Natural-scientific picture of the world», «Topography», «Solving geographical problems» and many others.

The curricula for geography of the 10-11th. grades provide for directing the content of education to the formation of subject geographical competence, cognitive interest of students, the development of their intellectual and creative abilities, through the organization of independent educational activity, the process of finding and processing geographical information.

In this context, in our opinion, it would be advisable to introduce the course «Lean-logistics in geography» developed in the curricula of general secondary education institutions at the profile level of 11th grade students.

The «Lean-logistics in geography» elective course, in our opinion, plays an important role in the structure of the profile education of high school and is related to the satisfaction of individual requests, inclinations and needs of students; aimed at updating the educational process in geography, expanding knowledge of the subject and having an integrated character, so it is considered as subject-integrated. The main ideas of the course – integration, economization, greening, sociologization, humanization of the geocentric content of education, involvement of students in the implementation of research, designing in geography, pragmatic activity by means of modern geography with the help of a new form – logical practicum (workshops).

The aim of the course is to improve the understanding of logistics flows and to establish the concept of logistics as a science based on integrated approaches in the formation of geographical thinking and holistic perception.

Tasks of the course «Lean-logistics in geography»: deepen the geographical, economic and social education of graduates of general secondary education through the study of the basic concepts of logistics, history and stages of development of logistics, functions and types of logistics, its role and place in different areas of human life; to orient the individual to individualization and independence in the process of making their own logistics decisions; to improve the concept of logistics as a science; to familiarize with varieties of logistics flows; to identify the individual logistical abilities of students, in accordance with their chosen direction of profiling; to create conditions for students to realize themselves as logisticians; to deepen geographical and socio-cultural knowledge; to develop geographical, spatial, logical and creative thinking; to develop logistical skills and abilities; to promote the choice of future professional activity; to form a geographical, economic, ecological culture and a comprehensive geographical worldview; to form a competent graduate of an educational competitive in the market of the requested professions; to form a culture of communication; to supplement educational and methodological support for geography with new teaching aids; to create optimal pedagogical conditions for teaching students at the profile level [6].

Didactic and methodological features of the elementary course «Lean-logistics in geography» for grade 11 th.: the elective course is a superstructure of the geographical profile; extends the content of the geography of the profile level of study, enabling the use of thematic information in the process of mastering the content of related subjects; promotes satisfaction of cognitive interests and individual characteristics of students in various fields of human activity; reflects the content of the curriculum that is fundamental to the creation of this course and does not repeat the content of the academic, profile levels of study.

The structure of the curriculum developed by our course «Lean-logistics in geography» consists of an introduction, 3 sections, 10 topics with orientated content, 5 logic practicum, workshops (logistic workshops – a new form of active practical activity of students), reserve hours (0,5 h), the expected results of students' educational and cognitive activity (knowledge, activity, value components); from the calculation of study – 1 hour per week for a total duration of 17,5 hours during the semester (Table 1).

The curriculum of the course, which is of a framework nature, is based on the principles of continuity and of school geographic education, integration of internal and cross-curricular links.

The implementation of the content of the curriculum of the course «Lean-logistics in geography» involves the use of elements of the classroom-lesson system; active, interactive forms of classroom and extracurricular activities.

Due to the framework nature of the «Lean-logistics in geography» curriculum, the teacher can creatively approach its content by selecting objects of study, K-direction tasks, and regional examples. Knowing the level of the students, their preferences, the teacher can vary the hours to study topics, sections, implementation of logic workshops from the time reserved.

**Table 1. Curriculum of the elective course «Lean-logistics in geography»**

№	Name of section, topic	Hours		
		Together	theoretical lessons	practical lessons
1	Introduction	2	1	1
2	Section I. Logistics theory	5	3	2
2.1	Topic 1. General characteristics of logistics	1	1	–
2.2	Topic 2. Logistics	1	1	–
2.3	Topic 3. Cost-effective logistics	3	1	2
3	Section II. Applied logistics	6	5	1
3.1	Topic 1. Military logistics	1	1	–
3.2	Topic 2. Business logistics	2	1	1
3.3	Topic 3. Environmental logistics	1	1	–
3.4	Topic 4. Urban logistics	1	1	–
3.5	Topic 5. Logistics services	1	1	–
4	Section III. Logistic design	4	2	2
4.1	Topic 1. Lean-design of commodity flows	2	1	1
4.2	Topic 2. Lean design in the service industry	2	1	1
5	Reserve time	0,5	–	0,5
Together		17,5	11	6,5

*Source:* developed by the authors

The content of the curriculum presented in the context of the four cross-cutting content lines of the new Ukrainian school (environmental and sustainable development, civic responsibility, health and safety, entrepreneurship and financial literacy) aimed at: studying the concept of logistics, its history, stages of development, functions, types, role and place in human life; development of applied modeling skills, use of logistical knowledge and introduction of concepts such as:

- logistics-planning, management, control, regulation of the movement of material and related information flows in space and time, starting with the primary source and ending with the place of final consumption;

- logistics chain – a linearly ordered set of logistics process participants who carry out logistics operations to bring an external flow from one logistics system to another;

- logistics operation – a separate set of actions for the implementation of logistics functions, aimed at the transformation of material and (or) information flow;

- set of logistic operations that ensure maximum demand for logistic service consumer demand in the process of managing logistics flows at the optimum level of costs;
- logistics system – organizationally-structured interconnectedness of link elements, which are combined with internal and external goals;
- set of grouped logistics operations aimed at realizing the logistic function goals of the logistics system;
- time-logistic cycle interval between ordering and delivery of ordered products (services);
- economical production – a management concept based on business optimization (production, services) to minimize losses with maximum customer focus (demand, needs) [7].

The content of the curriculum «Lean-logistics in geography» will be summarized as follows:

- «Introduction» (meaning logistics. Logistics as a science. Logistics as a branch (function) of a corporation. Symbolism of the logistics business. Cognitive and constructive role of logistics in the modern world. Logistics in geography. Sources of knowledge about logistics);

- section I «Logistics theory», topic 1 «General characteristics of logistics» (Logistics System. Logistics chain. Logistics operation. Logistics operations object. Logistics operations object in geography. History of origin of «Logistics» term. Logistics development stages. Functions of logistics), topic 2 «Varieties of logistics» (Types of logistics. Classification types of logistics. Military logistics. Business logistics. Material and information flows. Logistics expenditures. City logistics. Environmental logistics. Logistics tasks in the world geography), topic 3 «Savings logistics» (Basic principles of lean-production. History of lean-production. Basic aspects of lean-production. Methods and concepts of lean-production. Types of lean-production costs. Sectoral options of lean-manufacturing. Lean-logistics. Savings healthcare. Lean-mail. Savings construction. Savings management. Lean-city);

- section II. «Applied logistics», topic 1 «Military logistics» (Military logistics as a type of logistics. History of military logistics. Logistic system of military logistics. Military logistics Flows in History and Modernity. Logistics provision. Logistics in topography. Elements of military logistics in geography), topic 2 «Business logistics» (Logistics business logistics systems. Logistics management challenges in practice. Purchasing logistics. Distribution logistics. Sales logistics. Transport logistics customs. Logistics inventory. Logistics warehouse. Logistics info. Logistics complex. Logistics business. Logistics flows. Lean business. Logistics business in the Ukrainian economy), topic 3 «Environmental logistics» (Environmental logistics. Production processes and production wastes. Utilization. Unauthorized emissions. Lean – conservation and environmentally sound human behavior. Logistic flows of environmental logistics. Lean logistics of environmental attractiveness of Ukrainian regions. Logistics and geographic forecasting), topic 4 «Urban Logistics» (City logistics. Urban and rural population. Urban infrastructure. Metropolis. Agglomeration. Urbanization. Types of cities, their functions and problems. Urban lean logistics. Lean logistics and demographic processes. Demographic policy. Lean-logistics of your locality), topic 5 «Logistics services» (Logistics outsourcing. Logistics audit. Logistics providers. Logistics and logistics managers: professions, professional qualities. Logistics education institutions. Museums of logistics);

– section III «Logistics design», topic 1 «Lean-design of commodity flows» (Design in geography. Spatial models. Logistic flows in the field of economy. Logistic flows in the production of goods. Lean-design of goods flows. Logistic design. Logistic flows in the agro-industrial complex. Risks. Logistics benefits. Logistics disadvantages. Global «value chains» and «logistics chains»: common, excellent), topic 2 «Lean designing in the service industry» (Lean designing in the service industry. Services in the field of logistics. Logistics flows in the transport sector. Logistics flows in the financial sphere Logistics flows in the fields of education, science, culture, tourism and sports Political geography).

Substantial content of the proposed «Lean-logistics in geography» program of the elective course promotes geography education at the profile level, as it deepens the knowledge of the students in logistics and its derivatives, QR-coding (its creation and use), lean-logistics, outsourcing, audit and development skills such as: distinguishing between spatial models, describing the features of logistics in designing, modeling, constructing, space and time; skills development, working with cartographic material, etc.

In addition, the content of the proposed program is career-oriented, as it introduces senior students to such professions as logistics, manager, provider and specifics, geography of the location of educational institutions in logistics.

At the same time, the realization of the content of the elective course program is aimed at revealing the facts, processes, phenomena at an angle of view of four cross-cutting content lines, the formation of key, general-subject, subject geographical competences.

The implementation of cross-cutting content lines requires greater attention of geography teachers to the organization of the learning process at the profile level, in particular regarding:

- the use of integrators of the content of education (universal concepts, fundamental theories) in the construction of integrated tasks (questions) from the perspective of four thematic positions (civic responsibility, financial literacy, environmental safety and health);
- structuring the integrated content of the thematic courses (elective, optional students, etc.);
- use of exercises for the development of students' critical thinking with the substantiation of their civic position as a member of the team (class, school, family, community, state);
- modeling of educational tasks of competently oriented direction by means of realization of through four content lines with the projection for obtaining high results of educational and cognitive activity of students in the aggregate of knowledge, activity, value, etc.

In this context, the ability to acquire knowledge independently is an integral part of competency-oriented learning aimed at the formation of key, subject-specific, geographical competences of education seekers [5].

Use of such tools, forms, technologies, techniques in studying the content of «Lean-logistics in geography», such as E-book, book-trailer, hotlist, multimedia scrapbook, mind-mapping software, QR-coding, Print Screen-visualization, for active use geoinformation system, educational online services, updates the learning process, is interested in the content, and when used systematically in practice, makes them necessary and appropriate in the knowledge of geography.

The «Lean-logistics in geography» logistics screen demonstrates the construction of intelligence models in logistics knowledge by students of 10–11th. classes by means of test

exercises in the form of tasks for choosing one (or more) correct answer, establishing sequence and correspondence, mapping modeling-construction and example of tasks of the bank of questions of the thematic E-collection, which supplements the curriculum «Lean-logistics in geography», forming an appropriate educational complex before revealing the content of the proposed elective course with logistics to the study of geography.

### **Conclusions.**

Thus, the development and use by teachers of the author's curriculum, such as «Lean-logistics in geography», diversifies the educational process, makes it interesting and up-to-date, adapted to the needs and preferences of students, and their framework nature contributes to the teachers' creative approach to the development of didactic providing, structuring the content and constructing scientific and methodological knowledge of space-time patterns in geography and pedagogical modeling of the subjects activity in the process of geography training at the profile level.

So, it is necessary and effective process of teaching geography at the profile level of high school students as expedient, systematic and complex process, in which there is the connection of didactic and methodological functions that leads to the competently oriented student in geography.

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**MANAGEMENT OF THE EDUCATIONAL PROCESS: IMPLEMENTATION OF THE ANTI-CORRUPTION MEASURES THROUGH CHANGES IN THE CONSCIOUSNESS**

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***Abstract.** Today for Ukraine there are many challenges and one of them is the fight against corruption. It is obvious that corruption has a destructive character. It is also important to understand its consequences, as well as the perception of such a phenomenon by citizens. One of the reasons for the large-scale development of corruption in the country is also the change of moral and spiritual values at the personal level, which began in the '60s of the twentieth century. It was then that corruption mechanisms of social relations were born. It is important to form the consciousness of the younger generation through internal and external factors. It is necessary to make so that the youth not only wanted to live and work in Ukraine. For this purpose, the change of thinking and structural transformations in the country is necessary. Today decentralization is seen as a positive algorithm of actions from the state for many processes including in overcoming corruption. Decentralization can be the powerful anti-corruption tool as it increases possibilities of control of public resources because it brings together power and people. Decentralization allows the formation of a new educational space, the use of which is an anticorruption factor for sustainable development.*

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**Keywords:** *education process, corruption, anti-corruption measures, decentralization.*

**Introduction.**

The studied issues in one or another extent became the subject of scientific searches and discussion for such scholars as: Kolodko G.V. (2000), Senatorov A. (2001), Stillman D., Stillman I. (2017) and others [3, 6]. Analyzing the causal and effect problems of corruption in society, note that this problem is not limited to economic factors. It also has a number of concomitant factors that are of a diverse nature. One of which speaks of dissatisfaction in society, as an internal factor and distrust of the country as a whole, as a factor of Ukraine's perception of the world community. The importance of overcoming these shameful elements by the country and reforming the consciousness with the help of the younger generation is an urgent problem of our time.

This is what led to the choice of the topic of research, the formulation of goals, the synthesis of proposals for the change of negative trends. Ukraine is one of the most corrupted countries in Europe, because of the willingness of the Ukrainian society to perceive a corrupt type of behavior and lack of real counteraction, corruption becomes a norm of behavior at the state, regional and local levels. Corruption – is one of the main problems of Ukraine, which is constantly at the center of the attention of both Ukrainian and international communities. The pace and effectiveness of this struggle is slow – from 2013 Ukraine's position in the Transparency Corruption Perceptions Index International has improved as rising up to only 14 seats. Today, our country ranks 130th, dividing it with countries such as Nicaragua and Cameroon. Corruption is an unlawful activity that involves using officials their rights and opportunities for personal enrichment.

### **Materials and Method.**

The authors in their research paid attention to the current state of corruption, and its impacts on economic stability, as well as the prospects of overcoming its negative phenomena through the process of decentralization when developing a methodological approach. Used analysis methods as well as tabular and graphical methods of presenting research results as a research tool. The research database was made up of official data from the Government of Ukraine, an accredited representative of the global Transparency International movement, official Internet sources, as well as peer-reviewed journals and books.

In the first stage, in the search for information on the nature of corruption and its negative phenomena, the research process focused on the materials that examined what negative effects corruption has on society. Journals and books have been used as sources of information to study the types of corruption and approaches to combat it that are being reviewed.

In the next phase, author tried to figure out the dependence of the quality of life and level of education and found out that a person who wants to improve their lives gets an education and wants to move up the career ladder. For a more objective understanding of the mood in Ukrainian society, authors will look at the data provided by experts from the Institute of Demography and Social Studies named after M.V. Ptukha of the National Academy of Sciences of Ukraine as the main indicators of quality of life among certain countries.

The next stage of the research includes the results of the observations, the purpose of which was to find the answer to the question of how to change the thinking of the young generation to corruption itself in the context of decentralization, as well as to describe the key characteristics of generation Z. This has led to the hypothesis that decentralization can be a powerful anti-corruption tool, as it increases the ability to control public resources and unite power and people. The final stage of the methodological approach is the implementation of the new discipline "Community without corruption" in UTC secondary schools and elementary schools, as well as in colleges and vocational schools. The main objectives of a study of a subject matter are provision of knowledge concerning essence of corruption, the preconditions of its origin, the theory and practice of preventing of corruption; formation of ability to analyze corruption manifestations, to classify types of corruption acts, to determine corruption level by different methods; framing of skills of use of methods of measurement of corruption and development of anti-corruption mechanisms that can be implemented in community; how to prevent corruption violation; creation of a ground for non-acceptance of corruption by community. It is worth noting that this approach will form a new way of young people thinking and obtaining moral and ethical values in the fight against corruption.



### **Result and discussion.**

The main causes of the widespread corruption in Ukraine today are irresponsible and inefficient government, the underdevelopment of civil society, lack of competitiveness, raw material orientation and the shadow nature of the economy and the imperfection of legislation. One of the reasons for the large-scale development of corruption in the country is also the change of moral and spiritual values at the personal level, which began in the '60s of the twentieth century. It was then that corruption mechanisms of social relations were born. The particularly large breakthrough was subjected to public morale in the 1990s - under conditions of the lawlessness of state power, at the stage of radical market reforms. It was during this period that corruption relations penetrated all spheres of society's life.

Identified negative effects of corruption, such as: -corruption impedes the country's economic growth, makes its citizens poorer, the economy is less productive, and also holds back the development of enterprises; -incorrupt countries, government expenditures are ineffective: in particular, they spend less on education and medicine, but more on military projects (which, in turn, slow down GDP growth); -in corrupt countries, there are fewer budget revenues that occur, in particular, due to tax evasion. In Ukraine, 62% of businesses evade taxes, with almost half of them giving bribes. Corrupt countries attract less private investment because of higher risks and higher capital costs. Corruption suffers from the quality of state governance – instead of spending time-solving social problems, employees are looking for opportunities to be enriched.

One of the most serious consequences of corruption is the reduction of the efficiency of the economy – for example, because of rising capital costs or decreasing its productivity. Corruption constrains the development of state institutions (especially in less developed countries), as corrupt authorities are interested in this, which in turn, also negatively affects economic development. At the same time, Ukraine has a basic infrastructure for combating corruption: the Prozorro system, National Anti-Corruption Bureau of Ukraine, is the obligation of officials to fill the e-declarations. In Ukraine, 22% of the population justifies corruption. At the same time, the Index of Corruption Perceptions (CPI), the Index of Economic Freedom and the Index of Happiness in our country are quite low. Transparency International Ukraine has analyzed the relationship between these indicators in European states and has outlined the law: the more tolerant the society is to corruption, the worse the state is in terms of economic freedoms, deeper corruption and less prosperous people.

Reducing the level of corruption to a safe one in Ukraine is only possible if it be studied the foreign experience in the fight against this will extremely negative social phenomenon, in the first place successfully operating in other countries of political, legal and organizational – mechanisms to overcome corruption. The selection and study of foreign programs aimed at counteracting bribery and corruption, which has proven effective in practice, represents huge prospects for the borrowing of positive foreign experience, especially in the absence of its own actually functioning anti-corruption mechanism. The source of corruption is excessive state interference in the economy, bureaucratic traditions, social history, etc. The need in determining the preconditions for corrupt acts is conditioned by the fact that corruption as a social phenomenon is the product of socio-historical processes and social relations with established regularities and tendencies. Therefore, identification of the causes of corruption is so important in the process of combating it. The main factors and the corresponding consequences of corruption are given in Table 1.

**Table 1. Classification of corruption factors and their consequence on spheres of emergence**

Factors	Consequences
Political	unfavorable characteristics of the political elite; political instability; the imperfection of the mechanisms of relations between bodies of state authorities and political parties; lack of sustainable traditions of democracy; shortcomings of state regulation of financing of political parties; restriction of socio-political freedoms; excessive political decentralization, etc.
Economic	excessive state interference in the economy; shortcomings of the system of wages of civil servants; inadequate tax policy; low level of economic development; high security of the country with natural resources, etc.
Social	low education of society; the weakness of civil society, etc.
Legal	undeveloped anti-corruption legislation; gaps in the legal regulation of social relations; contradictions between the provisions of various regulatory legal acts; fuzziness or incomprehensibility of linguistic wording of legal norms; exceptions to general rules and procedures; confusion and dispersion of legal regulation, etc.
Managerial	weak effectiveness of state control; structural and functional disadvantages of the system of state bodies; the opacity of their activities; disorderly of general administrative procedure; undeveloped administrative justice; lack of proper organizational support for anti-corruption activities; disadvantages of providing administrative services, etc.
Moral-psychological	developing the corruption stereotypes with the help of media; hyperbolization in the public consciousness of the total corruption of the state apparatus; spreading the idea of the senselessness of individual counteraction to corruption, etc.
Cultural and ethical	the lack of transpersonal values, ideals and moral prohibitions; disagreements between public perceptions of corruption and its legislative definition; the existence of double moral standards of corruption; misunderstanding of the acuteness of a corruption problem in society, etc.

*Source:* generalized authors.

Corruption changes the nature of law enforcement activities of state bodies that cease to perform the function of protecting rights and turn into a tool for the massacre of innocent persons or the tool of unjust satisfaction of personal or group interests of certain persons, including the officials themselves of these bodies. The consequences of corruption of an international character may include: the negative impact of corruption on the image of the state in the world, the complication of relations with other countries, international organizations and the international community as a whole, the loss of the state's international positions in the economic, political and other spheres [4].

So, corruption has a destructive character and has a tendency to expand and deepen. Therefore, it is important to timely diagnose the problem and act on its bias, as well as it is necessary at the same time at all levels of society to fight in a variety of ways to eliminate this problem.

Also corruption has destructive character and, in the light of the above figures, is, unfortunately, the norm of the socio-political and socio-economic environment for modern Ukraine.

Highly phenomenal in its functioning is noted as the political and legal segment of corruption. The sphere of widening of corruption relations for this segment acts representation of interests of both physical and legal persons, by way of power or official lobbying, and in the majority of cases, contrary to certain normative-legal acts. "Price" (corruption remuneration) of such activity, as a rule, depends on the nature of the activity and in most cases is directly proportional to the status of persons involved in corruption relations. The main negative "effect" of functioning of this kind of corruption is the destabilization of the legal system of the state, that in most cases comes down to non-compliance with the principle of justice.

The microeconomic approach to economic modeling of corruption and combating it, based on developed by the American economist G. Becker's economic theory of crime, that is constructed on comparison of the expected benefit and possible costs from the offense.

Corruption (like any other type of criminal activity) is a highly risky activity, since the person who gives or takes a bribe risks of being caught and sentenced. If to try to depict in the form of formula the dependence of the offender's net income on various factors, then it will look like this:

$$R = (1 - p) S + p (S - D) = S - p D \quad (1)$$

where  $R$  - income of the offender;

$p$  - the probability that a violator of the law will be caught and punished;

$S$  - benefit size of the benefit of giving / receiving a bribe;

$D$  - the amount of losses a participant in corruption relations, which he will suffer as a result of punishment.

Based on this formula, it can be argued that two supports of the fight against corruption in the bureaucratic environment are: an incentivezation to be honest; sanctions for corruption behavior.

A very important indicator of corruption in the country is the Corruption Perceptions Index. Ukraine has got 32 points out of 100 possible in the Transparency International "Corruption Perceptions Index" (CPI) survey for 2018 and ranked 120th (out of 180 countries). This is 2 point higher and 10 positions higher than last year (30 points, 130 position out of 180 countries). Improvement of this indicator results in the following factors of influence: reducing the level of corruption in the police; work of new anti-corruption bodies and the register of e-declarations; gas market reform; reform of government procurement; reform of financing of parties; deregulation; business rarely faces the need to bribe.

All these factors give a slow but positive dynamics. Many people are worried about such an indicator as the quality of life. In Ukraine, it is not very high in comparison, for example, with the countries of the European Union. And in combination with the latest digital technologies and access to information, it is not only a financial but also an emotional threat for many people in the country. A large number of young people want to go abroad not only temporarily to study and work, but to permanent residence. And this, in turn, presents new threats to the country of demographic character. Quality of life is the most important social category that characterizes the structure of human needs and the ability to meet them. Some researchers in determining the concept of "quality of life" focus on the economic side, material security of life of the population. There is also the opposite view, according to which the quality of life is the most integrated social indicator. Quality of life of the population is a degree of satisfaction with the material, spiritual and social needs of man.

A person suffers from low quality and feels the pleasure of high quality of life, regardless of the sphere of work, business and personal life. Consequently, quality is necessary for a person constantly. The person himself seeks for improvement of quality of life - he gets an education, works at work, seeks to advance in career ladders, makes all efforts to achieve recognition in the society.

For a more objective understanding of the mood in Ukrainian society, considerate data provided by experts from the Institute of Demography and Social Studies named after M.V. Ptukha of the National Academy of Sciences of Ukraine as the main indicators of quality of life among certain countries (Table 2). According to the results of the given data, the indicators in Ukraine are practically the lowest among the 10 surveyed countries. The health care level, the standard of living and safety and also freedom of choice have the absolutely low level that, as a matter of fact, and influences the general index that is closing in these ten the countries.

**Table 2. Satisfaction with own lives (%).**

Satisfaction with own lives, %								
	Education	Health care	The standard of living	Work	Secure	Freedom of choice		General index
						f	m	
Czech Republic	74	74	75	70	70	80	77	6,6
Poland	67	47	68	44	66	73	73	6,0
Slovakia	66	52	59	61	62	54	47	6,2
Hungary	55	53	56	71	53	52	50	5,3
Romania	64	65	49	41	55	74	80	5,8
Bulgaria	42	38	37	51	54	53	52	4,4
Georgia	66	59	24	33	73	56	61	4,1
Turkey	51	71	65	61	60	60	67	5,5
Ukraine	50	22	17	39	44	34	43	4,0
Moldova	55	40	44	32	45	55	53	6,0

*Source:* according to data of the Institute for Demography and Social Studies named after. M.V. Ptukha of National Academy of Sciences of Ukraine

In addition to personal indicators, citizens, as members of society, face external factors that also have an impact on the quality of life and reflect the attitude of citizens towards the environment and their mood in society (Table 3). Analyzing the generalized data, it should be noted that the satisfaction of the majority of Ukrainian public life extremely low. The special concern is caused by such indicators as the local labor market, legal system and central power. Therefore, very many citizens "receive" the status of the compelled labor migrants. After all, they understand that in the local labor market with worthy financial security, most of them do not have the place. And the central power will not help them with it. For more or less decent existence of the families' part of them goes abroad for temporary employment. In the majority it is people of middle age. But not so circumstances consist of the youth.

**Table 3 Satisfaction with social life (%).**

Satisfaction with social life, %						
	By local labor market	Leisure opportunities	Local power	Legal system	Environment protecting	Central authority
Czech Republic	39	14	89	45	67	44
Poland	25	9	86	42	51	21
Slovakia	12	11	81	26	38	28
Hungary	23	9	80	42	46	28
Romania	22	7	80	40	28	25
Bulgaria	13	4	77	19	22	14
Georgia	5	18	74	37	30	25
Turkey	31	5	75	43	44	49
Ukraine	9	16	76	4	13	8
Moldova	9	17	71	22	24	17

*Source:* according to data of the Institute for Demography and Social Studies named after. M.V. Ptukha of National Academy of Sciences of Ukraine

Very good indicators in Ukraine, according to the demographer, on the expected training duration, that has grown by 23%. The share of the youth of student's age which gets higher education reaches 82%. And it is the highest rate among the countries mentioned above. And the share of persons is more senior than 25 years having at least secondary education, makes 94% among women and 96% among men. The number of pupils on one teacher averages 17 people. Among the countries that were taken for comparison, in their Turkey most of all - 24, and least of all in Poland - 10.

Modern young people, or as they are called "generation Z", have a peculiar, different from other generations, thinking. Generation Z is those who were born in 1995-2012. Gradually they become the main labor force in the labor market. The generation Z watched the most violent recession when many of their acquaintances have been forced to struggle very much to keep that for the sake what they so diligently worked. In addition, they had to face with many millennials that completely go in cycles with their careers and simultaneously burdened with large debts. Being forced to support high rates of transformations, the generation of Z is under pressure as well as the impatient aspiration to move forward faster. It is no wonder that in generation Z has a high level of motivation. Generation Z has great doubts about the expediency of entering college and the value of a bachelor's degree. This generation can truly be called the "do it yourself" generation. It is simply created to make lightning decisions. Their aspiration to move ahead doesn't leave time for infertile reflections. According to the results of the research Pew Research, in 1995 when the first representatives of generation Z have begun to born, only 14% of American teenagers had access to the Internet. By 2014 this indicator has reached 87% [6].

Having access to worldwide network Internet, for most of them there are no borders and restrictions. They intensively learn languages, communicate with like-minded from around the world, dream to see as much as possible unknown places personally. And the lack of large sums isn't the reason for restrictions. Because they can travel by hitchhiking, live in hostels and work at a

distance. And some restrictions which arise at the high corruption of officials in the country are not relevant for them. After all, most of them understand that there is life without corruption and they can be a part of this society. Therefore, having seen other attitude towards people in highly civilized countries and having compared to realities in Ukraine, many of them make the decision to begin the life outside the native state.

So, to keep and increase the future of our state, it is necessary to make so that the youth not only wanted to live and work in Ukraine, but that also young people from other countries regard Ukraine as such which is attractive, safe and perspective for living and that there is a sense to think about moving here to the permanent residence and never to leave her. For this purpose, the change of thinking and structural transformations in the country is necessary.

Today decentralization is seen as a positive algorithm of actions from the state for many processes including in overcoming corruption. Decentralization can be the powerful anti-corruption tool as it increases possibilities of control of public resources because it brings together power and people. On the other hand, the increase in local resources can potentially create also new opportunities for corruption actions. Exactly the representatives of united communities have the opportunity to start with a clean letter and build communities without corruption, or at least minimize it.

Countering of corruption takes the central place in the programs of the United States Agency for International Development, which is through between the sectoral themes of projects, that are supported the partners and through which anti-corruption mechanisms are introduced in united territorial community (UTC). This is the USAID Ukraine program: Strategy for strengthening of local government in Ukraine (PULSE); Project «Decentralization — a Way to the Best Results and Efficiency» (DOBRE); Transparency and accountability in public administration and services; Project «Alliance for Transparent Education Management in Ukraine» (UTEMA); Program «Program of assistance of Citizen Activity» «ENGAGE»; Project "Support to Organizations-leaders in counteract Corruption in Ukraine» «InterAction».

The project activity assumes achievement of three purposes:

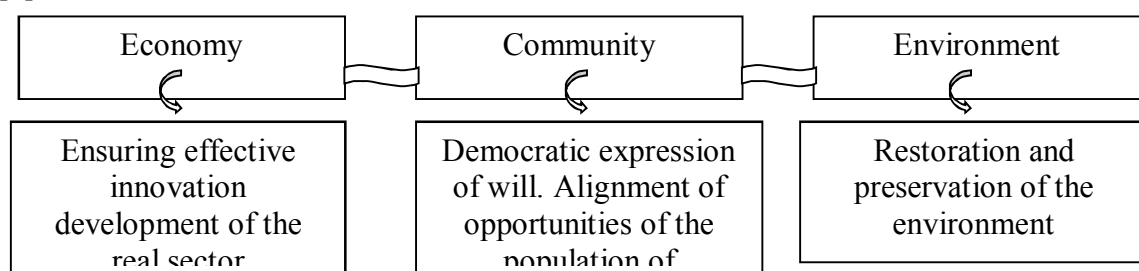
- 1) extension of the powers of governmental institutions in measures to overcome corruption;
- 2) strengthening of public support and involvement of citizens to actions for overcoming corruption;
- 3) the impossibility of public tolerance to the manifestations of corruption.

In support of these projects, authors have paid attention to the relevance of our implementations and to transfer the focus on youth. Today, in Ukraine, a new educational space is formed that has more than 301754 students (Figure 3). Very important to create a new consciousness for the younger generation. And in it is calling of new discipline "Community without corruption". This subject should be taught at the UTC main secondary and branches of the UTC basic schools and also in colleges and vocational schools. The main objectives of a study of a subject matter are provision of knowledge concerning essence of corruption, the preconditions of its origin, the theory and practice of preventing of corruption; formation of ability to analyze corruption manifestations, to classify types of corruption acts, to determine corruption level by different methods; framing of skills of use of methods of measurement of corruption and development of anti-corruption mechanisms that can be implemented in community; how to prevent corruption violation; creation of a ground for non-acceptance of corruption by community.

During the study of the discipline students will receive knowledge concerning the essence of corruption and its consequences, socio-economic and political causes of its occurrence, the legal and regulatory base prevention and combating of corruption, administrative and criminal liability for corruption action, main components of anticorruption strategy, opportunities of use of potential of civil society in combating corruption, the methodological bases of measurement of level of corruption, possession of skills in the qualification of corrupt acts, implementation and use of methods for measuring the level of corruption, mastering of skills for developing a plan against corruption measures, skills in developing of ethical behavior rules of employees [7-8].

And the main thing - is the formation of a new way of thinking of young people and obtaining moral and ethical values [2]. Develop such categories as: judgments, reasoning, formation of conclusions, generation of concepts, the ability to use knowledge, skills for identification of corruption opportunities, qualifications of corruption acts and forecasting of consequences of their manifestation in UTC; a deep understanding of the negative consequences of corruption for UTC, the causes of corruption occurring, conditions of its spread and penetration into all spheres of public life; knowledge of methods for measuring corruption; the ability to organize activities for making of a plan of measures for the prevention and counteraction of corruption in UTC; the ability to apply the obtained theoretical knowledge on prevention and counteraction of corruption for formulating practical recommendations and proposals to local self-government bodies; formation in a future experts of the political culture not compatible to manifestations of corruption acts; development of ability to resist to corruption temptations, to show intolerance to corruption cases; formation of the ability to analyze the state of corruption in UTC; development of sense of responsibility for the choice and consequences of acts; education of independence, will, morality.

With such skills that can be used at the developed new generation of thinking, it can be argued that the sustainable development of UTC, which is extremely necessary for the newly created communities, is guaranteed. In fact, according to the UN Commission on Environment and Development in 1987, sustainable development is a development that meets the needs of the present generation and doesn't infringe on the interests of future generations in the satisfaction of their own needs [1].

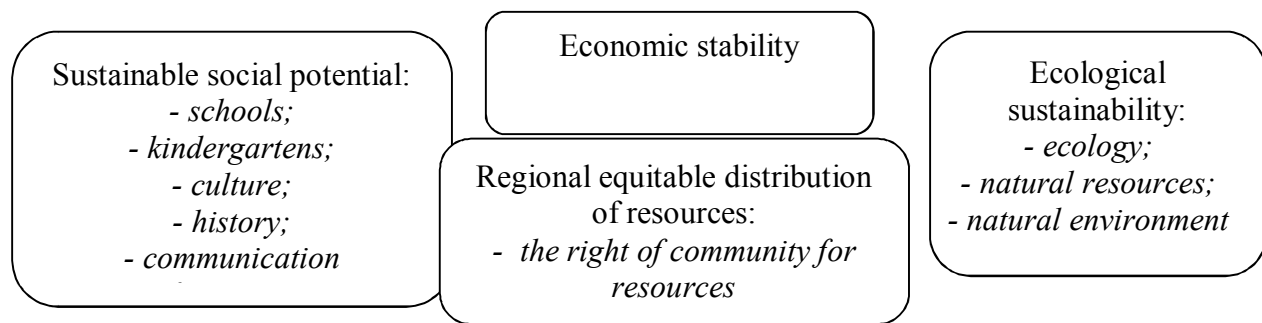


**Fig. 1 Three-dimensional model of sustainable development of the region**

Source: own elaboration

Problems of sustainable development of the region arise in connection with the contradictions in the formation of each component [5]. Economic growth is an outpaced increasing of regional income in comparison with population number - increase in the welfare of each person. The social component has one of the priority values as it is observed: the tendency of increase in the specific weight of urban population; the tendency of aging of rural people.

These two tendencies define dependence of the region on the external food markets as the zone of food provision of the cities (the population which doesn't make production) is narrowed.



**Fig. 2 Measuring instruments of sustainable development of the region**

Source: own elaboration

The concept of provision of sustainable development of the region should be oriented on the person. The essence of this aspect of the concept is to increase the level and quality of life of every person in the community. The key issue is the preservation of social and cultural stability, the reduction of the number of conflicts between people, the fair distribution of wealth, the preservation of cultural capital, etc. All these elements are accelerated in achieving a gradual elimination of corruption.

### Conclusions.

On the basis of conducted researches, draw the following conclusions that the fight against corruption is a necessary condition for a successful country's development. As a result, it is possible to get the following benefits:

1. The index of perception of corruption in society is changing for the better, and in the society, there are negative trends regarding the non-acceptance of such disgraceful phenomena.
2. The quality of life of citizens improves. What in turn gives additional opportunities for access to education, medicine and carrying out leisure.
3. The trust in the power at various regional levels increases.
4. It is provided the free access of people to resources, which guarantees safe livelihoods and avoidance of environmental problems is provided.
5. The quality of education and its satisfaction as a possibility of guaranteed employment in a country with sufficient financial support increases.
6. Decreasing the migration process, both temporary and permanent, that affects the positive social and demographic dynamics in the country.
7. The budgets of different levels are filled with the withdrawal of funds from the "shadow economy".
8. The country's image on the world stage is improving, that in turn leads to the perception of Ukraine at the level of the highly developed countries.

Consequently, combating corruption is an important task for every member of the society, since it directly concerns each citizen of Ukraine. Undoubtedly, it is not such a fast process, but gradual changes can yield positive results on which depend the future of our country and future generations.



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**STAGES OF ADAPTIVE SYSTEM OF MASTER'S TRAINING OF  
EDUCATIONAL INSTITUTION MANAGEMENT**

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**Abstract.** *The article describes the stages of adaptive system of professional master's training of educational institution management on the basis of the step-by-step detailing method. The concept of "Master's training system" has been studied. The structural components of the master's training system have been outlined: value, motivational, intellectual, functional and role-based, technological, regulatory and personal. The elements that provides an adaptive nature to the system have been outlined: external purpose and objectives aimed at self-organization; motivated master students; professional competencies that take into account market requirements; learning content, focused on forming the ability to carry out professional activities in non-standard environment; internal realistic goal, objectives, principles of professional master's training, which turn to adaptation in changing environment; modernized teaching staff; adaptive educational environment; diagnostic support subsystem; the result of training competitive future professionals. On the basis of the given system elements, the stages of the adaptive system of professional master's training have been defined and described in the article: motivational and identification, adaptation, diagnostic and self-organizational. It is proved that functioning of the adaptive system of master's training is possible subject to the change of specially organized professional training to the directed self-organization and self-education of the graduate students.*

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**Keywords:** *pedagogical system, master's training, adaptive system of master's training, self-organization, self-education.*

**Introduction.**

Ukraine's modern higher education is being constantly reformed to ensure the country's sustainable development and increase the competitiveness of our graduates in the European space. The result of the creation of a fresh innovative environment, improving the efficiency of the educational process, is the refocusing of the traditional pedagogical system of training specialists to an adaptive one, which in theory and practice is considered as a means of optimizing the learning process, which is associated with flexibility, self-organization and adaptation to the changing environment. According to the theory of management in the man-machine system an adaptive system is capable to adjust itself to change by automatically adjusting the management algorithm. In the pedagogical sciences (management in the "person-to-person" system), this process is called self-organization, which provides self-renewal or self-ordering of the system as a response to external impacts.

### Literature review.

O. Disa [4], L. Koroletska [5], V. Proshkin [14], S. Omelchenko [13] and others have paid attention to the research of pedagogical systems in recent years. Researchers O. Kovalchuk [6] (training of humanities degree masters for innovative activities); N. Myronchuk [10], O. Protsenko [15] (training of high school teachers in the magistracy) and others have been worked in the field of master's professional training. Scientific researches of Y. Atamanchuk [1], Y. Tymtsunyk [16], O. Lebid [8], S. Nemchenko [11] and others deal with the system of professional master's training of educational institution management. However, the adaptive system of professional master's training of educational institution management has still been poorly studied.

*The purpose* of the article is to describe the stages of the adaptive system of professional master's training of educational institution management on the basis of the step-by-step method. To implement this method, it is necessary to distinguish clear steps in a specific sequence. *Objectives*: to consider the concepts of "system", "pedagogical system", "adaptive system of master's training"; to identify the main components of the master's training system, to outline their adaptive elements that provide an adaptive nature to the system and to describe the stages of the resulting adaptive system of professional master's training of educational institution management.

The *hypothesis* of this study is the assumption that the development of an adaptive system of master's training of educational institution management can contribute to improving the quality of professional master's training and their further activities in management positions.

### Methods.

In the course of the research, the following *methods* have been used: *step-by-step detailing*, which implies the gradual fragmentation of the main objective (master's training system) into simpler components – its structural components, their clarification and gradual dwelling into the elements of the adaptive system of the professional master's training of educational institution management; *modelling* – makes it possible in the study to reflect the essential features of the adaptive system of master's training and to theoretically comprehend its structure, individual segments, processes, to identify inconsistencies and to harmonize the designated components with the realistic educational goal; *classification*, the use of which provides classification of groups of segments in the adaptive system of master's training and their correlation; *induction*, the process of exploratory study of the adaptive system, during which the transition from the individual components of the system to the conclusion of its general provisions takes place.

### Results

Training of educational institution managers within magistracy is considered from the perspective of systems theory through the prism of four fundamental determinants: system structure; its composition (subsystems, elements); current global condition of system dependence; the environment within which all the processes that organize the system take place [9, p. 9]. Thus, the system refers not only to the set of a large number of units, where each unit is subject to the laws of cause-and-effect relationships, but also the unity of relations and relationships of the individual elements that cause an immediate complex function, which is possible only due to the structure of a large number of interrelated and interacting elements (S. Sarkisian, L. Golovanov) [7, p. 6].

The pedagogical system is a process divided into different elements, levels and parts which in interaction with one another are combined into a whole and aim at creating favourable environment for the development, formation and influence on the objects of education. N. Kuzmina defines the pedagogical system as a set of interconnected structural components (educational information; pedagogical communication tools (forms, tools, methods, techniques); learners; teacher; purpose of educational activity) and functional components (constructive, communication, organizational, predictive), which should provide a link between the structural components. Both structural and functional components are subordinate to the educational goal [17, p. 144].

According to V. Bespalko's definition, the pedagogical system is a set of interconnected means, methods and processes necessary to create an organized, purposeful and deliberate pedagogical influence on the formation of personality with set qualities. Based on this definition of the pedagogical system, it should be noted that the value orientations of a particular society set goals for the formation of personality, and therefore, one or another pedagogical system: goals change – and the system is to change [3, p. 6]. According to the researcher, the structure of any pedagogical system is an interdependent set of invariant elements: objects of education; educational goals (general and private); the content of education; educational processes; the subject of education (or technology in education); organizational forms of educational activities. All interactions take place within the given structure: both those who study and those who determine the course of the educational process, which leads to the formation of personality with specified qualities.

The system of master's training is treated as a kind of pedagogical system, because of its characteristics inherent in such a system: it consists of interrelated elements; the elements form a whole; elements within the system form certain subsystems; any system is a subsystem of a higher level system. Furthermore, the system of professional master's has general characteristics for all social systems: purposefulness, integrity, structural nature, dynamism, interaction with the environment and with systems of lower and higher order.

V. Bereka in his research of theoretical and methodological bases of master's training of future education managers has substantiated and developed the system of managers training. Thus, based on the system approach, the researcher has identified the structural components of the system of master's training of education managers: value, motivational, intellectual, functional and role-based, technological, regulatory and personal. These components, according to the author, are to stimulate to the extent possible the active state of all components of the manager's personality. As system-creating elements of the continuous professional managers training system, the researcher has identified the following: values, essence, purpose and objectives, features of management activities, regularities, principles of the process of professional master's training; the process of professional and personal formation of a specialist and the final result. As variable components, the author has identified the organizational and pedagogical conditions for the implementation of the management process (content, forms, technologies of educational process organization, conditions of personnel, financial and material and scientific and methodological support, diagnostic technique, effectiveness of the professional training process) [2].

At the same time, the traditional system of master's training of educational institution management has a number of drawbacks: lack of flexibility and adaptation in the process of master's training depending on the personality of the student and the level of his/her abilities; complexity of accounting for market needs (customers) and specific capabilities of educational

institutions (intellectual potential); inability to account for opportunities and needs of a particular personality; discrepancy between the content of the programs and the requirements for specialists who are able to work effectively in the modern market economy [2]. This can be ensured by incorporating adaptive processes into the system of training specialists who will lead the graduate student to a high level of development, adapting him/her to their requirements, without losing focus on the purpose and specificity of the organization of the educational environment. It should be noted that it is the case of a two-sided adaptation: the educational system in a particular educational institution adapts to the individual characteristics of the graduate student and the graduate student himself adapts to the system. Such adaptation gives the concept of an adaptive system that involves interaction, resulting in the necessary qualitative changes.

Therefore, an adaptive system of master's training of educational institution management has been created to provide fast, flexible and effective training of modern professional managers, able to quickly respond to changes in the society, to make independent leadership decisions, to maintain balance and prudence in making managerial decisions. Pedagogical experience shows that the most effective task of training masters of educational institution management is solved through professionalization, creativity, self-organization and self-education. It is advisable to outline the adaptive elements of the system of master's training of educational institution management:

1. External purpose and objectives that determine the operation of the system aimed at self-organization.
2. Master students of education management who are motivated to acquire professional competences.
3. Professional competences (general, special, research), taking into account market requirements.
4. The content of the training, which is focused on building the ability of future masters to carry out professional activities in non-standard environment.
5. Internal realistic goal, objectives, regularities, principles of master's professional training aimed at utilizing the potential of a person to adapt in changing environment.
6. Teaching staff, which ensures the realization of the goals and objectives of management training and educational activities at the level of modern market requirements, which cause the continuous education of teachers by constantly improving their professional competence.
7. Adaptive educational environment (educational space), consisting of a standard part, adapted educational and methodological support, which includes a standard component of the educational program and an optional component, which is adaptive due to specially developed adaptive technologies, techniques, innovative and interactive methods, an individual selection of forms of teaching which make it possible to adjust to the needs and capabilities of each graduate student and provide him/her with the right to choose and so on.
8. Diagnostic support subsystem for monitoring to provide adaptive features to the educational process by reviewing educational programs, current correction/self-correction, diagnosis/self-diagnosis, cognition/self-cognition, reflection/self-reflection, and to jointly predict further development based on analysis and self-analysis of the result.
9. The result of training future professionals who are competitive in the labour market and able to act in changing and non-standard environment.

On the basis of these system elements, the stages of the adaptive system of professional master's training of educational institution management have been defined, which includes 4 stages: motivational and identification, adaptation, diagnostic and self-organizational.

*I stage – is motivational and identification.* At this stage the basic foundation of the adaptive system of professional master's training of educational institution management is laid, which represents the motivational orientations of the educational and professional activity of the graduate students, who are in the constantly changing modern market conditions. They determine the direction, content, requirements and competencies that masters are to master in the educational process. That is, the motivational stage involves the process of giving rise to the needs of graduate students for educational activities to achieve professional-personal goals and meet their own demand for self-improvement. The motivation of the graduate students occurs through the realistic external goal and its transformation into internal motives. External goals reflect the social needs of professionals and social requirements for their professionalism and personal qualities that are set externally, internal goals are individually formed by the graduate student, in accordance with his or her life positions, moral values, needs, aspirations. Information is provided in the course of educational activities in the form of content modules of general and special training, namely: compulsory educational courses, optional courses selected by an educational institution or graduate student, research work, practice, distance courses, group and individual consultations, participation in scientific-practical conferences. It should be emphasized that adaptive processes take place in the mastery of both standard and optional content. However, to provide a personalized approach, it is necessary to offer a variety of special courses or electives that can be removed or added according to the needs of students. This ensures the flexibility of the content.

The graduate student collects new information, analyses it and reaches the level of its rethinking. Self-identification takes place (level of knowledge, values, professional aspirations) with regard to other people, classmates, teachers, with the requirements of educational and professional activities, identification of own problem areas of development. The graduate student is faced alternatives of variety of behaviour patterns: to change something in himself/herself, his/her knowledge, to develop or formulate a new strategy of his/her own development, or to remain at the level where he/she is already comfortable. That is the implementation of the first stage of the adaptive system of professional master's training of educational institution management.

However, the adaptation process does not stop there. The graduate student sees a further goal that he/she is unable to achieve without additional knowledge. He/she faces a situation of further orientation, in which the execution of the task requires not to learn already available information, but to generate additional information, without which this task cannot be solved. This situation requires updating their knowledge, searching the information they need, and developing new ways to act. Thus, the situation of further orientation leads the graduate students to the second stage of the adaptive system of training - long-term adaptation.

*Stage II – adaptive* (transitional, long-term), involves stimulating the individual activity of the graduate student, which takes place in the process of interaction between the teacher and the graduate student, helps to establish a balance between the current level of the graduate student's development and the new requirements of the educational environment in which he is now. The beginning of the adaptive stage involves identification of problem areas and changes occurring in

the educational process. This causes the graduate student to determine the parameters of the problem area where the active voluntary interaction of the teacher and the master is automatically established. It should be noted that adaptation occurs at the expense of a specially created choice situation for a graduate student – a combination (model) of the most favourable directions of actions taking into account situational factors of the environment.

An adaptive system should be capable to assist each graduate student in achieving the optimal level of intellectual development according to his or her natural abilities and individual inclinations, taking into account the dynamic of pedagogical interaction, directing his or her resources to self-education and self-organization, taking into consideration the activity or passivity of the individual potential of the graduate student. The tool here will be the preparing of an individual adaptive scenario of the professional development of the graduate student – a step-by-step strategy of adaptive educational activity (detailed scenario) of the student for the entire period of study, taking into account the individual features and abilities of the graduate student.

In studying the issues of adaptation in the pedagogical aspect, active (progressive) and passive (regressive) adaptation by involvement of the individual into educational activities have been identified. In the event that the graduate student, by mobilizing own resources, is active, finds methods for searching information on his/her own, adapts to rapidly changing educational environment, and achieves his/her goal, he/she reaches the level of self-adaptation (self-adjustment), such process can be called an active adaptation. Such activity of the graduate student greatly facilitates his interaction with the teacher and provides the teacher with better opportunities to develop professional competences at a high scientific and practical level. But the involvement of the graduate student in the educational activities can be passive – there are manifestations of inactivity, confusion, disadaptation of a student who for some reason is not activated in the educational process. In this case, the graduate student requires specific support from the teacher, which is carried out by using additional elements – specially pre-developed pedagogical tools – individually selected methodological, didactic, information and technological support with the materials necessary for obtaining professional competencies.

It should be noted that regardless of the manifestation of active or passive master's adaptation, an individual adaptive scenario in any case is developed together with the student, a free choice of forms, methods, teaching aids is proposed, which results in modernization of the educational process and two-sided improvement of professional skills in the "Teacher-Student" system.

*Stage III – diagnostic* (individual diagnostics), involves tracking, collecting and analysing information about qualitative changes that occur in both the graduate student and the teacher (two-way adaptation process), changes in his educational activities and environment (educational environment). Diagnosis procedure is to detect these changes in the professional master's training and eliminate uncertainties regarding the target processes, to establish regular relationships, to identify their manifestations in specific conditions of the educational environment. The dynamics of personal development of masters during the educational period, their adaptive activity, the level of professional awareness are also monitored. The evaluation of the activity is carried out both by the graduate student (individual diagnosis) and by a group (expert groups) or a teacher. Based on the results of diagnostics, a comprehensive analysis is carried out to identify potential opportunities and problems of the development of graduate students. Such analysis allows defining specific

pedagogical objectives of the subjects of educational process, to reach a new level of professional training/self-training. The main methods of diagnostics are observation, qualitative and quantitative analysis of the results of educational activities, methods of expert assessments, questioning, testing, sociometric methods, projective methods, scale methodology, conversations, consultations, etc. The diagnostic result is a joint adjustment of the adaptation process of graduate students and the changes made to the individual adaptive scenario. The diagnostic stage of the adaptive system of master's training is implemented through successive steps: observation/self-observation, analysis/self-analysis, assessment/self-assessment, reflection/self-reflection, and correction/self-correction. Both graduate students and teachers are to undergo the diagnostic procedure, monitoring both changes of the other (observation, analysis, assessment, reflection, correction), and their own changes (self-observation, self-analysis, self-assessment, self-reflection, self-correction).

*Stage IV – is self-organizing.* This stage is the final stage in the adaptive system of master's training, the final outcome is the transition to self-education as a continuous process of self-development and self-improvement of professional competences of the future educational institution manager.

It should be noted that self-organization comes through improved in the magistracy course of the individual's personal abilities and systematic self-activity, manifested in purposefulness, expansion of their own initiative, motivation, ability to plan their own professional activities, make quick decisions and be responsible for them, criticism with regard to the results of their own actions, a sense of obligation [12].

In the scientific literature there is confirmation that self-organization is defined as a spontaneous process (refers to the beginning of its emergence), but there can be a different opinion. The process of self-organization is related to the improvement and development of the personality implemented through the activities, so it is not of the spontaneous but the targeted nature. If human activity is conscious (deliberate), it will always be targeted. Therefore, at the last stage of the adaptive system of professional training of education managers there is a change of specially organized educational activity to the targeted self-organizing of self-education of the individual. This change provides self-management of the training system without external control. Therefore, in our view, self-education refers to individual, targeted, systematic, professional-cognitive activity with the outlined realistic goal, awareness of the means of its achievement, which is managed by the individual, who independently analyses and evaluates his/her abilities and knowledge.

### **Conclusions.**

The operation of the adaptive system of master's training is possible provided the specially organized professional training is changed to the targeted self-organization and self-education of the graduate students. This change provides the self-organization of the training system as a response to the mobility of the educational environment, alters the traditional vector of training, without losing focus on its purpose and specificity. The establishment and operation of an adaptive system of training masters of educational institution management is the key to ensuring flexible and effective training of modern professional managers, able to quickly respond to changes in society, make independent leadership decisions, maintain balance and prudence in making management decisions.

The prospects for further research are in determining the impact of the use of the developed adaptive system on the quality of training masters of educational institution management.



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## **COMPUTER MODELING IN THE EVALUATION OF THE EFFICIENCY OF THE FUNCTIONAL DIDACTIC MODEL OF FORMATION OF DIGITAL COMPETENCE OF STUDENTS**

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**Abstract.** *The article discusses the process of computer simulation with the help of special software - the BPwin application, which provides the ability to simulate various processes, identify and diagnose relationships between units of models, automated reporting. The process of formation of digital competence of students of economic specialties is interpreted as a partnership of teacher and students, during which the students stimulate and organize active independent cognitive activity in order to master the system of competences, outlined in the content of teaching of each specific discipline and mastering modern digital technologies in educational and future professional activity. It has been found that BPwin models have confirmed the relationship between the units of the functional didactic model of digital competence formation of students of economic sciences, and all identified units of the model and their components contribute to increase the efficiency of the process of formation of digital competence of students of economic sciences as a whole. The units of the model are defined: motivational-target, information-content, operative-action, diagnostic-resultant. Motivational-target unit contains the purpose formation of digital competence of students of economic specialties. The operative-action unit is represented by didactic conditions that are implemented in the educational process of preparation of students of economic specialties. The diagnostic-resultant unit provides monitoring of the effectiveness of educational activities of students of economic specialties and diagnostics of the levels of formation of their digital competence.*

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**Keywords:** *digital competence, pedagogical experiment, modeling, resource-based learning, BPwin.*

### **Introduction**

The importance and necessity of using pedagogical experiment is especially actualized in the current conditions of modernization of the domestic education system, when Ukrainian educational institutions are actively working in the direction of innovative search and implementation of reforms. Undoubtedly, the problem of the quality of scientific and pedagogical research (verification of the developed methods, technologies, programs, methods, pedagogical and didactic conditions that are introduced into the educational process for the purpose of its improvement) is one of the fundamental methodological problems of pedagogical science.

In the contemporary context, it is of paramount importance, since the effectiveness of pedagogical developments and the expediency of their use must be proven through a pedagogical experiment.

### **Literature review.**

On the whole, many scientists are exploring the problems of organizing and conducting a pedagogical experiment. Thus, the methodological foundations of the organization of pedagogical experiment (general requirements, logic, stages, methodology and technique of processing the obtained facts) were disclosed by O. Zhosan [11], F. Korolev [5]; theory and practice of pedagogical experiment in Ukraine as a complex method (formulation of a hypothesis, goals, tasks, combination of observation methods, interviews, questionnaires, control questions, videos, testing, interviews, creation of special situations, transcripts of lessons) E. Panasenko [9]; G. Vorobyev, A. Piskunov explored the peculiarities of conducting a pedagogical experiment, which is connected with the specificity of the phenomena being studied (didactic, partially-methodical, educational, school experiment), psychological and technical aspects of conducting a pedagogical experiment [10]; pedagogical researches and peculiarities of pedagogical experiment in the system of methodical work of educational institution (development of normative documents on preparation and conducting of experiment, program of pedagogical experiment) are presented in the works of N. Kalinichenko [4]; methods of processing the results of pedagogical experiment by means of computer statistical packages were studied by D. Novikov [8]; some aspects of modeling in pedagogy were investigated by M. Hrynova [1], N. Kononets [1], O. Mukoviz [7].

Analysis of the works of scientists made it possible to conclude that in the pedagogical experiment often use the method of modeling – method of model creation and research, more precisely, the scientific method of investigating different systems by constructing models of these systems that retain some of the basic features of the study object and studying the functioning of the models with the transfer of the obtained data to the study object.

### **Results and Discussion.**

It is advisable to model the process of formation of digital competence of students of economic specialties. So, let us consider the functional didactic model of digital competence formation of students of economic specialties, which are formed by interrelated units: *motivational-target*, *information-target*, *operative-action*, *diagnostic-resultant*.

*Motivational-target unit* contains the purpose – formation of digital competence of students of economic specialties. It should be noted that digital competence is an integrative professional quality of person, characterized by the ability to critically apply information and communication technologies to create, search, process, exchange information at work, in public space and in private communication; information and media literacy, basic programming, algorithmic thinking, database management, Internet security and cybersecurity skills; understanding the ethics of working with information. This unit is highlighted in order to develop motivation for the study of modern digital technologies, to provide positive motivation to study and future professional activity of an economist, to the process of formation of digital competence and information culture of future specialists of economic profile during studying at the university as a whole, and displays didactic tools that it is advisable to use them in the educational process to create situations of success and motivational techniques.

The *information-content unit* contains a contents of the Training studio "Digital technologies in the work of an economist", which reveals a logical chain: "basics of information and communication technologies - system economic data - information systems in the field of economy - modeling of economic systems and processes "; e-learning resources - e-learning content "IT-education", electronic technical means, distance courses for the disciplines "Economic cybernetics", "Economic-mathematical methods and materials", "Economics modeling", "Modeling of economic dynamics", "Management modeling in socio-economic systems", virtual classes, virtual boards.

The *operative-action unit* is represented by didactic conditions that are implemented in the educational process of preparation of students of economic specialties:

- 1) development of the process of digital competence formation of students of economic specialties on didactic principles: science, systematic and consistent, accessibility, consciousness and activity of teaching, clarity, strength of knowledge, communication of theory and practice, emotionality, control and correction of knowledge, optimization of learning;
- 2) implementation of competent and resource-based approaches to the development of electronic educational resources (distance courses, virtual classes, electronic textbooks, virtual boards, etc.) for the formation of digital competence of students of economic specialties;
- 3) introduction of a Training studio "Digital technologies in the work of an economist";
- 4) coaching as a pedagogical technology of digital competence formation of students of economic specialties;
- 5) resource-based learning technology – activation of information retrieval and analysis, Web mining (use of data mining methods for automatic retrieval and retrieval of information from Web documents and services), Text Mining technology, visualization methods, contextual search in documents.

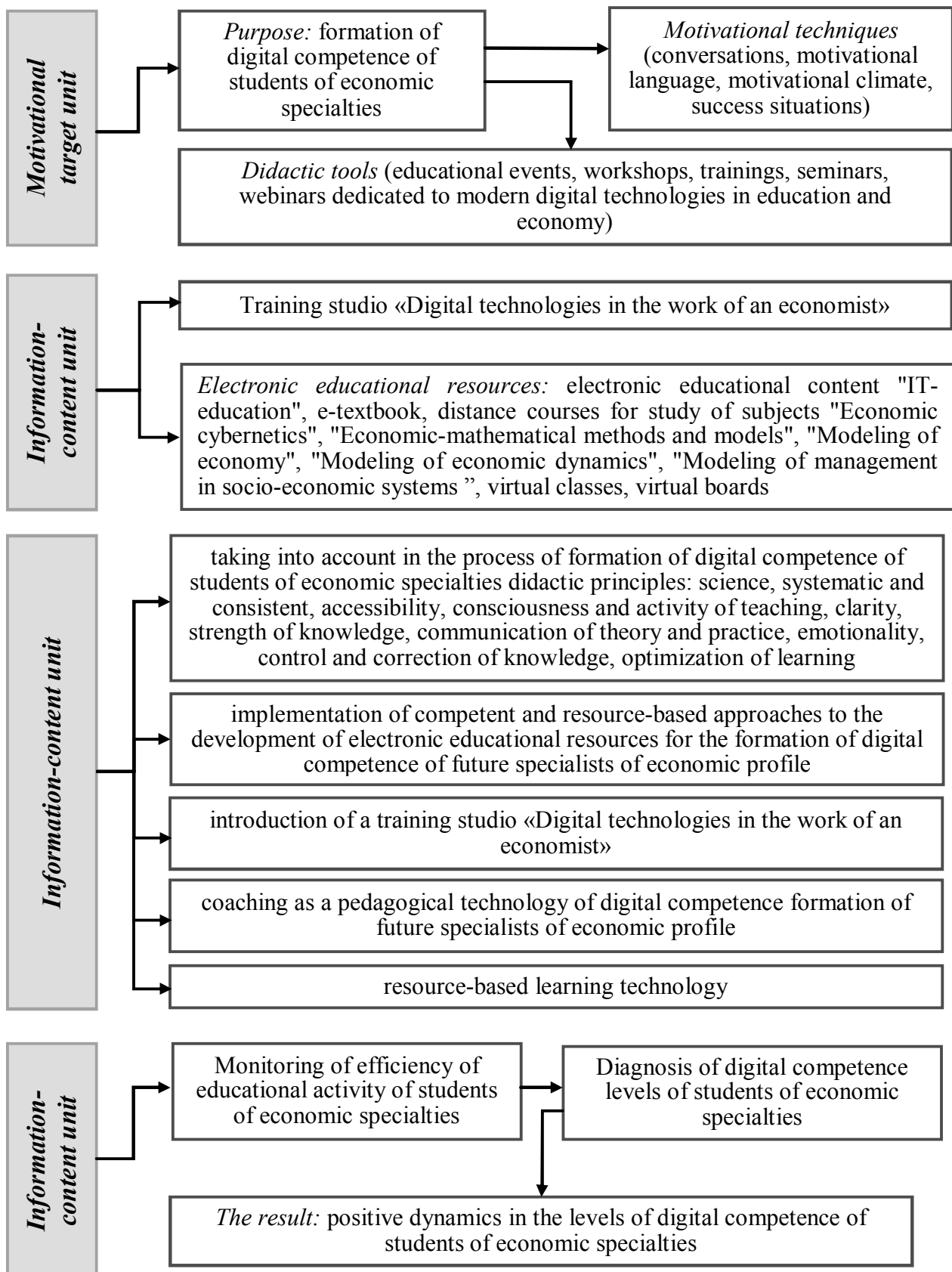
The *diagnostic-resultant unit* provides monitoring of the effectiveness of educational activities of students of economic specialties and diagnostics of the levels of formation of their digital competence. The expected result in the implementation of the proposed model is the positive dynamics in the levels of digital competence of students of economic specialties.

A visualization of the functional didactic model of digital competence formation of students of economic specialties is presented in figure 1.

In order to test and validate the effectiveness of our functional didactic model of digital competence formation of students of economic sciences, applied the *method of computer simulation* with the help of special software BPwin (AllFusion Process Modeler 7) [2; 3; 6].

The BPwin model means a description of the system (textual and graphic), which should answer some of the pre-formulated questions [6].

It should be noted that BPwin models provide us with the basis for an in-depth understanding of the digital competency formation process for students of economics majors, allow to systematize and analyze as much as possible all stages of implementation and experimental verification of a functional didactic model, identify whether all identified units of the model are needed for an effective digital competence building process for students, interconnected, and discover the nature of those relationships.

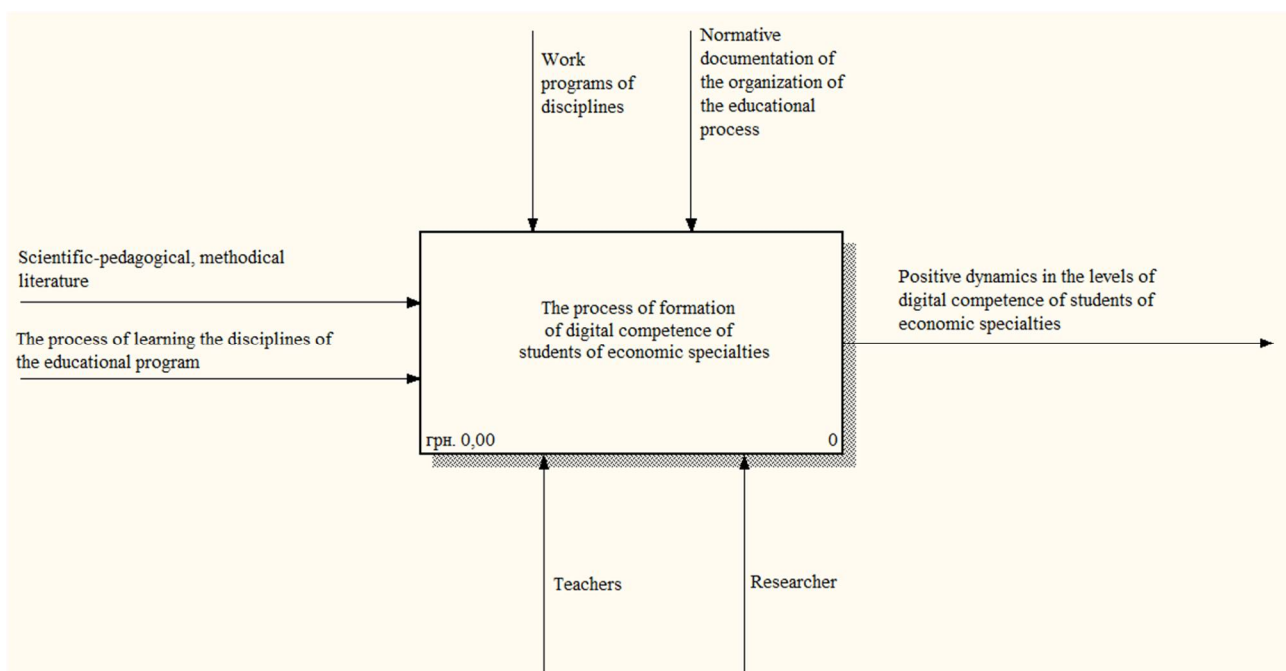


**Fig.1. Functional didactic model of digital competence formation of students of economic specialties**

Source: author's development

Using the BPwin program, the user can make his work more productive. BPwin's Explorer-style interface makes it easy to navigate and edit complex processes with a hierarchical structure.

The developed possibilities of changing the scale of the presentation allow us to quickly find and focus on the part of the process model necessary for work. Setting a task for starting a computer simulation at BPwin is to determine the function unit, the input and control information, the execution mechanism (who performs a particular process, the task), the output information as a result. So, the BPwin computer model function unit represents the process of digital competence formation for students of economics majors, as shown in Figure 2 using the chart "Setting objectives". It should be emphasized that *the process of formation of digital competence of students of economic specialties* is interpreted as a partnership of teacher and students, during which the students stimulate and organize active independent cognitive activity in order to master the system of competences, outlined in the content of teaching of each specific discipline and mastering modern digital technologies in educational and future professional activity.



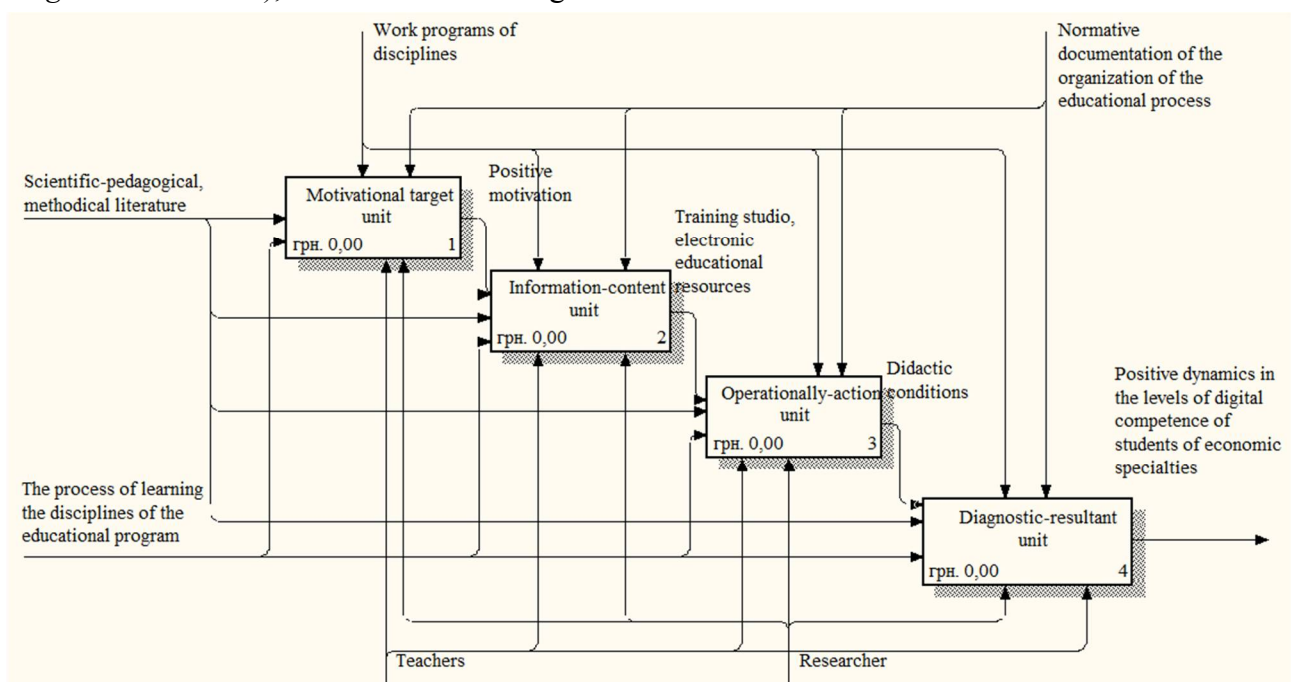
**Fig. 2. Contextual Diagram "Setting objectives"**

*Source:* author's development

This process is aimed at: developing skills to formulate the purpose of educational activity independently; developing skills to model and design their own learning activities; development of students' desire to achieve the goal; development of independent work skills, development of skills to evaluate and analyze learning outcomes, independent work; developing skills in working with a large number of educational literature and web resources; mastering the skills of critical information analysis, the use of digital technology in the future profession; mastering digital communication skills; creating your own educational content; mastering effective methods of working with electronic educational resources (distance courses, virtual classes, electronic textbooks, virtual boards, etc.); developing the ability to seek information and process it qualitatively; development of fruitful cooperation between teacher and students in the process of introduction of technology of resource-based learning – activation of information retrieval and analysis, Web mining (use of data mining methods for automatic retrieval and retrieval of information from Web documents and services), Text Mining technology, visualization methods, contextual search in documents.

Figure 2 demonstrates that the input is scientific and pedagogical, methodological literature and the process of teaching students of economic specialties according to the chosen educational program. In the course of the organization of training were guided by the work programs of disciplines and normative legal documents concerning the organization of the educational process in the educational establishment. Researcher and the teachers were identified as the contractors for the implementation of the developed model. The result of the *process of formation of digital competence of students of economic specialties* is a positive dynamics in increasing the level of digital competence of students (output information).

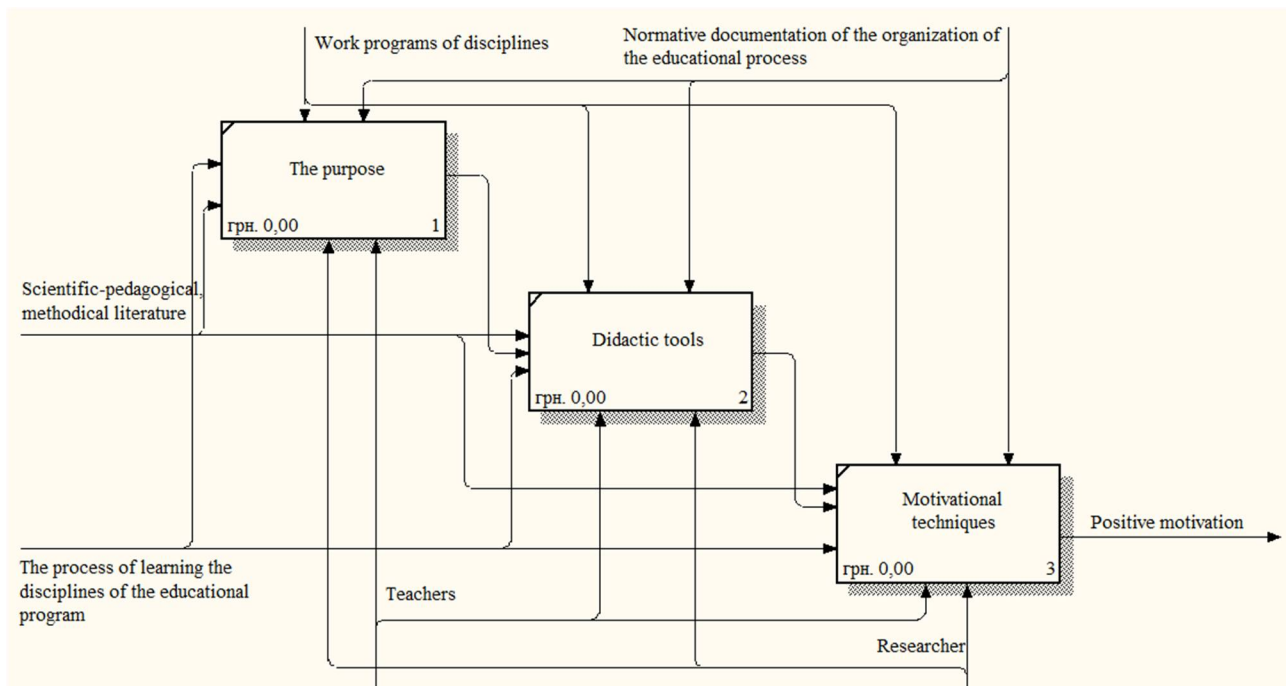
Let's decompose the model (decomposition is the process of dividing the model into elements that are taken as indivisible objects) for a more detailed description of its units, detailing the information and delving into two levels [5]. Thus, the implementation of the functional didactic model was carried out in 4 stages (*motivational-target, information-content, operative-action, diagnostic-resultant*), which is shown in figure 3.



**Fig. 3. Decomposition of the context diagram from figure 2]**

Source: author's development

The interpretation of figure 3 makes it possible to follow that, using scientific and pedagogical and methodological literature, organizing the process of studying the disciplines of the educational program of students of economic specialties, guided by the work programs and normative documentation of the organization of the educational process in the institution of higher education, at the exit of the *motivation-target unit*, formed a positive motivation of students to develop digital competence. At the output of the *information-content unit* was developed the content of the Training studio “Digital technologies in the work of an economist” and electronic educational resources. All tasks of this unit are done by the researcher and the teachers. At the exit of the *operationally-action unit* - realization of didactic conditions of formation of digital competence of students of economic specialties. At the exit of the *diagnostic-resultant unit* - positive dynamics in the levels of digital competence formation of students of economic specialties.



**Fig. 4. Decomposition of the motivational-target unit**

*Source:* author's development

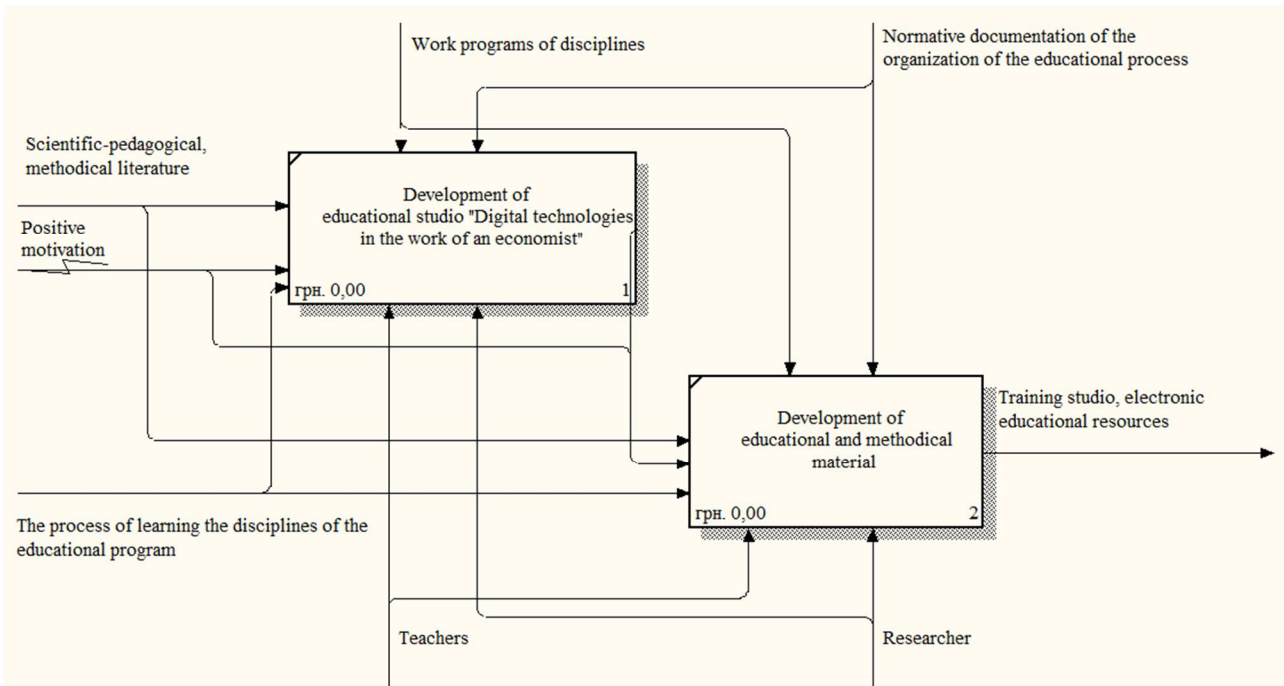
The decomposition of the motivation-target unit is shown in figure 4, which shows that analyzing the educational and methodological literature and the process of teaching the disciplines of the educational program, guided by the normative documentation of the organization of the educational process, work programs of disciplines researcher and teachers made the purpose (formation of digital competence of students), developed didactic tools (forms, methods, tools learning) and motivational techniques (conversations, motivational language, motivational climate, success situations, etc.).

These functional components of the motivation-target unit (3 decomposition units "Purpose", "Didactic toolkit", "Motivational techniques") ensure the readiness of teachers to realize the didactic conditions of formation of digital competence of students of economic specialties.

The interpretation of the processes shown in figure 5 gives you an opportunity to see the result of the information and content unit: the content of the Training studio «Digital technologies in the work of an economist» and electronic educational resources have been developed. Moreover, the researcher and teachers have outlined the means, methods, forms of teaching, identified pedagogical technologies, developed educational and methodological support for the process of digital competence formation of students of economic specialties.

Teachers of practically oriented disciplines have also been involved in the choice of methods, forms and means of teaching, implementation of pedagogical technologies, as well as in the development of educational and methodological support and indirectly in the introduction of the Training studio «Digital technologies in the work of an economist».

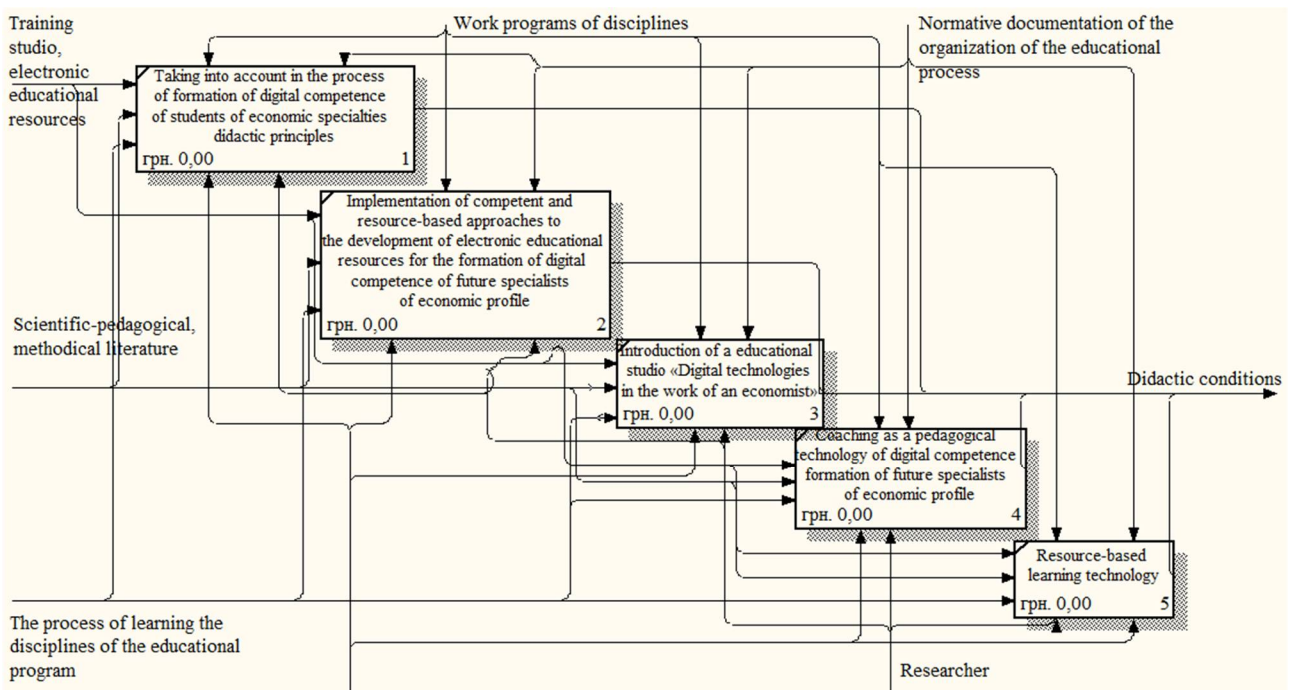




**Fig. 5. Decomposition of the information-content unit**

Source: author's development

The decomposition of the *operative-action unit* is shown in figure 6:



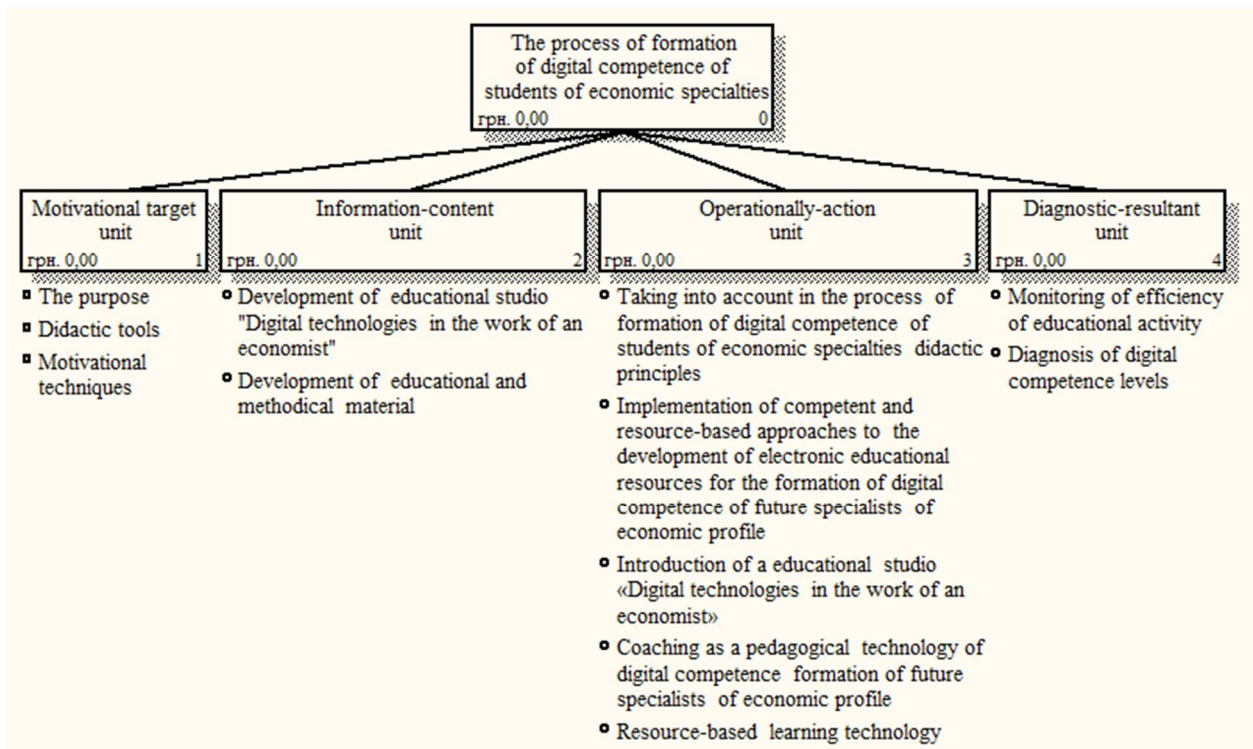
**Fig. 6. Decomposition of the operative-action unit**

Source: author's development

Figure 6 shows that the researcher and the teachers, on the basis of a thorough analysis of work programs of disciplines and normative documentation of the organization of the educational process in the educational establishment, the program of Training studio «Digital technologies in the work of an economist» have been determined didactic conditions that are implemented in the educational process:

- 1) development of the process of digital competence formation of students of economic specialties on didactic principles: science, systematic and consistent, accessibility, consciousness and activity of teaching, clarity, strength of knowledge, communication of theory and practice, emotionality, control and correction of knowledge, optimization of learning;
- 2) implementation of competent and resource-based approaches to the development of electronic educational resources (distance courses, virtual classes, electronic textbooks, virtual boards, etc.) for the formation of digital competence of students of economic specialties;
- 3) introduction of a Training studio "Digital technologies in the work of an economist";
- 4) coaching as a pedagogical technology of digital competence formation of students of economic specialties;
- 5) resource-based learning technology.

Similarly, the decomposition of the diagnostic-resultant unit was performed according to the results of which determined that researcher and teachers based on a thorough analysis of scientific and pedagogical, methodological literature, work programs of disciplines and normative documentation of the organization of educational process, process of teaching the disciplines of the educational program, educational and methodological support developed educational and methodological support for monitoring the effectiveness of students' educational activities and diagnosing the levels of digital competence of students of economic specialties.



**Fig. 7. Node Tree diagram**

*Source:* author's development

The whole process of forming the digital competence of students of economics is visualized with the help of a specialized type of Node Tree diagram (automated report), which allows to show the relationships between all diagrams as a unit hierarchy in the model, which makes it possible to consider the whole model as a whole. The generated Node Tree report clearly shows the number of decomposition levels of the constructed functional model and the relationship between parent and child diagrams (Fig. 7).

So, it can be seen from Figure 7 that the hierarchical representation of the process of digital competence formation of students of economic specialties demonstrates the possibility of full implementation of all tasks and confirms the pedagogical expediency of defining each unit of a functional didactic model. The expected result in the implementation of the proposed model is the positive dynamics in the levels of digital competence of students of economic specialties, which can be confirmed after conducting a pedagogical experiment.

### **Conclusions.**

Summarizing the results of computer simulation in BPwin environment, it was concluded that all units of the developed model are interconnected, and therefore the functional didactic model of formation of digital competence of students of economic specialties offered for testing is an effective mechanism for improving the quality of students' learning and professional readiness in the conditions of digitalization of society and economy. Obviously, BPwin models provide the basis for in-depth understanding of the process of digital competence formation of students of economic specialties, allow to systematize and analyze all stages of implementation and experimental verification of a functional didactic model, confirm the relationships between the units of the model, find out whether all identified units models and their components contribute to the purpose - formation of digital competence of students of economic specialties.

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**GENDER ASPECTS OF ECONOMIC SELF-PRESENTATION OF UKRAINIAN STUDENTS**

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**Abstract.** *The article deals with the actuality of a problem of economic self-presentation of young men and women as subjects of their economic socialization. The purpose of the study is to identify the socialization impact of traditional and egalitarian gender orientations of students on their economic self-presentation in micro, meso, and macro levels of society. The concept of gender as a cross-cutting characteristic of economic and political stratification of society is outlined. The social and psychological factors that determine the differentiation of economic roles, socioeconomic status, life opportunities and limitations of both sexes are substantiated. The phenomenon of entrepreneurship in various spheres of economic life in terms of the subjectivity of both sexes is described. The model of the economic behaviour of students is presented. The predominant economic guidelines for young men and women toward their roles in the private sphere (family) and the public sphere (education and careers) are revealed.*

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**Key words:** *economic self-presentation, traditional and egalitarian gender orientations, students.*

**Introduction.**

In the context of economic crisis, research on gender issues is being updated, aiming at identification of the major factors of differentiation of social, financial and economic statuses of men and women, achieving gender equality in employment, which are manifested in unequal opportunities of women and men in terms of authority, education and employment, income and property. The reorientation of the country's economy to market conditions requires young women and men to be proactive, innovative and ability to take risks, and at the same time rational thinking and reflection that are the features of an entrepreneurial subject of economic relations. Modern student youth is at the crossroads of gender self-identification in the economic culture, which exacerbates the problem of investigating young women and men entrepreneurship, enhancing the economic competence of a specialist as an integral part of the profession of a graduate of a higher educational establishment.

### **Problem Statement.**

Economic issues are an inherent component of applied socio-psychological research, covering topics of mutual influence of education and economic status, features of tactics of presentation of oneself, including the ability to work, internalization of different attitudes towards one's self in collectivist and individualistic cultures. The results of the researches testify the difference of value attitudes towards material enrichment of the student youth, which underwent socialization within the framework of market and planned socialist economy [1; 2; 3]. Feminine and masculine-oriented countries with respect to the dominant system of social values, in which financial-status and property ones occupy either a subordinate, secondary, or a prominent, leading position, also have an influence on the nature of economic self-presentation [4].

A gender misbalance, vertical-horizontal stratification is typical for Ukraine. The division of social life into "male" and "female" as the old paradigm of "male domination – female subordination" goes back in time, because of its inefficiency in its various life spheres, starting from the micro-level of the family and ending with the macro level of the occupations' division, leadership position, the ideology of the state. Gender-specific problems are observed in double employment of a woman, her lower economic status and the level of payment, idea exploit of one-sex responsibility (a woman-mother, a woman-caregiver and others) [5; 6; 7].

The experience of European countries is considered to be the most effective regarding implementation of the positive actions on achieving gender equality. Council of Europe Gender Equality Strategy (2018–2023) focus on six strategic areas: 1) to prevent and combat gender stereotypes and sexism; 2) to prevent and combat violence against women and domestic violence; 3) to ensure the equal access of women to justice; 4) to achieve a balanced participation of women and men in political and public decision-making; 5) to protect the rights of migrant, refugee, and asylum-seeking women and girls; 6) to achieve gender mainstreaming in all policies and measures [8].

Ensuring equal opportunity for men and women in achieving social status, overcoming gender stereotypes, using an egalitarian ideology of economic activity, interchangeability of genders in family functioning is a challenge of time while exploring the social and psychological mechanisms of formation the new economic Human (Homo economicus).

### **Research Questions.**

In the transition period of the society development, reinforced by the financial and economic crisis, the peculiarities of planning and building their own vocational and educational careers are at the forefront of the problem of economic socialization of young women and men, as they are inextricably linked with the demographic situation, the condition of marriage and family relationships, offers in the labor market, employment and unemployment, the expected rate of return on human capital. Rapid market changes, that Ukraine is striving to achieve during last years, are inevitably affecting the spheres of economic lives of sexes, their psychological readiness for self-actualization in the market conditions which require from everyone to accept responsibility for their own economic capacity. This is about economic self-actualization, the success or unsuccess of which influences the social functioning of a family, psychological prosperity of an individual. The term of economic self-actualization is directly related to the professional self-sufficiency of an individual, his/her level of social and economic achievements [7; 9].

According to N. Dembytska [10], the idea of representing the relations of property as a carrier of the economic experience of society is a factor in the economic socialization of youth. V. Komarovska [11] points out that the main factors of economic consciousness formation are: social and economic conditions of labor and life activity of the subjects of economic activity; characteristics of those social groups in which the subjects of economic activity are included; psychological characteristics of individuals as subjects of economic activity; gender peculiarities of individuals as subjects of economic activity.

Based on the definition of the economic culture of personality, provided by V. Moskalenko [12], as an assimilated system of social and economic relations, values and norms that emerge outside the economy and acquire special significance within it in accordance with its needs, then students' gender differences in the construction of future scenarios of their own financial sources should answer the questions that gender expectations determine them most. V. Kravets [13], examining the gender differences in the students' perceptions of the family economy, notes that today's youth are oriented towards an egalitarian type of distribution of family responsibilities. At the same time, with the general trend of democratization of family relations, the concept of "the head of a family" is mostly related to a man.

#### **Purpose of the Study.**

The new aspect of our study concerns the current problem of economic self-presentation of girls and boys as subjects of economic socialization. *The purpose of this study* is to identify the socialization impact of traditional and egalitarian gender orientations of students on their economic self-presentation in micro, meso, and macro levels of society.

#### **Conceptual Models.**

The new social and economic realities of Ukrainian student life are beginning to develop a new paradigm for personality assessment, an economic dimension that increasingly resists the paternalistic paradigm of the Soviet era and at the same time elevates the role of professional demands. Erudition, awareness is a necessary condition for a culture of economic activity. Economic knowledge helps successful entrepreneurship and effective management. The ability to present oneself is a category operated by social psychologists, exploring the motives of people's professional and career activity, their financial and economic achievements and differentiation of results. Personal prestige is an important category in view of the achieved socioeconomic status. Its component is a reflection of one's own psychic potentials and the results achieved.

The lack of identification with authoritative and entrepreneurial personalities and economically exemplary social groups in the Ukrainian territory impedes the young person's professional and career achievements, and, besides skepticism and social apathy, gives rise to their economic loss and passivity. De jure, there are the legal equality of citizens for education and related financial pursuits and achievement in the field of employment, de facto – despair and gender inequality, which are reinforced by corruption and gender stereotyping. On the other hand, any gender-based measures planned above, such as appointing women to leadership positions or 30% quotas for women, or incorporating maternity benefits into the Labor Code, etc., will not bring the desired economic balance of the genders at all, if with the initiation of social changes, there will be no changes in personal, subjective sphere – in the consciousness and self-consciousness, the content of gender orientations.

Revealing the psychology of gender differences in the economic behavior of student youth, the ability to be guided by economic principles at different levels of material functioning has a hidden psychological basis – positive objective attitude to their personal economic potential and the prospects for its use (self-reflection). It is this very ground that dictates the different economic behavior of men and women in the context of limited material resources and the widening range of personal demands. In addition to the internality of the locus of control, the principles that provide positive thinking play an important role in achieving the desired status of economic well-being and overcoming the psychological pressure of gender stereotypes.

### Research Methods.

The methods of the research included a complex of complementary techniques (theoretical analysis of the achievements of positive psychology and standardized psychodiagnostic tests). These methods have been used for the identification of peculiarities of self-reflection, self-presentation and self-monitoring by the students' youth their professional achievements and working potential, gender differences in their social image presentation. Mainly, the test of "Self-esteem attitudes" (E. Brian & S. Epstein) was used in order to identify young person's confidence in their own competence, leadership potential, popularity, being a loved one, self-acceptance, general and protective self-esteem, self-control, feeling of physical attractiveness, hospitality [14].

In total, 298 students (180 female and 118 male) from Kyiv, Ternopil and Chernihiv Pedagogical Universities have participated in the research.

### Findings.

To what extent do gender stereotypes mediate students' ideas when it comes to the spheres of responsibility in professional and financial activity of women and men? Distribution of the students' answers regarding gender differentiation of the economic functioning spheres is represented in Table 1.

**Table 1. Women' and men' answers regarding the spheres of economic activity (in %)**

Item No.	Judgement content	Students' answers	
		Women	Men
1.	The most important responsibility of a woman is to ensure the well-being of the home economy	84	86
2.	Excessive professional activity of a woman interferes with her role of mother and caregiver	45	65
3.	A woman who is a boss, manager or entrepreneur is less financially successful than a man	48	60
4.	A greater financial contribution to the family budget and its financial support should be provided by a man	78	82
5.	Profession and professional career, successful financial business is more important for men than for women	66	85
6.	A man should contribute in every way to the success of a woman's career by fulfilling all the necessary household responsibilities on an equal basis with her	56	45

The data presented testify to the prevalence of students' stereotyped economic perceptions of gender differentiation in the areas of economic responsibility among young people, especially

alarms the proportion of gender stereotyping of young women. The manifestations of economic bias can also be explained by the difficulties of self-determination at the transition stage of the Ukrainian economy development and the weakness of its market fundamentals, in particular by objective obstacles to small business development, in which women play a leading role in developed democratic countries.

Comparing the distribution of percentages of students who have a clear understanding of economic concepts, testifies to the differentiation of genders in the public and private spheres of economy, namely the removal of a large proportion of young women from issues of economic functioning outside the family, their greater involvement in microeconomic processes, and their husbands – in the macroeconomic realities of society. Accordingly, the possibilities of making economic decisions and commitments in social and private spheres are different, which means lower psychological readiness of women to participate in the social and economic life of small business, the region of future professional activity, the country as a whole. The differentiation of economic perceptions indirectly testifies to the imbalance of gender between public and private, professional functioning and relevant professional interests and narrow family and household functioning, which also requires a certain level of economic knowledge and economically relevant behavior on the part of women and men.

Although the motivation for economic achievement by starting their own business is found in some women, however, their plans for private business (according to the description of the business field and selection of illustrations) were limited to stereotypically female activities – counseling psychological services, training, or model, advertising, cosmetics, SPA business, design of houses and parks. Therefore, women, as were their mothers, are psychologically ready to be satisfied with a lower salary, position, socioeconomic status. Young women plan to realize their economic potential to a great extent in childcare and housekeeping. Author professional capacity of higher education they got is directed mainly at family life and is less focused on professional growth and career. Women have shown a lower level of economic interests of a social nature, even when considering the trends of macroeconomics in the organization of microeconomic activity, which is not typical of their male peers.

It should be added that according to the verdict of the majority of focus groups on the topic “Why He and Not Me?”, “Why She and Not Me?” only less than a third of the interviewed girls who relate themselves to the elite of Ukrainian society in the future feel themselves resourceful, financially independent, able to move on, to master other, additional professional skills. The protocols of gender-mixed and same-gender focus groups confirm that gender segregation of the economic roles of men and women as a value guideline for the future is also shared by the vast majority of male students who relate mainly to the middle class. When they are asked why they have gender bias regarding gender equality in the occupational and economic spheres, as well as the fact that the success of a woman’s economic career is related to the loss of her womanhood and the diminishing of the success of the role of mother and housewife, most of the respondents, regardless their gender, singled out the impact of childhood memories from their parents’ family (“I remember”: ... “mom’s kitchen apron”; “smell of freshly baked mom’s (grandmother’s) pies”; “joy of family members”, especially us, about the purchase of gifts by the father after getting his salary”... etc.).



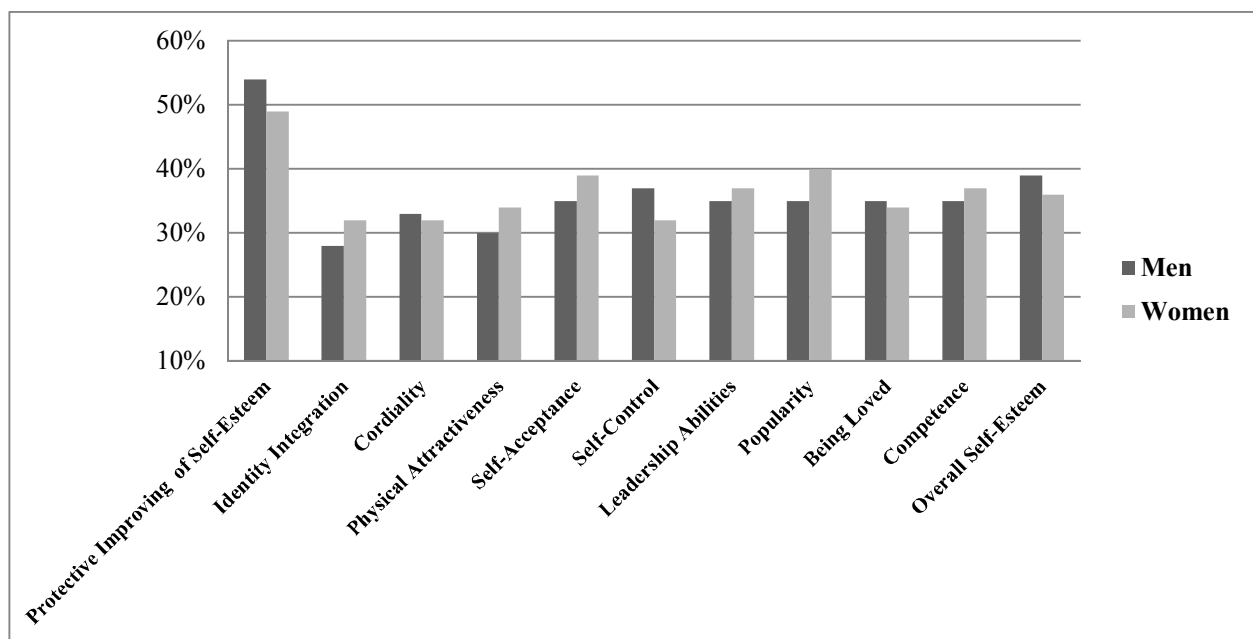
Economic culture is manifested not only in the ability to plan and adhere to a monthly or annual budget, but also in taking on new challenges to current savings. It is no coincidence that entrepreneurial traits about housekeeping are more common in women. The girls demonstrated much higher knowledge and skills of savings through better awareness of promotions and seasonal discounts on goods and services, unplanned expenses (medical treatment, emergency repairs, loss of a job, sudden hospitalization, etc.). Women and men found significant differences in professional dreams and plans (Table 2).

**Table 2. Gender factor in the choice of labor activity (in %)**

Item No.	Options for economic functioning	Women	Men
1.	Group form of professional-financial activity	62,6	45
2.	Individual form of professional-financial activity	34,4	53
3.	Not decided	4	2

The data obtained in the research study confirm the results of our previous studies, namely the fact of more purposeful development of the image of economic “I” in male students due to higher coherence of affective, cognitive and behavioral components with learned common sexual stereotypes about the domination of the material and financial status of male persons and the subordination of women to them [15].

Young women, in evaluating themselves, demonstrated a higher level of self-satisfaction in such aspect of it as moral acceptance, coherence of moral views with real behavior, their own ability to manage people than their male counterparts. At the same time, women show a much higher level on the scale of “protective strengthening of self-esteem”, which indicates, on the one hand, a certain degree of acceptance of one’s Self and, on the other, a fear of possible rejection of oneself, rejection of significant others, desire to show oneself in a better way (Fig. 1).



**Fig. 1. Mean value of genders using the method of “Questionnaire of the self-esteem attitudes”**

However, behind the high indicators of the self-esteem scale [14] is hidden a protective response of women, which can also be explained by lower levels of coherence in self-esteem attitudes, such as being “loved” or uncertain that she is physically attractive in the eyes of others, healthy, full of strength, popular, and is respected by people. In contrast to women, men are characterized by a higher level of self-esteem integration, which is not altered by the imaginary or real individual defects of their own Self. For example, higher indicators on the “identity integration” scale imply a better ability of men to integrate their experiences into their own Self, lower internal conflict ability, different facets of Self, which in the end results in a higher level of integration of the male self.

Girls also have a higher level of protective strengthening of self-esteem, which indicates an increased attention to their own selves, which is based on the fear of not fully realizing their potentials, not being properly assessed by the social environment. This indicator testifies to the desire of women to show themselves in a better way, which can sometimes be accompanied by excessive criticism, anger and selfishness. Girls demonstrate a higher level of consistency between moral perceptions and actual behavior, a higher level of appreciation of their own physical attractiveness, their own popularity and competence, their ability to lead and manage people. However, their self-esteem and overall self-esteem scores are lower than men’s. This difference may have an explanation, the roots of which are in fear of a possible negativity on the part of a society that is more focused on the socially successful personality of the man rather than the woman.

In our view, such a gender disparity of results testifies to the greater subordination of a woman’s life scenarios, her goal setting and self-realization to the effects of traditional gender stereotypes, which increase a woman’s anxiety before expecting to have children, motherhood, a combination of professional and home responsibilities, which affects the corresponding anxious reflection of woman’s own meanings of being.

### **Conclusions.**

The results of the study showed a higher level of psychological readiness of men for individual forms of economic activity than women who are more oriented towards group forms of professional and financial activity. The social roles of men and women are still largely mediated by gender stereotypes, which guide the differentiation of their economic self-expression, predetermining the life scenarios declared by the student youth and vision of material commitments. However, the realities of the economic functioning of the genders have shaped the greater personal potential of women in the development of the traditionally masculine economic space, the trigger mechanism for which will dominate the patriarchal egalitarian ideas of personal professional self-presentation. A number of socio-psychological differences between the genders as a consequence of differentiation of their gender socialization should be taken into account in the process of education of economic culture and psychological correction of professional skills, namely: young women do not concede to men in social, varieties of communicative competence and assertiveness in achieving professional goals.

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## **CHALLENGES OF YOUTH ENTREPRENEURSHIP AND PROSPECTS OF YOUTH ENTREPRENEURSHIP EDUCATION IN UKRAINE**

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**Abstract.** *The paper supports understanding of the complex challenges that youth entrepreneurs face: financial challenges, insufficient knowledge (education) and/or skills, experience; character type mismatch; bureaucratic constraints; societal and age stereotypes; inaccessibility of youth entrepreneurship support structures and initiatives, etc. The obtained data was collected via questionnaires that were distributed to 120 respondents – youth entrepreneurs registered in Ukraine. The conducted interviews allowed creating the rating of factors preventing young people from starting their own businesses. A search of modern theoretical reviews and empirical studies of the subject was also conducted. The findings revealed, among others, that a major factor that influences the youth entrepreneurship development is the lack of proper entrepreneurship education in Ukrainian higher educational institutions. It is proved that youth entrepreneurship is a complex sector that requires particularly serious attention from government agencies. The study indicates the need to prioritize attention to youth entrepreneurship education and determines its prospects in Ukraine.*

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**Keywords:** *challenge; youth entrepreneurship, education; entrepreneurship education; youth.*

### **Introduction.**

According to the concept of long-term socio-economic development of Ukraine, one of the target principles of the country's development is the transition of economy from an export of raw materials to an innovative socially-oriented type of development. Undoubtedly, development of innovations in modern economy is impossible without active entrepreneurship, since the latter can stimulate creation of new companies, actively develop and introduce new technologies and products.

Literature on entrepreneurship has shown that one of the latest trends in modern economy is the expansion of youth entrepreneurship, which necessitates the formation of a new generation of young, dynamic and modern entrepreneurs, who are able to play an active role in business, economics and society. Therefore, socio-economic priorities of modern society lead to significant changes in the goals, content and results of professional training of a new generation of students.

#### **Purpose of the study.**

The article reviews studies that focus on the challenges and de-motivating factors that youth entrepreneurs experience in their quest to build their own business and considers numerous aspects of entrepreneurship education of youth.

#### **Research question.**

The research question that is pursued in this article is: What are the specific determinants preventing the development of youth entrepreneurship?

#### **Methods of the study.**

To provide the rare insight into the state of youth entrepreneurship and distinguish the decisive factors that impact the development of youth entrepreneurship, a search of modern theoretical reviews and empirical studies of the subject was conducted using the search words “youth entrepreneurship” & “youth entrepreneurship education”. The search was undertaken from 17 November 2019 till 10 January 2020. The information was also obtained by means of questionnaires that were distributed to 120 respondents – youth entrepreneurs registered in Ukraine

#### **Findings.**

The comprehensive overview on national youth age definitions within 47 European states has revealed the absence of official, unambiguous definition of age brackets of “youth” or “young people” [1]. For the statistical intentions, the United Nations defines youth as those persons between the ages 15 and 24 [2]. The European Union in its strategic framework targets young people between 15 and 29 years of age [3; 4].

Youth is an active part of society, capable of participating in the economic life of a country and region. Youth is a part of the population that easily accepts everything new and is more willing to take risks. They are creative in their decision of tasks, preferring to do what they are really interested in. Attracting young people to entrepreneurial activity serves not only to increase the share of small and medium-sized businesses in the country's economy, but it can also solve a number of issues related to youth employment and self-employment, realization of their professional and creative potential. However, youth entrepreneurship is a complex sector that requires particularly serious attention from government agencies. Properly built, targeted support will ensure the development of small business not only in the country, but also in the region, which, in turn, will lead to economic prosperity and increase the investment attractiveness of the country.

Currently, youth is acknowledged to be a strategically significant resource of society. One of the most important aspects of youth entrepreneurship, as a factor in the economy progress, is its innovative component. The future of innovations, the intensity of their enlargement is largely determined by the youth factor. According to the All-Russian Center for the Study of Public Opinion, 65 percent of students and young people aged 18-25 dream of starting a business; at 35-40 years only 25 percent of all respondents have the same idea; and in 45-60 – only ten percent. 78% of respondents consider opening a small business an excellent way of self-realization; 60% prefer their own business, counting on a higher level of income compared to self-employed [5].

Annual polls and sociological studies demonstrate that the percentage of teenagers who want to start-up their own business is several times higher than the proportion of those who have already set up their own business.

Nevertheless, despite the existence of support structures and initiatives in the country, the amount of young businessmen remains unsatisfactory. Today, no more than 4% of young people have their own businesses [6], the rest are employed as salary earners.

The following possible obstacles to youth entrepreneurial activity can be singled out:

- shortage of initial capital (82% of respondents cite it as the main argument for their inactivity); inadequate financial resources [7]; financial challenges posed by student loans and other educational costs, resulting in less funding opportunities [8];
- insufficient knowledge (education);
- poor competencies (managerial skills; time management; delegating tasks; hiring employees; cash flow management; marketing strategy [9]);
- lack or absence of experience;
- personality traits (self-doubt; insufficient motivation, self-awareness, creativity, self-control, and positive self-concept);
- documentation procedures; legal aspects & administrative complexities; corruption;

Recognizing the complexity of factors that impact youth entrepreneurship, Karadzic, V., Drobnjak, R. and Reyhani, M. [10] identified the other major obstacles for the development of entrepreneurship among young people: cultural prerequisites; bureaucratic constraints; administrative paper work and complex tax regulations systems; lack of good quality sources of financing; poor availability of bank credit.

The findings by Saphetha Appie Gwija, Chuks Eresia-Eke, Chux Gervase Iwu [11] imply that a basic de-motivating factor to entrepreneurship development among others is “the lack and inaccessibility of support structures and initiatives for young entrepreneurs” [11].

While well recognized constraints among the youth entrepreneurship participants undoubtedly play an important role, other factors such societal and age stereotypes can also affect how the society perceives a young entrepreneur [8]. According to Eric D. Gordon [7], criticism and self-doubt, lack of brand image contribute in one way or another to make it tougher for a young entrepreneur than an older counterpart.

The findings of Wambala, F., Wachana, P., Kimani, B., Khamati, Ph. [12] highlight that financial inability to raise money required of the entrepreneurs training; infrastructural challenges; job conflict challenges; other challenges (legal issues, quality control issues, diseases, communication issues), etc. appear to be critical challenges for young entrepreneurial start-ups.

Young entrepreneurs’ viewpoints have also been integrated into the study. The conducted interviews with 120 young entrepreneurs in Ukraine allowed creating the rating of reasons that keep young people from starting their own businesses. See table no.1 for the list of de-motivating factors identified by the respondents in the rank order.

Research indicates that the main reasons for the reluctance to be an entrepreneur by students: fear of debt (13%), lack of team (12%), lack of ideas (11%), lack of experience (9%) and fear of losing one's property (5%). Thus, in such a situation, only state support can facilitate the entry of young entrepreneurs into the market.

**Table 1. Rating of personal de-motivating factors**

Rank	Factor
1	entrepreneurship is time-intensive; workload; need to balance between private life & business
2	debt fear; financial risks; lack of personal savings and/or credibility
3	lack of team; lack of support from family and/or friends
4	lack of business idea, creativity
5	disproportionate level of risk and profitability
6	sensitive market; political instability
7	lack or absence of experience; insufficient problem solving skills; inadequate university curricular and study programs; lack of career info
8	poor managerial skills and knowledge
9	fear of losing property; shame of failing
10	character type mismatch; lack of leadership skills
11	general negative attitude towards entrepreneurship; criticisms; age discrimination
12	other

*Source:* author's calculations based on the conducted interviews.

Despite the active measures aimed at the development of youth entrepreneurship, the following unresolved issues have a significant impact on the willingness of young people to create independent business projects: social mood of young people – in the youth environment, the willingness to take risks, create something new is poorly expressed, there is no entrepreneurial spirit; public perception of entrepreneurs (young entrepreneur is perceived as a person who has to constantly overcome difficulties, and not as businessman striving for success); level and content of educational programs (traditional educational institutions provide the basis for economic knowledge, while not generating incentives and behavioral competencies, without which successful entrepreneurial activity is impossible). Analyzing the index of entrepreneurial activity (data from the Global Entrepreneurship Monitoring), it should be noted that in recent years, an individual's activity in creating a new business at the age of 18-24 years increased by an average of 6.5%; 25-35 years – by 9.6%; 35-44 years – by 6.3%; 45-54 years – by 6.5%, 55-64 years – by 1.5% [13]. The data means that the highest entrepreneurial activity is demonstrated by young people. Nevertheless, the absence of other sources of income remains the main factor motivating individuals to entrepreneurial activity. There is a low percentage of entrepreneurs, including young entrepreneurs, who are motivated by a desire for independence in work and the possibility of self-realization.

In addition, the results of most studies show that in the first years of existence, a young entrepreneur is at high risk of failure: about one out of five young organizations fails, and 2/3 of young businesses close in the first seven years. Youth entrepreneurship is faced with obstacles to its development and formation, which often contribute to a decline in business activity. In the modern times, entrepreneurship in Ukraine not only does not solve the problem of creating new jobs, but a significant part of entrepreneurs do not see the advantages that their own business can provide. This explains why entrepreneurs, including young ones, are less focused on growth.

Analysis of existing problems indicates the need for a program-targeted approach and support of youth entrepreneurship. Key objectives include measures aimed at promoting entrepreneurship among young people; formation of a positive entrepreneurial environment; selection of promising entrepreneurial ideas; specialized training; acquisition of business skills by young people; creation of a system of information support for youth entrepreneurship; organization of communication, consultation platforms for young entrepreneurs, as well as their financial support. The evolution of youth entrepreneurship is impossible without increasing the level of entrepreneurial knowledge among young people, and the expansion of their entrepreneurial initiative.

The main task of educational institutions is to prepare a qualified specialist, capable and ready to put into practice the acquired knowledge. The great number of graduates of secondary vocational and higher educational institutions find work in the acquired profession, and only a few organize their individual business. This is one of the problems of domestic education, focused on the training of employees serving various fields of activity. Meanwhile, during the training course, students may have interesting ideas that, with appropriate support, can form into a successful business. In this regard, educational institutions should become a launching pad, an incubator of business ideas that helps talented young people become entrepreneurs. Studies on the contribution of educational institutions to entrepreneurial youth activity have shown that only 15% of graduates believe that the institutions provide them with all the necessary learning and competences to start-up their own business. The surveyed respondents consider that they lack proficiency in business and require additional training.

Therefore, one of the main tasks of higher and secondary professional educational institutions is to integrate efforts and pedagogical actions aimed at forming students' economic thinking, awareness of basic economic, financial categories, their ability to independently generate ideas about commercial success, make informed decisions, apply the acquired knowledge to profitable business activities. Correspondingly, educational institutions require adaptation, increasing the number and quality of educational programs for future entrepreneurs, effective application of practice-oriented approaches in learning, development of students' motivation and enthusiasm in entrepreneurial career.

Experiences of other countries emphasize the need to implement integrated changes into the entrepreneurial education of students in educational institutions: awareness of socio-economic importance of entrepreneurship; deepening theoretical knowledge about entrepreneurship, business, acquisition of entrepreneurial skills (development of business plans, projects, designing algorithms, entrepreneurship strategies, etc.) while engaging students in specially created and real situations within the educational process; formation of an individual style of self-realization in professional activity by establishing and conducting one's own business; creation of business projects; reflection and self-reflection on the results of self-fulfilled tasks; assessment and self-assessment of the levels of entrepreneurial competence etc.

Implementation of these changes is ensured by the following methodological means: individual, group, collective forms of classroom work in the course of general professional, theoretical, vocational training, team work during extracurricular activities (quizzes, tournaments, competitions, etc.); industrial training and practice; technologies of problem, research, project, imitation-role, binary learning; traditional and interactive methods: imitation-role-playing, didactic-cognitive and business games, work in small groups, "brain storm"; didactic tools: individual cards, problem-finding tasks, tests, logic circuits, summary tables, practice-oriented situational tasks, glossary, technical training, e-learning resources, etc. [14].



### Conclusions.

The study draws the next conclusions: youth (people between the ages 15 to 29) is an active part of society, capable of driving the economic development of a country; challenges facing youth entrepreneurs in Ukraine and in foreign countries are broad and varied: financial challenges, insufficient knowledge (education); character type mismatch; bureaucratic constraints; societal and age stereotypes; inaccessibility of youth entrepreneurship support structures and initiatives.; it is, consequently, critical that the governments and educational institutions prioritize attention to youth entrepreneurship schooling: provide counseling support in the field; deepening theoretical knowledge about entrepreneurship and motivation for youth entrepreneurship; acquisition of entrepreneurial skills of the students; engaging the learners in specially created and real situations within the educational process, etc. The findings may encourage the stakeholders (policy-makers; researchers; educational institutions and entrepreneurship educators) who are concerned about youth entrepreneurship to provide sufficient support to students, to offer more entrepreneur-related subjects, create a more entrepreneur-friendly environment.

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**MANAGING A CONDOMINIUM AS A CREATIVE URBAN SPACE IN UKRAINE**

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**Abstract.** *Many modern Ukrainian cities are a product of Soviet industrialization, which took place on a large-scale, pompous and without taking into account social infrastructure. The new municipal management in post-modern Ukrainian society will develop because of the administration of condominiums, which create a comfortable urban space suitable for living. This public organization in our country transformed from a means of socio-political struggle against the class of owners at the beginning of the twentieth century into a business entity with great potential in administration of social processes at the beginning of the twenty-first century. In this case, the priority tasks for the future development of condominiums is a guideline to satisfy the needs and interests of residents by expanding the range of public services and making room for their creative self-realization. Gentrification of cities after deindustrialization plays a special role in such an update. If modern Ukrainian condominiums expand the range of services for their residents, then this will free up their creative potential and help create a new dream city.*

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**Keywords:** *house committee, house-commune, association of co-owners of apartment buildings, condominium, creative urban space, gentrification, joint management.*

**Introduction.**

One of the trends of the beginning of the 21st century was the decrease in the role of the state as the main element in the public administration system. The city returned to the life of modern person. He received not only the status of a place of attraction for active people, but also became a marker for their identification with the outside world. A resident of Kyiv, Dnipro, Zaporizhzhya, Odessa, Lviv is not only a social status, but also a special worldview, its own culture and its own way of life. The basis for such a formation of man is the environment of his actual existence - his house. An apartment building is not only a place of compact residence of people, but also a special public unit that combines the freedom and tolerance of a modern person-owner. The house is one of the first meetings with the outside world, which affects the formation of a person's worldview, and, therefore, this is the space of primary self-expression, the formation of a unique attitude to people around. Managing such infrastructures is a special art that goes beyond the collective association of people to live together on a common territory and requires the search for other meanings and actions for effective functioning in the context of the formation of the municipal services market. Therefore, the study of the main aspects of the management of condominiums as a creative urban space in our country is an urgent topic for this scientific work.

### **Literature review.**

Existing research in this area divided into three parts. Firstly, an analysis of international experience in organizing the functioning of condominiums in the studies of Sulochana Shekhar [8], Ute Lehrer, Thorben Wieditz [7], Robert Gratz [6], which will be useful for the reorganization of the national municipal infrastructure. Secondly, fundamental research on urban space and its creative reorganization in works of Alexander Atabekyan [1], Charles Landry [5], Marina Hlukh [3]. Thirdly, regulatory documents and a practical analysis of the work of these public associations at the level of Government of Ukraine [2] and Parliament of Ukraine [4]. The purpose of our scientific work is to substantiate the model of condominium management as a creative urban space in Ukraine.

### **Results.**

Finding a solution to the problem of organizing cohabitation of equal members of society several times changed its form and content in the theory and practice of managing public institutions in our country. If you do not touch upon the contradictory influence of city policy on the development of municipal governance in Ukraine, then the creation of this public organization was in the following sequence: «house committee - house-commune - association of co-owners of apartments of the building – condominium». At the same time, the condominium is as close as possible in spirit to the modern understanding of this legal entity in the non-state sphere of activity.

The first attempts to create such organizations are associated with the protection of the rights of housing users with a significant difference in the financial capabilities of citizens. Alexander Atabekyan claimed: «From the very beginning of their appearance, house committees were created to regulate relations between tenants and homeowners, it defended the common interests of residents before the private interests of householders, it insisted on the production of repairs, where it was necessary to regulate heating in houses with central heating and the like» [1]. This point of view on the control object shows the wide potential of such unions that can develop both in the direction of public protest, and in the direction of improving and self-organizing the life of citizens, as it began to develop in our country today. Social reformers of the early twentieth century were optimistic that commune houses would make significant changes to the face of the social and state system of that time. The main emphasis was on the destruction of the economic role of the family and the transition to free relations. The family institute survived the Soviet social system, but the transition to a market society in Ukraine was a real test for him. It is interesting that, having arisen as a form of anti-state protest, this collective participant in the municipal management system becoming a little foundation for the effective organization of economic activity of homeowners in a market environment.

Law of Ukraine «On Associations of Co-Owners of Apartment Buildings» gives a rather stingy definition of this subject of public administration. For lawmakers, the association of co-owners of apartment buildings is: «legal entity created by the owners of apartments and non-residential premises of an apartment building to facilitate the use of their own property, as well as the management, maintenance and use of common property» [4]. The authors of this regulatory rule focus our attention on the implementation of property rights in new social relations, but beyond the bounds of understanding the community, collectivity and integrity of the representatives of the class of owners and tenants, which was not in the previous history of the country. The co-owners' association anticipates the emergence of condominiums for managing the space of modern urban life, but they should be the main object of our study as a new level of modeling of social processes in the Ukrainian practice of municipal administration.

The new form of society's self-organization differs from the previous one in that people who fully own part of the urban property and, therefore, are a significant socio-political force at the local government level. This is the potential for the development of a high-quality political landscape of the city government in Ukraine. Therefore, this participant in the public administration system, which needs to determine its place among other urban organizations and the formation of relations with them. Creative environment is a space comfortable for existence and development by stimulating and supporting the search for a new, perfect and useful state of affairs for society. The main distinguishing feature of a creative urban space is its tolerance for all dissimilar and other citizens and processes, which makes it a viable basis for the development of such associations of owners.

The practice of developing condominiums in our country is multidirectional and it used in the construction of both socialism and capitalism, which suggests an eclectic foundation for the creation of such urban organizations. This suggests the need to use a creative approach both in finding the optimal condominium management model, and in organizing their work in practice, taking into account the existing socio-historical traditions and similar world practices of such administration. It is possible to understand the depth and potential of future changes based on the analysis of foreign experience in condominium management. Ute Lehrer and Thorben Wieditz describe the increasing role of these associations in both domestic and foreign policies: «Toronto's urban entrepreneurialism found its expression in urban policies that ever more tightly integrated real estate interests into policy documents, hoping to reposition Toronto within the global economy» [7, p. 88]. The condominium and politics in Ukraine is a dangerous mixture for the struggle for power, but the condominium and the protection of the interests of residents are awareness and operational satisfaction of the social needs of a modern city. The basis for this process may be the association of condominiums, which must receive a vote in the city council in order to find a balance of interests of different areas of the city.

Let's turn to the basic condominium management models, which are based on three national standards (German, French and English models) [3]. They distinguished by a combination of private and communal property in the management of housing and land and city organizations for the sale of energy resources in residential buildings. Our state and society should come to understand that the introduction and development of these participants in the municipal services market can be based not only on the economic efficiency of condominiums, but also on the comfort of human life in them. The effectiveness of the condominium functioning depends on the level of freedom in the organization of their work, which makes it possible to search for their own administration model, which is more comfortable for residents. Most of these management models allow the condominium to own, together with city authorities, land near the house, city pipes and organizations selling energy to citizens. Ukrainian city authorities and independent private companies have a monopoly on the supply of all utilities, which significantly limits the self-realization of condominium managers and reduces the possibility of creating comfortable conditions for their residents.

Many city blocks created during the period of communist industrialization in our country. Today, industrialization is over, and with it, many houses began to resemble slums. To solve this problem, it is necessary to use the experience of countries such as India. Sulochana Shekhar substantiates the need for a detailed analysis of the interests of slum dwellers during their reorganization: «In the present case, in-situ development was recommended based on the open area available, land value, ownership, the density of the slum population and accessibility to basic facilities.

Housing structure (such as whether single floor or double-storey structures were needed) was decided in line with residents 'needs» [8, p. 48]. The Indian practice of urban improvement suggests that initially the municipal authorities should change their attitude towards the residents of the houses, and then create comfortable living conditions for each of them. If the state wants an unusual solution for the modernization of urban housing management, the condominiums must apply a creative approach to the administration of the subjects of this municipal activity in our country. The condominium is not only the Western standard for the coexistence of citizens, but also a special community of people who are close in spirit, who unite as representatives of one social group in the framework of free relations of social coexistence and development.

Charles Landry sees the main vector of development of municipal management in creating the conditions for creative self-realization of a person. He claims that service is the basis of a person's comfortable life in a city in which he can find himself and change the world for the better. Charles Landry proposes to shift the solution of household problems from the resident of apartment to the management of the condominium: «Our city dweller goes to a store, repairs a car, sends letters, walks a dog, meets with neighbors, goes to work, and takes children to school. Ultimately, the typical municipal manager must ensure that these regular actions of people take place as smoothly as possible, without unnecessary effort» [5, p. 53]. Therefore, the main task for the specified subject of socio-economic relations is the comfort of its participants, which involves expanding the range of services to ensure the effective functioning of the municipal space in Ukraine, as well as creative self-realization of co-owners.

The Ukrainian government should understand that the condominium is an economic entity, and not a voluntary-compulsory form of reforming the municipal system of the city. One of the main and characteristic features of the modern Ukrainian is that he simply does not have time for life. He desperately needs recreation in conditions of intensive life in the city, which cannot be outside the place of residence. The popularity of rehabilitation centers in the sleeping areas of Ukrainian cities speaks of a promising niche for creating self-sufficient directions in the work of condominiums. This also includes the increased need for condominium residents to develop cleaning services, childcare and retirement services, as well as the creation of a home delivery service. This is a huge and undisclosed potential of the condominium services market, which can develop at the municipal level in our country. Such a service sector will help the citizen better realize himself in a professional activity. An important aspect is that condominiums will not become ghettos for wealthy citizens. They must be a competitive participant in the urban social services system.

A research by the Ministry of Development of Communities and Territories of Ukraine [2] shows a depressing picture, where a negligible number of condominiums in our country chose improvement and improvement of the surrounding living space as their type of economic activity. Analysis of the table allows us to conclude that 12% of condominiums set as their main goal the administration of common property and only 1 % of the total number of condominiums choose activities to improve the comfort of their residents and owners. This significantly reduces the management potential of these public organizations, as 89% of its leaders perceive their work exclusively as house maintenance, and this contributes to an irresponsible attitude to a trusted municipal resource and an increase in the time to achieve worthy coexistence of citizens. Particular attention is required to condominiums, which are located in the historical part of the city or include the place of life of the leader of society.

**Table 1. Distribution of condominiums by type of economic activity in Ukraine**

The code	Kind of activity	Number of organizations	%
81.1	Comprehensive housing maintenance	30535	89,53%
70.32.0	Property management	2276	6,67%
68.32	Property management on a fee or contract basis	2014	5,91%
68.2	Real estate leasing	848	2,49%
81.21	General cleaning of houses	423	1,24%
81.29	Other cleaning	300	0,88%
81.22	Construction and industrial cleaning	151	0,44%
94.99	Other activities of public organizations	118	0,35%
91.33.0	Activities of public organizations	76	0,22%
70.20.0	Leasing of own real estate	65	0,19%
70.20.2	Lease of own and state real estate of non-production purpose	58	0,17%
81.3	The provision of landscape services	52	0,15%
43.22	Installation of water supply networks, heating and air conditioning systems.	49	0,14%
43.29	Other construction work	39	0,11%
90.03.0	Garbage removal	30	0,09%
43.99	Scaffolding	29	0,09%
96.09	Other individual services	27	0,08%
43.21	Electric installation work	25	0,07%
82.11	Office administrative services	25	0,07%
41.2	Construction of residential and non-residential buildings	24	0,07%
68.1	Buying and selling real estate	24	0,07%
43.31	Plastering work	23	0,07%
43.34	Painting and glazing	23	0,07%
70.32	Non-residential premises management	22	0,06%
43.91	Roofing	20	0,06%
43.33	Facing work	19	0,06%
35.3	Hot water and air conditioning	18	0,05%
43.32	Installation of carpentry	17	0,05%
36	Water purification and supply	16	0,05%
74.70.0	Cleaning of industrial premises, equipment and vehicles	15	0,04%

This unused tourist potential for such a change in the work of condominiums is at home in almost every district of the modern Ukrainian city. Traditionally, people want privacy and relaxation in their place of permanent residence. The additional value of housing attracts tourists (a monument of architecture, a house-museum, an apartment-museum) and brings additional income, but deprives condominium participants of a quiet life.

Consequently, they, like other owners of private companies, need to determine the level of publicity of their organization. These buildings reflect the unique history of our country and can be combined into a holistic landscape of business, tourism, cultural and entertainment infrastructure in the global information world, where uniqueness is the main value and good sale.

Modern Ukrainian cities are dying not only demographically, but also economically. Deindustrialization of the economy and population migration will lead in the near future to the need for gentrification or conservation of the working areas of many cities of our country. For city life, the best way out is gentrification in the form of an influx of financially prosperous citizens. Robert Graz writes: «New residents, whether young middle-income families or recent immigrants, pour extra strength into any neighborhood in the same way as the constant influx of new people, new ideas and new entrepreneurship is always important for the prosperity of a large city» [6, p. 88]. The Ukrainian condominium will become the main participant in the process of gentrification and will encounter problems such as the rise in the cost of maintenance of municipal services due to the increasing needs of new wealthy residents, crowding out insolvent old-timers. It should become a place of formation of national tolerance and good neighborliness with representatives of other nations, cultures and religions. That is, the inevitable increase in the influence of condominiums on the public life of the city is not only an improvement in its economic potential, but also an aggravation of the problem of the social stratification of society and its national-ethnic tolerance, where conflicts can develop not only between regions, but also inside houses.

The migration of residents of Donetsk and Luhansk regions after the outbreak of war in the east of the country became an indicator of the Ukrainian problem of gentrification. People from these regions bought apartments in houses, improved the labor potential of enterprises and organizations, but still they outraged local residents with their move. Old-timers accused them of supporting Separatism, despite the fact that the migrants had more Ukrainian patriotic views, but no one wanted to hear them. In the future, Ukrainian cities may face even greater conflict when residents of less prosperous regions of the world who have greater labor potential move to Ukrainian condominiums.

International experts in the field of municipal administration have two areas of work on this issue. Firstly, the creation of national quarters, which is difficult to do without violating the rights of modern person. Secondly, the creation and support of effective programs to support multiculturalism at the community and condominium levels. The second option has clear legal and democratic advantages.

The condominium is a public association of the future Ukraine, which base on the need for coexistence and mutual understanding of its participants for the further development of the municipal services market in the country. He was destined to become the basis for the development of tolerance in Ukrainian society. Such formations in our country are not possible on the principle of isolation, which contradicts the organization of the Post-soviet City infrastructure. Thus, it is vital for Ukrainian condominiums to embody a creative urban space, which will become the universal basis for the comfortable coexistence of completely different people based on the principle of multiculturalism, tolerance and freedom of expression in society.

### **Conclusions.**

The practice of creating condominiums in Ukraine has a large and controversial background. They were the stronghold of the anarchist, but they are introducing today as subjects of economic activity, although they have not yet become a comfortable place for every citizen. Creating a creative and comfortable space requires collective responsibility, which has a two-level basis for survival in the emerging market of public utilities and the search for self-realization and economic independence by the tenant and owner of the condominium.

The article analyzes the main aspects of national condominium management in a post-industrial society and came to the following conclusion. Despite the difficulties with universal and individual trust in Ukrainian society, condominiums will not achieve the physiological and social comfort of their participants unless they choose a collective model for managing and formalizing contractual relations. Joint management of property, common ownership of pipes and land with the city, a humane policy for the development of the municipal space based on socio-historical experience and existing prospects will create the basis for the favorable existence and creative development of such organizations. Our study analyzes the experience of municipal management in Canada and India, which gave us two thoughts. Firstly, the condominium is a promising political entity at the national level in Ukraine, which requires government attention and a clear vector of development. Secondly, the improvement of existing condominiums within the framework of the municipal policy of improving the comfort of living in the city should proceed from the interests of residents of houses, taking into account their opinions and ideas about comfortable living space.

One of the main tasks of the modern condominium in the Ukrainian city is to take care of the daily care of its residents. Expanding the scope of services for citizens in the conditions of their permanent place of residence is the liberation of space and time for their creative development and contribution to their dream city.

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**MODERN TEACHING METHODS IN ENTREPRENEURSHIP EDUCATION**

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**Abstract.** *The paper investigates some issue of using modern teaching methods in order to improve the quality of entrepreneurship education. The global economic crisis affected on every sphere of life and entrepreneurship education is no exception. Every country needs creative and innovative entrepreneurs, a flexible and resilient work force well equipped with the necessary skills and key competences. The most important factor in teaching methods and its process is the quantity and quality of the lessons given by the teachers. Modern teaching methods are used to make learning sessions interactive and motivating. It is important and most preferred in the technological age, because they give students the best opportunity to get a thorough knowledge. One of the important advantages is that the teacher can choose the training program for students according to the curriculum and specialization of the course and use the tools that will best contribute to the achievement of learning objectives. The aim of our article is to analyze the modern teaching methods in higher education as a new approach for improving the quality of entrepreneurship education. The key methods of our scientific research are synthesis, observations of studying and training, analysis and generalization of given information to use the progressive ideas in Ukraine.*

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**Keywords:** *entrepreneurship education, teaching methods, new approach to teach, quality of the lesson, labour market.*

**Introduction.**

Globalization, the rapid development of technology and the lower cost of travel have completely changed the nature of work. It is no longer enough to train students for a career. Universities must prepare students to work in a dynamic, rapidly changing entrepreneurial and global environment. Entrepreneurship is viewed as a major driver of innovation, competitiveness and growth. Herald and Roseveare noticed: "The fundamental changes in employment over the past 50 years imply a rise in the demand for non-routine cognitive and interpersonal skills and a decline in the demand for routine cognitive and craft skills, physical labour and repetitive physical tasks... Graduates are entering a world of employment that is characterised by greater uncertainty, speed, risk, complexity and interdisciplinary working. University education and the mode of learning whilst at university will need to prepare students for entry to such an environment and equip them with appropriate skills, knowledge, values and attributes to thrive in it" [8].

In Europe, case studies and other interactive pedagogy are underutilized, as is the inclusion of business people and entrepreneurs in the classroom. Almost half of all materials used in the entrepreneurship courses in Europe are generated locally, as faculty teach with a mix of lectures as

well as formats that do not use conventional course materials. Greater emphasis needs to be placed on experiential and action learning. There are numerous pedagogies that can be utilized, including case studies, team projects, and activities with entrepreneurs. Using active learning methods is more complex than traditional teaching methods. It requires engaging students more deeply in the learning process. Educators therefore must be able to create an open environment of trust, in which students develop the necessary confidence to take risks. Europe's competitiveness, innovation and economic growth depend on being able to produce future leaders with the skills and attitudes to be entrepreneurial in their professional lives, whether by creating their own companies or innovating in larger organizations [22].

### **Results.**

Entrepreneurship education in the 21<sup>st</sup> century is the first and arguably the most important step for embedding an innovative culture in Europe. It is about more than acquiring knowledge from a single discipline. Higher order skills, such as critical thinking, creative problem solving, teamwork, and communication, are becoming even more fundamentally valuable. As information and facts proliferate, the ability to navigate across a wide range of disciplines and to critically evaluate, extract and communicate meaning have become essential attributes for success in modern society. Increasingly, the most important element of modern pedagogy in entrepreneurship education is not simply the teachers' transmission of information and the students' retention of facts. Now students must have learnt how to handle and interpret concepts, evidence and ideas, how to think and act as experts and, ultimately, how to produce original insights and valuable knowledge for the benefit of society. As a result, higher education is entering a new and exciting period. Leading universities understand that they need to change pedagogy from fact-based traditional lecturing to interactive teaching with the aim of fostering durable skills such as critical thinking, developing an expert mind set and problem-solving. In the interactive mode of teaching, students will be more equal participants in research based teaching and, hence, in the process of discovery, innovation and learning through and from mistakes. One of the effects is that they will learn to act and think as experts and will have a better notion of professional identity [10].

This will provide them with a higher sense of agency and purpose as they are going through the curriculum. There is strong evidence that active learning methods enhance the effectiveness of teaching and instruction in a way that imparts deep understanding of concepts [7].

Davies and Gibb suggest that the education system should emphasize a set of values and abilities which is inimical to an entrepreneurial spirit. They believe that using traditional education methods to develop entrepreneurs could be interpreted as teaching "to drive using the rear mirror". According to them the students of entrepreneurship program should be encouraged to cope in new ways with the real world by emphasizing: (1) learning by doing; (2) encouraging participants to find and explore wider concepts relating to a problem from a multidisciplinary viewpoint; (3) helping participants to develop more independence from external sources of information and expert advice, and to think for themselves – thus giving ownership of learning; (4) encouraging use of feelings, attitudes and values outside of information; this, in general, will place greater emphasis on experience-based learning; (5) providing greater opportunity for building up of networks and contracts in the outside world linked with their learning focus; (6) helping participants to develop emotional responses when dealing with conflict situations, and encouraging them to make choices and commitments to actions in conditions of stress and uncertainty[4].

A transformation to active learning will allow students to spend a significant portion of their class time on activities that require them to interrogate information in a variety of ways, from using electronic clickers to answer questions, to completing worksheet exercises and exploring problems through discussion with fellow students [19].

Entrepreneurship education has become popular for many reasons. Learning about developing business plans and creating a company allows students to better understand and integrate finance, economics, accounting, marketing and other business disciplines, offering them an integrative and enriching educational experience. Entrepreneurship education encourages the founding of new businesses by students and alumni and equips them with critical decision-making skills that enhance the success of graduates in the job market. Furthermore, the entrepreneurial mind-set increases the transfer of technology to the market, from the university, through the development of technology-based business plans and student involvement with technology licensing. Finally, entrepreneurship education creates links between the academic and business communities. Education for entrepreneurship is considered a useful, applied approach to the study of business and the economy [1].

### ***Methods of education.***

Teaching methods represent “a set of forms, methods, technical means and principles of their use, by means of which content is circulated in order to achieve the objectives” [13]. In the contemporary context, we can distinguish two phases of teaching, namely: “traditional teaching, classical and modern teaching, new, psychological, the difference between the two consisting of the design and organization of learning situations (rigorously conducted in the first case and having various degrees of autonomy in the second case)” [15]. Traditional teaching takes into account memorizing and reproducing knowledge, the student works alone and is required to follow the lecture, the teacher’s presentation or explanation. Modern teaching takes into account cooperative learning, the student communicates with the teacher in order to solve the situations set forth by the latter. In this case, the teacher facilitates and moderates learning [2].

Although currently modern teaching strategies are more and more used, a harmonious blend with traditional ones is necessary for a good training of the student/scholar. Yakovleva N. and Yakovlev E. talks about the use of interactive methods of training, which encourage interest in the profession; promote the efficient acquisition of training materials; form patterns of conduct; provide high motivation, strength, knowledge, team spirit and freedom of expression; and most importantly, contribute to the complex competences of future specialists. She defined such teaching methods: training, case study method, behavioral modeling, play projects, the method of peer feedback, metaphor game, storytelling, the method of action learning, basket-method. She noted that active learning methods modify the role of the teacher from the translator of information to the organizer and coordinator of the educational process and make it possible to form complex competences in future professional specialties via student activities that manifest as closely as possible the content of professional work [21].

Bourner T. and Flowers S. mentioned that Universities have two core processes: teaching and research. The output of teaching is learning and the output of research is a contribution to knowledge. They have a clear view of the learning aims of higher education: disseminate knowledge; develop the capability to use ideas and information; develop the students ability to test ideas and evidence; develop the student ability to generate ideas and evidence; facilitate the

personal development of student; develop the capacity of students to plan and manage their own learning. They considered that quality of education is defined in terms of all these aims. Each of the potential learning aims suggests a large range of teaching methods to reach the quality outcome. So, different teaching methods are appropriate to different learning aims.

1. Disseminate knowledge: lectures, up-to-date textbooks, reading, handouts, “Guest” lectures, use of exercises that require students to find up-to-date knowledge, develop skills in using library and other learning resources, directed private study, open learning materials, use of the Internet.

2. Develop capability to *use* ideas and information: case studies, practicals, work experience, projects, demonstrations, group working, simulations (e.g. computer based), workshops, discussion and debate, essay, writing.

3. Develop the student’s ability to *test* ideas and evidence: seminars and tutorials, supervision, presentations, essays, feedback on written work, literature reviewing, exam papers, open learning, peer assessment, self-assessment.

4. Develop the student’s ability to *generate* ideas and evidence: research projects, workshops on techniques of creative problem solving, group working, action learning, lateral thinking, brainstorming, mind-mapping, creative visualization, coaching, problem solving.

5. Facilitate the *personal development* of students: feedback, experiential learning, learning contracts, action learning, learning logs, role play, structured experiences in groups, reflective documents, self-assessment, profiling.

6. Develop the capacity of students to *plan and manage* their own learning: learning contracts, projects, action learning, workshops, mentors, reflective logs and diaries, independent study, work placement, portfolio development, dissertations [20].

Action learning can be an effective vehicle for developing creativity (it is very effective in developing the capacity to ask productive questions and much of creativity is about asking new questions from a different mindset), personal development (particularly the development of self-‘knowledge’) and it can be used as a vehicle for helping people to plan and manage their own learning. We also believe that it eliminates the need for a system of personal tutoring as (in addition to its role as a vehicle for learning) an action learning set also acts as a powerful self-help group. Hooker M. considered that “...the nineteenth-century model of teaching at higher level still holds sway and (teaching) has not changed much since. Fundamentally, higher education is still a process of imparting knowledge by means of lectures to those who want to acquire it” [11].

### ***Lecture Method***

A lecture is a talk or verbal presentation given by a lecturer, trainer or speaker to an audience. With all the advancement of training systems and computer technology, lecture method is still a backbone widely used in teaching and training at higher level of education. This method is economical, can be used for a large number of students, material can be covered in a structured manner and the teacher has a great control of time and material. A study conducted by Benson, L., Schroeder, P., Lantz, C., and Bird, M (n.d.). provides evidence that students may place greater emphasis on lecture material than on textbooks. Lecturing is not simply a matter of standing in front of a class and reciting what you know. The classroom lecture is a special form of communication in which voice, gesture, movement, facial expression, and eye contact can either complement or detract from the content [3]. McCarthy, P. in article “Common Teaching Methods” stated strengths of lecture method that it presents factual material in direct, logical manner, contains experience

which inspires, stimulates thinking to open discussion, and useful for large groups [16]. Our findings also revealed that most of the students considered lecture as best method because according to opinion of students ; it creates new ideas, it is good for large class, develops creativity among students, teacher is experienced and has mastery on subject, explain all points and can answer all questions by students. Sullivan & McIntosh said that with planning and effective presentation techniques, the lecture can be a highly effective and interactive method for transferring knowledge to students [17, 18]. Lecture gives the pupils training in listening and taking rapid notes [14]. Most of the students rated lecture method as the best teaching method. Reasons included: teacher provides all knowledge related to topic, it is time saving method, students listen to lecture attentively and take notes etc. So we can distinguish the main characteristics of the lecture: it creates new ideas; it is good for large class; teacher is experienced and has mastery on subject, explain all points and can answer all questions raised by students; students can ask if they need any clarification; learn through listening; students give their input; teacher discusses whole topic in the class in easy language so students can easily understand the topic; it is good for large class; teacher provides all knowledge related to topic; time saving as teacher is supposed to finish lecture in time; students give their views at the end of lecture; students can ask question if they have any problem to understand lecture; students attentively listen lecture and take notes as the teacher ask questions at the end of lecture; students know and understand basic concepts; it creates new ideas; teacher knows all the students so he/she can use suitable strategies for the class to make them understand; teacher is experienced and has mastery on subject and can answer all questions by students; teacher shares information with students so it creates interest in students; students are more involved and participate when teacher ask question; teacher provides notes; students easily understand every point; students share knowledge with teacher; teacher is a role model for students.

Tips and techniques for improving lecture method:

1. Lecture material should be stimulating and thought provoking.
2. Information should be delivered dramatically by using example to make it memorable.
3. The teacher needs to use questions throughout the lecture to involve students in the learning process and to check their comprehension.
4. Reinforce learning by using visual supports like transparencies, flip charts, whiteboard/black board etc.
5. Teacher should take feedback of students to improve lecture method.

Interactive techniques also make learning more engaging, challenging, authentic and satisfying, whilst leading to better retention of learning outcomes. In the context of a lecture, the level of transformation will be determined by the topic and the desired learning outcomes. An active session could include the introduction of a few carefully designed clicker-based provocations by the lecturer in real time, allowing a gauge of understanding and engagement while teaching. Alternatively, a highly interactive lecture might require students to engage with online materials prior to arrival and to respond to a quiz that assesses their understanding or enables them to highlight content they found most challenging, then the lecturer and teaching assistants can focus instruction in these key areas. At the start of the lecture challenging questions could be posed intermittently for voting individually via clicker or smartphone response, and then posed again after facilitating discussion of these initial responses in small groups. Data collection from these responses could then inform follow-up personalised tutorial support or other interventions [12].

### *Finland experience.*

The Finnish higher education system is considered to be one of the best in the world: the enormous economic and scientific potential of this country is the result of a democratic system of education for citizens, significant expenditures on training and retraining, the use of modern pedagogical and information technologies, and technical means of training. The training of experts in the system of higher education in Finland is aimed at developing students' ability to set goals, independent study, creative thinking, teamwork, solve problems, make decisions and achieves the desired results. Universities of Finland teach critical thinking, analysis and selection of necessary facts among and endless sea of information.

Polytechnics and universities design their own instruction according to national statutes and their own degree regulations. Thus teachers and lecturers have full autonomy regarding their teaching, as well as the materials and methods used. Results of evaluation projects are frequently used to develop of the instruction. Alongside the traditional forms of teaching – lectures, demonstrations and examinations based on lectures and literature – instruction makes increasing use of other methods, such as essays, projects, seminar and group work. The use of new information technologies in instruction has also increased. In recent years, polytechnics have strongly developed their instruction. The aim has been to increase students' independent and self-motivated study. There are various forms of project and teamwork and studies have also increasingly been transferred outside the institution. The role of the teacher has clearly become more instructor-oriented. Compulsory practical on-the-job learning, of a minimum of 30 ECTS credits, enables many students to combine their final project included in the degree programme with hands-on work experience and to apply their theoretical knowledge in real situations. Topics for final projects come primarily from real cases or problems in working life and are often commissioned by enterprises.

Traditionally the system of study has been based largely on lectures. Students have the choice of attending lectures and passing an exam based on these lectures, or taking an exam on required reading materials, which are considered the equivalent to the lectures. Today there are more and more seminar type courses where discussion, extra reading and paper or lecture diary is required. Degrees in the sciences will also include laboratory and practical work components, which cannot be compensated for by books or lectures alone. Before, there had not been much reading in conjunction with lectures, nor discussion seminars except at advanced levels. Student questioning of teachers, and vice versa, is not as common as in the United States. Contact between students and a teacher outside of the classroom is not customary, although teaching staff have mandatory weekly office hours. Courses are often built around lectures and assigned readings, and exams can be based on either or both. Many courses are also available as “book exams” (lecture attendance is not required and the examiner provides a list of books and/or articles on which the exam is based). Book purchase is seldom a feature of Finnish courses, at least on the scale that dominates at American universities. Student bookstores do not recycle books and buy back old books. Students are accustomed to borrowing the course reading materials from the university library instead of buying them.

The HILL (Hipped Learning Language) concept is a unique e-learning environment (an online lecture system) used at Universities. It allows students to attend lectures without being physically present or watch recorded lessons later on. HILL combines pedagogical ideas and latest technology to make e-learning as flexible and client conferred as possible. It has been developed in

co-operation with different experts (Cisco Webex, IBM, AKG). HILL consists of technological solutions, a pedagogical process and the culture of the organization:

6. Technological aspect: all teachers and students must have the knowledge of basic technology and possibilities to use the network infrastructure.

7. Pedagogical: inquire based learning, flipped learning, case studies, real-time network sessions and virtual classrooms. Teachers and students co-operate and do team work during network session (all of them are trained to use the new technology).

8. Cultural: the new learning culture depends on the commitment of staff and management. Everyone must be eager to change the learning culture and develop and learn new ideas every day [6, 9].

### **Conclusions.**

“Quality” teaching is teaching that transforms students’ perceptions and the way they go about applying their knowledge to real world problems. “There is no contradiction between the imperative of good teaching and the imperative of research which critiques, refines, discards and advances human knowledge and understanding. Good teaching, in many subject areas, is only good to the extent that it is informed by the latest research. A good teacher, like a good graduate, is also an active learner, questioner and critical thinker. The good teacher aims to help the student be confident in handling the subject as it has developed so far, to be courageous in openness to new ideas, curious enough to seek new solutions and opportunities, and insightful enough to work well with others so that the flow of information and effort is maximized” [5].

The aim of modern entrepreneurship teaching is to give students necessary skills to resolve the issues that appear in a real professional environment. Interactive methods of training give students an opportunity to deepen knowledge, improve language skills, share their experience, inspire searching for the additional information according to a specific task, enable the development of flexibility, initiative, independence in decision-making, as well as the ability to work in a team. There are many problems which do not have an unambiguous solution in entrepreneurship activity. That is why it is important to give students opportunity to express and prove their position, critically assess the opinion of others. This helps to approach the process of study creatively, encourages the development of an ability to find alternative solutions, see nontrivial ways of problem-solving.

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Publisher:  
Ljubljana School of Business  
Tržaška cesta 42, 1000 Ljubljana  
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Ljubljana 2020

Publication is freely available online at  
<https://www.vspv.si/sl/o-soli/publikacije>



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