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# THE ECONOMIC SECURITY OF HIGHER EDUCATION INSTITUTIONS FROM THE PERSPECTIVE OF INTERNATIONAL COMPETITION

Alla Kasych<sup>1</sup>, Svitlana Breus<sup>2</sup>, Yevheniia Khaustova<sup>3</sup>

**Abstract.** The *purpose* of the article is to develop a methodological approach towards assessing the economic security of institutions of higher education. *Methodology.* There has been generalized the experience of foreign universities in terms of providing high standards of educational and research process in the context of ensuring their economic security in modern conditions. The study has been conducted on the comparison of aggregate indicators of the economic security of HEIs based on the results of factor analysis (the method of the main components). The output data are formed taking into account the main approaches to constructing a balanced system of indicators based on the results of cluster analysis. The integral indicators of economic security of HEIs and integral indicators of economic security in general have been calculated based on the values of factor loadings and weighting coefficients of indicators for each group. *Results.* The system of performance indicators of the world leading universities has been formed and the key factors of economic security of foreign universities have been identified taking into account the generalized experience of foreign universities. The developed methodological approach to the assessment is universal and provides opportunities for developing measures to improve the level of economic security of institutions of higher education. Studies have shown that the economic security of economic entities is not least determined by the management efficiency of intellectual resources. *Practical implications.* The calculated level of HEI economic security is an indicator not only for protecting it from threats but also for the causal link between socio-economic development of the state, its economic potential and the level of higher education. *Value/originality.* The holistic scientific and practical study has been carried out in the article taking into account the interconnection of higher education and economic security of institutions of higher education and a methodical approach to the evaluation of the economic security of HEIs has been developed. The above stipulates the necessity of developing a methodological approach to assessing the risks to the economic security of institutions of higher education on the basis of possible threats to their activities.

**Key words:** balanced indicators system, development and personnel training indicators, factor analysis, aggregate indicators, economic security of institutions of higher education.

**JEL Classification:** C38, C43, I25

## 1. Introduction

Institutions of higher education play a leading role in training highly skilled professionals to meet the labour market needs, which is actualized in the context of globalization and the transition to an economy of knowledge. At the same time, ensuring their economic security plays an important role both in the development of the state and society as a whole because the economic security of institutions of higher education is the HEIs protection from the negative influence of a number of factors from the external and internal environment

in terms of efficiency of resources available to protect against their activities' threats. Thus, the level of economic security of institutions of higher education is an indicator not only of protecting them from threats but also of the causal link between socio-economic development of the state, its economic potential, and the level of higher education.

Universities in developed countries are not just educational institutions but are at the forefront of the society, science and culture development, and therefore, their development forms not only their security but also

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is the basis of the whole country economic security. That is why, in the process of university development strategy, there are consultations with the community, which allow taking into account the requirements of the public, local authorities, strategic guidelines for the state development. For example, the University of Washington mission is to create a unique community of teachers and students who are capable of large-scale research and seek to improve the lives and livelihoods of students in the region, the country and the world (Washington University Consolidated Financial Statements). An even more ambitious mission is the one of Cambridge University, which is to contribute to the development of society through the achievement of teaching, learning, and research at the highest international level (University of Cambridge Annual Report, 2016).

Leading universities in the educational services market clearly understand that their credibility and future economic security depend on the educational process quality and scientific achievements level. Accordingly, one should dwell on the foreign universities experience generalization in terms of ensuring the high standards of educational and research process. The main indicators characterizing the world leading universities activities are presented in Table 1.

Key factors of the economic security of foreign universities are the following: personnel, material and technical base, financial capabilities, organizational innovations, etc.

Personnel, its reputation, qualification, initiative, ability to apply innovative approaches in professional activity determine the quality of teaching.

The effectiveness of scientific research is determined not only by the University's revenues from

commercialization but also by the number of firms founded on the basis of university scientists' intellectual property. Publications by lecturers and university students and their presentation in Scopus and Thomson-Reuters bases are important. The Hirsch Teacher's Index is used not only in making managerial decisions about career growth but also in making agreements.

Material and technical base. Only a high-quality material and technical base will enable the university to achieve excellence in teaching, research and support of the world image in the future. This is the main approach when determining the amount of funding for these goals. Most of the leading universities have their own campuses. Accordingly, universities develop a campus development program that seeks to improve not only the learning process conditions but also conditions for the comprehensive development of students and their living conditions through the transport systems and infrastructure upgrading. Creating, for example, nanoscale hubs, business schools, incubators – all these investments in the development of the material and technical base are the ability of students to become active participants in the already innovative processes, which significantly increases the image of the university and, therefore, its economic security.

Financial capabilities. "If you see any economy that is not doing well, find out what is spent on education" (Ola, 1998; Omotor, 2004). The basis of universities economic security in modern conditions is their financial capabilities, which have significant differences in different countries. So, leading universities have annual revenues of \$2-9 billion (Table 1) against the background of total annual education expenditure in Ukraine, which is about 6% of GDP and does not exceed \$6 billion.

Table 1  
World leading universities activities indicators

	Indicators	Oxford		Stanford		Harvard		Charles University in Prague
		2015	2016	2015	2016	2015	2016	2016
1.	Number of students, bachelors, masters, PhD	22348 11703 10645	22602 11603 10999	16190 6994 9196	16336 7032 9304	21430 7240 14190	21790 7330 14460	51438 18896 32542
2.	Number of teaching staff, professors, researchers	1680 4501	1747 4634	2153	2180	1514	1631	4653
3.	Revenues, US dollars, millions	1982	1718	9051	9797	4525	4776	393
4.	Expenditures, US dollars, millions	1714	1737	8351	9307	4463	4700	391
5.	Net profit, US dollars, millions	268	-19	700	490	62	76	2
6.	Net assets, US dollars, millions	3692	3913	30434	31719	45402	43397	601 (assets)
7.	Fixed assets, US dollars, millions	1640	1728	7797	9000	6184	6529	-
8.	Average cost of a bachelor's degree, US dollars	-	-	44184	45729	-	-	-

Source: Facts and Figures Charles University, Financial report Harvard University 2016, Stanford University Annual Report 2016, The University of Oxford Financial Statements 2015/16



Supporting financial sufficiency for the university means the ability to continue to attract and retain the best staff, as well as provide research and teaching materials that are consistent with the world's leading universities positions.

Taking into account all the above, it should be noted that one of the major threats to higher education in Ukraine is, among other things, the spread of globalization processes in the educational sector and the expansion of the international education market. The experience of foreign universities, in particular in the context of improving the educational service quality, is outlined in works (Banjong & Olson, 2016; Ding, 2016; Nicholls, 2018).

The generalization of the results of the international education market study, conducted on the basis of various statistical information, suggests that the market of international education is rather dynamic and opens opportunities for competitive educational systems. In total, over the past 20 years, the number of mobile foreign students has increased by almost 3 times from 1.7 million in 1996 to 4.7 million in 2017. Experts predict that the number of students to study abroad should reach 8 million in 2025 (Figure 1).

According to the experts (GLOBAL: International students: a \$100 billion business? 2009) who have tried to assess this global market segment, the potential value will already be \$100 billion in the near future. This suggests that education is turning into a business, which, in the case of international attractiveness, provides significant financial resources to the country's economy. Accordingly, the provision of qualitative educational services allows the country to attract sufficient financial resources to the economy. For example, in 2014, international students have invested in the US economy nearly \$27 billion (Banjong & Olson, 2016).

Taking into account the foregoing it should be noted that in modern conditions, the relationship between higher education and economic security is observed. The study of the economic security level has been

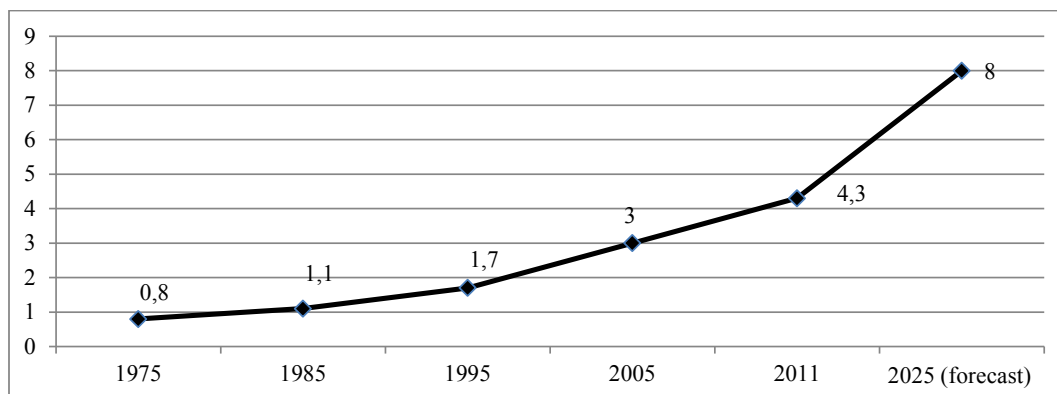
conducted on the basis of data from the Ukrainian HEIs, which are typical representatives of the educational services market.

The destructive processes in the Ukrainian economy are reflected in the activities of higher education institutions (HEI) as elements of the social and economic system. The negative trends from the demographic crisis and external migration were accompanied by social and economic consequences of external aggression, which did not go beyond higher education. Moving education institutions from the temporarily occupied territories was an objectively necessary measure, which had significant negative consequences: total loss and the need to restore the material and technical base, reduction of a half of academic staff (AS) and students, as well as the loss of partially recovering intellectual resources (methodological support of education processes, software products, information bases, image and business relations), etc.

Taking into account the importance of HEIs for the development of the country's social and economic system, determining their economic security, it is expedient to consider the possibility of reproducing their intellectual potential of the nation, which has a positive impact on the economic security of the state as a whole. It is important to further develop universal methodological approaches to assessing the economic security of the HEI, in particular, those moved from temporarily occupied territories.

## 2. Literature review

Scientists also consider the role of education in the formation of national innovation systems (Kasych & Vochozka, 2017), and foreign experience, in particular, as for the sources of funding HEI activities (Kasych & Tsygan, 2013) has been studied in a certain way. The relationship between education and economic security and the ability of education to influence the economic vulnerability level of any country are highlighted in the



**Figure 1. The number of students studying abroad**

Source: compiled according to the data (Number of international students)

work (Munteanu & Munteanu, 2015). The research (Kendiukhov, 2008) shows that the economic security of an economic entity today is largely determined by the efficiency of intellectual capital management. Therefore, the strengthening of the intellectual component in the activities of educational institutions of Ukraine (Illiashenko, 2011, Sardak, 2016, Kasych & Vochozka, 2017) requires an appropriate addition and systematization of factors that should be taken into account in the formation of indicators for estimating economic security.

Despite the consideration of issues related to the estimation of the economic security of higher education institutions, it is necessary to expand the database of empirical studies, in particular, taking into account the results of relevant studies on the institutions' economic security in the condition of external aggression. The research on the comparison of aggregate indicators of economic security of higher education institutions (moved from temporarily occupied territories) based on the results of factor analysis (by principal component method).

### 3. Purpose and methodology of the article

The purpose of the article is to develop a methodological approach to assessing the economic security of institutions of higher education. Conducting research on the comparison of aggregate indicators of HEIs economic security based on the results of factor analysis (by principal components method). The output data have been formed on a balanced system of indicators by the results of cluster analysis. Based on the values of factor loadings and weight coefficients of indicators for each group, integral indicators of individual universities economic security have been calculated.

In order to systematize the estimation indicators for HEI economic security, there have been taken into account the balanced indicator system (the Balanced Scorecard – BSC) (Kaplan & Norton, 2005) adapted to the needs of institutions of higher education (Breus, Khaustova & Denysenko, 2017; Breus, 2018). The output data (indicators) of HEI have been formed according to the following groups: “Finance”, “Students”, “Internal processes”, “Academic staff development and training” subdividing them into stimulant indicators and disincentive indicators.

At the same time, stimulant indicators (contributing to raising the level of economic security) include the following:

- the group “Finance”: the correlation between the licensed volume of acceptance to studies and the volume of the public procurement for the 1st year of studying according to the training programs of bachelors and masters; the average number of academic staff per one economic contract and scientific research, financed by budget funds;

- the group “Students”: the correlation between the number of students and the number of academic staff, the correlation between the number of acceptance to studies to the 1st year of full-time education and the number of titles of accredited specialties for bachelor's and master's programs;

- the group “Internal processes”: percentage of full-time academic staff having a doctor's degree/degree of candidate of sciences and the total number of full-time academic staff, the correlation between the total book funds and the number of students;

- the group “Academic staff development and training”: the level of academic staff creative and innovative performance, the coefficient of academic staff scientific recognition.

The disincentive indicators (contributing to lowering the level of economic security) include the following indicators;

- the group “Finance”: the correlation between the licensed volume of acceptance to studies and the volume of the public procurement for the 1st year of studying according to the training programs of bachelors and masters;

- the group “Students”: the correlation between the licensed volume of acceptance to studies and the number of applicants to the 1st year of full-time study programs of bachelors and masters, the correlation between the number of students in full-time and part-time studies;

- the group “Internal processes”: the correlation between the number of titles of accredited specialties to the programs of bachelor/masters training and the number of departments;

- the group “Academic staff development and training”: the coefficient of the necessity of computing technology and access to network resources.

Using the statistic software Statistica and factor analysis (method of the principal components), out of the output data of every HEI there have been outlined principal components (factor 1 and factor 2), at the same time:

- for all institutions, the indicators of the “Internal processes” group are merged only into factor 1, which indicates the expediency of reducing their number, in particular, by introducing a common indicator – percentage of full-time academic staff having a doctor's degree/degree of candidate of sciences or being a professor or associate professor and the total number of full-time academic staff;

- for all institutions, the indicators of the “Students” group immediately form factors 1 and 2, except for the correlation between the number of students in full-time and part-time studies, which is included only in factor 1. It indicates the relative continuity of this correlation and the possibility of using it as a universal indicator in assessing the economic security of education institutions;



- the indicator of the "Finance" group – the correlation between the licensed volume of acceptance to studies and the volume of the public procurement for the 1st year of studying has a negative value of factor loadings. It corresponds to the essence of this indicator, that is, an increase in the level of budget financing against the background of reducing the number of educational contracts and is a negative factor in ensuring the economic security of the educational institution.

According to the factor analysis results of the input data, there were determined factor loadings, on the basis of which coefficients of each indicator for each group of each higher institution were calculated (the product of the maximum loading for each indicator and the share of the total dispersion is calculated, multiplied by the total sum of the outputs of indicators for each group, and then the weighting factor of each indicator for each group for each grade is calculated as the ratio of the product for each indicator and the total amount of products) using the recommendations of National Institute for Strategic Studies (2013), Ministry of Economic Development and Trade of Ukraine (2013), State Statistics Committee of Ukraine (2003).

Normalized values of the stimulant indicators and destimulant indicators, as well as their weighting factors, become the basis for calculating integral indicators of economic security for each group of a separate high institution and an integral indicator of economic safety with the use of additive convolution (Ministry of Economic Development and Trade of Ukraine (2013), State Statistics Committee of Ukraine (2003) (formula 1).

$$I_m = \sum_{i=1}^n d_i \times y_i, \quad (1)$$

where  $I_m$  is an aggregate indicator (integral indicator for the group of indicators) / sub-index of the  $m^{\text{th}}$  group of indicators of HEI economic security,  $m = (1, 2, 3, 4)$ ;

$d_i$  is the weight of the indicator, which determines the degree of contribution of the  $i^{\text{th}}$  indicator to the integral index of the component (groups of indicators) of HEI economic security;

$y_i$  is a normalized value of the  $i^{\text{th}}$  indicator;  $n$  is the number of indicators used to evaluate the  $i^{\text{th}}$  indicator in the aggregated indicator (integral indicator in the group of indicators) / sub-index of the  $m^{\text{th}}$  group of indicators of HEI economic security;

$$\sum d_i = 1; 0 \leq d_i; y_i \leq 1.$$

The information about an integral indicator of economic security in general for each higher institution with the use of additive convolution (Ministry of Economic Development and Trade of Ukraine (2013), State Statistics Committee of Ukraine (2003) has been carried out by the formula 2.

$$II_{ESHEI} = \sum_m d_m \times I_m, \quad (2)$$

where  $II_{ESHEI}$  is an integral indicator of HEI economic security;

$d_m$  is weight coefficient, which determines the degree of contribution of the index/subindex of the  $m^{\text{th}}$  group of economic security to the integral index of economic security of institutions of higher education:

$$\sum d_m = 1; 0 \leq d_m;$$

$I_m$  is an aggregate index/subindex of the  $m^{\text{th}}$  group of economic security, where  $m = (1, 2, 3, 4)$ .

#### 4. The main material of the research

##### *Clustering HEIs according to the indices of the domestic ranking*

In order to study the dynamics of indicators of economic security, there has been carried out a selection of HEIs from those moved from temporarily occupied territories of Ukraine. It has been based on the assumption that institutions with better rating positions have a performance dynamics that reflects more fully the general tendencies in changes in the economic security of all HEIs moved from temporarily occupied territories.

The cluster analysis of HEIs has been conducted using the software Statistica and the  $k$ -medium method. After normalizing the initial data (indexes of the integral indicator in the Ranking of HEIs "TOP-200 Ukraine"), HEIs were assigned to clusters at a minimum Euclidean distance to the centre of gravity of such a cluster. The configuration of the obtained clusters and distances to the centre of gravity are given in Table 2.

According to the received data, the first cluster includes HEIs that either have relatively retained their positions in the rating and continue to occupy higher positions in comparison with other HEIs displaced from temporarily occupied territories, such as: Donetsk National Technical University (DonNTU); Vasyl Stus Donetsk National University (Vasyl Stus DonNU); Volodymyr Dahl East Ukrainian National University (V. Dahl EUNU); Luhansk Taras Shevchenko National University (T. Shevchenko LNU).

The second cluster includes only one HEI, which has the growth of the academic potential index, at the same time the decrease of innovative activity index and international recognition index; as a result, this university has considerably worsened its rating positions. The third cluster includes such HEIs that show a decrease in all indices and they occupy lower-ranking positions compared with HEIs in the clusters 1 and 2.

##### *Results of the integrated assessment of the safety level of HEIs*

The results of calculating aggregated economic security indicators by groups are presented in Table 3.

According to Table 3, a factor analysis of integral indicators by groups (by principal component method) was conducted, which resulted in factor loadings before and after the rotation procedure (quartimax normalized) for each group for a specific HIE (the value of the most significant indicators is highlighted) (Table 4).

Table 2

**The configuration of each cluster and the distance to the centre of gravity**

Cluster, distance	Observations (Institution of higher education)						
Cluster 1	C_1 Donetsk National Technical University (DonNTU)		C_2 Vasyl Stus Donetsk National University (Vasyl Stus DonNU)		C_3 Volodymyr Dahl East Ukrainian National University (V. Dahl EUNU)		C_4 Luhansk Taras Shevchenko National University (T. Shevchenko LNU)
Distance	0.479480		0.386527		0.606224		1.004392
Cluster 2	C_6 (Donetsk National Medical University) DonNMU						
Distance	0.000000						
Cluster 3	C_5 Donetsk National University of Economics and Trade named after Mykhailo Tugan-Baranovsky (DonNUET named after M. Tugan-Baranovsky)	C_7 (Donetsk State University of Management) DSUM	C_8 V.I. Vernadsky Taurida National University (V.I. Vernadsky TNU)	C_9 Donbas State Technical University (DonSTU)	C_10 Luhansk State Medical University (SI LSMU)	C_11 Luhansk National Agrarian University (LNAU)	C_12 Donbas National Academy of Civil Engineering and Architecture (DonNACEA)
Distance	0.596213	0.366310	0.286135	0.206771	0.482595	0.365469	0.563731

Table 3

**Integral indicators (aggregated indicators) of economic security by groups**

Years	Groups			
	"Finance"	"Students"	"Internal processes"	"Development and training of academic staff"
DonNTU				
2014	0,9925	0,6853	0,0	0,5038
2015	0,5339	0,4151	0,4703	0,3082
2016	0,0326	0,3534	1,0	0,5219
Vasyl Stus DonNU				
2014	0,8344	0,2910	0,6467	0,7077
2015	0,0	0,2554	1,0	0,3131
2016	0,5475	1,0	0,1805	0,4227
V. Dahl EUNU				
2014	0,6659	0,9565	0,2498	0,0621
2015	0,3261	0,3820	0,4071	0,3928
2016	0,4690	0,2015	0,7502	1,0
T. Shevchenko LNU				
2014	0,3351	0,8475	0,4821	0,0080
2015	0,1202	0,1615	0,3965	0,9341
2016	0,8802	0,3475	0,7244	0,5102

Based on formula 2 and according to Tables 2 and 3, there have been done the calculations of the integral indicator of HEI economic security by years (Table 5).

The range of inherent values of HEI economic security levels is enshrined in the Guidelines of Ministry of Economic Development and Trade of Ukraine (2013), according to which the level is equal to 0 is absolutely dangerous; the level in the range from 0 to 0.2 is critical; from 0.2 to 0.4 is dangerous; from 0.4 to 0.6 is unsatisfactory; from 0.6 to 0.8 is satisfactory; from 0.8 to 1 is optimal.

The data in Table 5 show the increase of the level of economic security for V. Dahl EUNU and T. Shevchenko LNU to the satisfactory level during 2014-2016. The level of economic security of DonNTU during 2014-2016 has remained at the unsatisfactory level, while the level of economic security of Vasyl Stus DonNU has declined from satisfactory to unsatisfactory level. The deterioration of their economic security is explained by the fact that after having lost a significant part of its potential, these HEIs as the most powerful does not have enough resources for its relatively quick recovery,

Table 4

**Factor loadings before and after rotation**

Groups	Factor loadings (before rotation)		Factor loadings (after rotation)	
	Factor 1	Factor 2	Factor 1	Factor 2
<b>DonNTU</b>				
“Finance”	<b>-0,9918</b>	-0,1278	<b>0,9943</b>	-0,1064
“Students”	<b>-0,9700</b>	0,2430	<b>0,9646</b>	0,2638
“Internal processes”	<b>0,9907</b>	0,1363	<b>-0,9934</b>	0,1150
“Development and training of academic staff”	-0,0260	<b>0,9997</b>	0,0045	<b>1,0</b>
Total dispersion	2,9067	1,0933	2,9059	1,0941
The share of total dispersion	0,7267	0,2733	0,7265	0,2735
<b>Vasyl Stus DonNU</b>				
“Finance”	<b>0,8862</b>	0,4633	-0,3161	<b>-0,9487</b>
“Students”	0,6462	<b>-0,7632</b>	<b>-0,9949</b>	0,1006
“Internal processes”	<b>-0,8932</b>	0,4497	<b>0,9550</b>	0,2965
“Development and training of academic staff”	0,6127	<b>0,7903</b>	0,1078	<b>-0,9942</b>
Total dispersion	2,3760	1,6240	2,0135	1,9865
The share of total dispersion	<b>0,5940</b>	<b>0,4060</b>	<b>0,5034</b>	<b>0,4966</b>
<b>V. Dahl EUNU</b>				
“Finance”	0,6962	<b>-0,7179</b>	-0,4041	<b>0,9147</b>
“Students”	<b>0,9905</b>	-0,1373	<b>-0,8815</b>	0,4721
“Internal processes”	<b>-0,9337</b>	-0,3580	<b>0,9999</b>	0,0121
“Development and training of academic staff”	<b>-0,9481</b>	-0,3179	<b>0,9995</b>	-0,0304
Total dispersion	3,2366	0,7634	2,9394	1,0606
The share of total dispersion	<b>0,8091</b>	<b>0,1909</b>	<b>0,7348</b>	<b>0,2652</b>
<b>T. Shevchenko LNU</b>				
“Finance”	<b>-0,7843</b>	0,6204	<b>0,9979</b>	0,0654
“Students”	-0,6355	<b>-0,7721</b>	-0,0459	<b>0,9989</b>
“Internal processes”	<b>-0,7695</b>	0,6386	<b>0,9991</b>	0,042
“Development and training of academic staff»	<b>0,7823</b>	0,6230	-0,1629	<b>-0,9866</b>
Total dispersion	2,2231	1,7769	2,0226	1,9774
The share of total dispersion	<b>0,5558</b>	<b>0,4442</b>	<b>0,5057</b>	<b>0,4943</b>

Table 5

**The value of integral indicators of institutions’ economic security and over the years (Ranking of institutions of higher education “TOP-200 Ukraine”)**

Years	DonNTU	Vasyl Stus DonNU	V. Dahl EUNU	T. Shevchenko LNU
2014	0,5520 (20)	0,6161 (25)	0,4282 (34)	0,4193 (33)
2015	0,4867 (23)	0,3921 (32)	0,3874 (37)	0,3999 (49)
2016	0,4696 (25)	0,5416 (27)	0,6484 (41)	0,6180 (64)

as opposed to V. Dahl EUNU and T. Shevchenko LNU. The latter, despite the lowest level of economic security in 2014, partially offset their losses due to the relative improvement of the intellectual component and the increase in the share of non-budget financing.

**5. Conclusions**

The study of foreign experience in ensuring the development of leading universities allowed, among other things, to highlight the importance of ensuring effective staff management through the selection of HEI scientists and university entrants; development of material and technical base; the expansion of financial capacity, the promotion of professional growth by teachers and students, etc.

Taking into account the generalized experience of foreign universities, a system of performance indicators of the world leading universities has been formed and the key factors of economic security of foreign universities are highlighted. Assessing the economic security of HEIs as elements of the social and economic system, it is expedient to consider the intellectual component. Studies have shown that the economic security of economic entities is not least determined by the management efficiency of intellectual resources. In this regard, it is important to pay attention to the opinion of leading scientists on the HEI management on the expediency of expanding factors in the formation of indicators for estimating their economic security.

Taking into account the mentioned above, it should be noted that the developed methodological approach can be universal and widespread among all HEIs. Its results can become the basis for the development of targeted measures and for the increase of the economic security level of institutions of higher education. On this ground, the more vulnerable from the point of view of economic security are institutions whose educational and scientific activities require a strong technical basis (laboratories, productions, etc.) with a relatively high level of budget financing. The implementation of this will facilitate the enterprises needs securement to qualified specialists. This in its turn, in the long run, will contribute to raising the level of Ukraine's economic development on the innovation basis, its competitiveness and ensuring the economic security both of HEIs and of the state and national security in general.

Empirical studies concerning the HEI economic security assessment require the development of

measures, the realization of which will help to alleviate the negative trends that have accumulated during education in recent years. This can be achieved by increasing the international competitiveness of Ukrainian universities, which requires:

- to develop and implement a strategy for attracting foreign students to study in Ukraine through the improvement of the material and technical base, the provision of competitive educational programs, and teachers' skills improvement;
- to conduct real research on foreign students' needs in different countries and ways to meet them;
- to study foreign universities experience in offering high-quality educational services in the international market.

The mentioned above stipulates the necessity of developing a methodological approach to assessing the risks to the economic security of institutions of higher education on the basis of possible threats to their activities.

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## FORMATION OF AN ORGANIZATIONAL AND ECONOMIC MECHANISM FOR ENCOURAGING INVESTMENT ACTIVITY OF ENTERPRISES

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**Abstract.** Aggravation of crisis processes in the economy impedes trends in technology improvement, which leads to a certain lag behind the current needs of social reproduction and the need to increase the investment activity of enterprises. Encouraging enterprises' investment activity is carried out through a mechanism in which there are legal, economic, and financial relations between the subjects of investment activity on the attraction of investments predominantly in the priority directions and branches. The research purpose is to determine the essence and provide the author's interpretation of concept "organizational and economic mechanism for encouraging investment activities of enterprises" and to develop its structure. The research subject is the development of the structure of the organizational and economic mechanism for promoting investment activity of enterprises and substantiation of its main elements. *Methodology.* The methodological basis of the research is a combination of theoretical and scientific methods: analysis, synthesis, systematization and comparison, theoretical and logical generalization. In particular, the following methods are used: analysis and synthesis – when studying the investment activity of the enterprise; systematisation and comparison – to identify the elements that determine the structure of the organizational and economic mechanism for promoting investment activities of enterprises; scientific abstraction – for the formation of theoretical generalization and conclusions. The paper considers different interpretations of the concept "organizational and economic mechanism for encouraging investment activities of enterprises". According to the authors, the organizational and economic mechanism for encouraging investment activities of enterprises is a multi-level hierarchical system of the main interconnected elements and their typical groups (subjects, objects, principles, methods, and tools), during and under the influence of which economic relations between all elements of the system are harmonized. *Results.* As a result of the analysis of the structure of the organizational and economic mechanism, the authors came to the conclusion that any mechanism is a complex structure of interconnected and interacting economic elements, processes, and phenomena that ensure achievement of the set goal. The proposed organizational and economic mechanism for promoting investment activity of enterprises allows investors to minimize investment costs, reduce risks when entering into an investment agreement, or more accurately estimate future revenues from project implementation. Further research directions are deepening of the interrelation of specific features of investment processes in Ukraine with its institutional environment, determination of features of economic relations as the structure of institutes that provide an overflow of investment resources from financial to real sectors of the economy. *Practical implications.* The practical significance is manifested in the possibility of using the proposed organizational and economic mechanism to encourage investment activities of enterprises, which ensures the effectiveness of managerial influences while promoting investment activity to achieve a specific goal in the external and internal environment of the enterprise. *Value/originality.* The originality is the substantiation of structural elements of the organizational and economic mechanism for promoting investment activity of enterprises that influence and determine the directions of encouragement of investment activities of enterprises, which allows combining the study of active business processes, financial support, and creation of information support.

**Key words:** investment activity, promotion, mechanism, organizational and economic mechanism, investment activities.

**JEL Classification:** G31, G11, R11, E22, O14

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## 1. Introduction

In order to keep their positions and increase their competitiveness, enterprises need to constantly develop, master new technologies, expand their activities. Currently, one of the main problems of the development of enterprises in Ukraine is an unsatisfactory age structure of fixed assets, their considerable depreciation and obsolescence. The volume of investments aimed at the implementation of the policy of renewal of fixed assets is insufficient; the problem is complicated by the low level of the financial stability of enterprises, which repel potential investors from investing in their activities.

Thus, the acceleration of the rate of decline in capital investments as a result of the impact of the global financial crisis observed in Ukraine, as in all emerging markets since 2009, has been aggravated by the economic downturn as a result of the conflict in the East of Ukraine after 2014, when an increase in the rate of decline capital investment ranged from 7 to 51%, and some recovery, beginning in 2015, still did not allow reaching the pre-crisis level of 2004-2007, when the increase in the growth rate of capital investment amounted to about 10-15% annually compared with the same period. The foregoing stipulated the necessity of developing measures to promote the intensification of investment activities of enterprises.

Encouraging enterprises' investment activity is carried out through a mechanism in which there are legal, economic, and financial relations between the subjects of investment activity on the attraction of investments predominantly in the priority directions and branches. Therefore, for making sound managerial decisions in the field of investment activities, it is necessary to form a complex effective organizational and economic mechanism for promoting investment activities.

Such scholars as O. I. Amosha (2005), I. P. Buleev (2006), O. S. Khryniuk & M. O. Derhaliuk (2017), O. V. Savchenko & V. P. Soloviov (2013), I. V. Bryl (2015), S. T. Piletska (2016), A. H. Honcharuk (2009) and others devoted their works to issues of the essence of "mechanism" and "organizational and economic mechanism" concepts.

However, despite a large number of publications confirming the relevance of this study, the essence of the concept of "organizational and economic mechanism" is still controversial, which, in turn, creates difficulties in developing effective tools for its implementation.

*The purpose of the article* is to determine the essence and provide the author's interpretation of concept "organizational and economic mechanism for encouraging investment activities of enterprises" and to develop its structure.

## 2. The essence of the concept of "organizational and economic mechanism for encouraging investment activities of enterprises"

There is a great deal of thought about the nature of these concepts, but so far there is no clear terminological definition. In order to understand the essence of the concept of a mechanism for promoting investment activity, it should be noted what is included in the content of the concept of "mechanism".

The term "mechanism" (from the Greek: *mechane* – machine) means a device that transmits or converts motion, internal structure, the system of something; a set of states and processes that make up a certain phenomenon (Bucel, 2003; Kalashnik, 2002). Analysis of scientific works gives grounds to distinguish two main approaches to the consideration of the essence of the concept of "organizational and economic mechanism" (Table 1).

Within the **first approach**, *the organizational and economic mechanism is considered* as a set of forms, methods, tools, and levers of influence on the activity of objects in order to achieve a certain effect. Among the supporters of this approach are O. S. Khryniuk, M. O. Derhaliuk (2017), A. H. Honcharuk (2009), I. V. Chukina (2014), and others. The definition according to the first approach is quite universal and reflects the elements of actions of the management system on the managed one.

It is necessary to agree with the authors' opinion regarding such an interpretation of this concept, but one important issue remains unanswered about the need for constant monitoring of such a mechanism. The organizational and economic mechanism should use market levers and natural connections between elements of the system, supplemented by organizational instruments of influence.

Within the **second approach** supported by O. V. Savchenko, V. P. Soloviov (2013), S. S. Savina (2012) and others, *the organizational and economic mechanism is considered* as a system that defines the order of a certain type of activity that has a complex, organized structure. This approach does not contradict the very essence of the mechanism itself since the need to achieve the goal is stimulated by the development from initial economic phenomena to final ones without additional impulses.

The concept "investment activity" was studied by such domestic scholars as N. Ye. Bryukhovetska, T. Yu. Korytko, I. V. Bryl (2016), N. Ye. Bryukhovetska, L. V. Ivanenko (2017), V. Ye. Budyakov (2008), T. Z. Charhaziya (2014), V. M. Butyrina, T. Z. Charhaziya (2012), O. A. Bohutska, Ia. S. Bryukhovetskyi. Based on the above definitions, one can conclude that, on the one hand, the concept of "investment activity" is defined as a synonym for "investment activities", which covers the style and nature of the actions of actors in the investment market and in the extended investment process, on the other – as its directed

Table 1

**Definition of the concept “organizational and economic mechanism”**

Author	Essence
O. S. Khryniuk, M. O. Derhaliuk (2017)	a certain system of elements of the organizational and economic nature (objects, subjects, goals, tasks, methods of interaction, methods, levers, tools, etc.), interconnected and interacting with each other with moving internal and external connections at the macro, meso, micro levels of the economy, its inter-branch complexes, branches, primary links, etc., the effectiveness of its implementation depends on the ability to create connections, elements, incentives, etc., which are absent at a particular moment
A. H. Honcharuk (2009)	a system of methods, operations, levers, organizational structures and their interconnections, which determine the content of the management process
O. P. Khaietska (2016)	a system of organizational and economic levers, instruments, factors influencing the economic activity of enterprises, industries, product subcomplexes, aimed at increasing its efficiency
O. V. Savchenko, V. P. Soloviov (2013)	a part of the system of management in a specific period of development of the national economy of any country, representing a combination of two heterogeneous but interrelated components – the organizational component and economic component
I. V. Chukina (2014)	a set of organizational and economic levers operating on the organizational and economic parameters of the management system and promoting the acquisition of competitive advantages, the formation and strengthening of organizational and economic potential and the efficiency of the enterprise as a whole
A. V. Cherep, D. V. Krylov (2014)	process of planning, organization, regulation, control over the economic, industrial, social development of industrial enterprises, the level of investment potential, investment activity through the observance of legal, economic, organizational levers and through the implementation of methods, functions, principles, ways of attracting investment resources, accumulation of savings, rational use of resources, taking into account the threats of the investment market in order to minimize risks and develop investment projects
H. V. Kozachenko (2003)	a management tool, which is a set of management elements and methods of their organizational, informational, motivational, and legal support, through the use of which, taking into account the specific features of the enterprise, achieving a certain goal is provided
S. S. Savina (2012)	a complex system that includes subsystems of forecasting and planning of development, motivation, organization, information provision
O. M. Shkilniuk	a system of organizational, economic, legal, managerial, and regulatory actions, methods, and tools that shape and influence the order of its implementation for achieving the expected socio-economic and other results
A. Sokolova (2009)	purposeful and managed open system of organizational, economic, legal, managerial, and regulatory actions, methods, and processes that shape and influence the order of activity in the Ukrainian economy that will contribute to the achievement of the expected economic, social, environmental, and other results.

general characteristics, tendencies of investment change, as an indicator of the efficiency of investment resources use or the result of investment decisions. Consequently, investment activity reflects quantitative and qualitative aspects of investment activities.

Thus, **the organizational and economic mechanism for encouraging investment activity of enterprises** should be understood a multilevel hierarchical system of the basic interconnected elements and their typical groups (subjects, objects, principles, methods, and tools), during and under the influence of which economic relations between all elements of the system are harmonized. Since any mechanism is a complex structure of interconnected and interacting economic elements, processes, and phenomena that ensure the process of achieving the goal, it is necessary to determine its clear structure that will realize functions determined by the mechanism.

### 3. The structure of the organizational and economic mechanism for encouraging investment activity of enterprises

Organizational and economic mechanism changes depending on the field of application; however, there are

common elements that determine its composition and structure. Determining the structure of the organizational and economic mechanism, most authors such as I. P. Buleev, I. D. Paderin (2006), O. S. Khryniuk, M. O. Derhaliuk (2017) take into account such components as goals, principles, and tasks of management, methods, levers and instruments, areas and functions of management, organizational, institutional, legal, informational, financial, and other support. In studies by S. S. Savina (2012), A. Sokolova (2009), three systems are combined in the organizational and economic mechanism: a support system, functional system, and target system. The generalization of the main approaches allowed forming the structure of the organizational and economic mechanism for promoting investment activity of the enterprise (Figure 1).

**The purpose** of the organizational and economic mechanism for encouraging investment activity of enterprises is the economic incentive to intensify investment activities of enterprises through direct and indirect methods and instruments of influence. **The object** of the organizational and economic mechanism for encouraging investment activity of enterprises is the process of ensuring the effective performance of the enterprise on the basis of increasing investment activity.

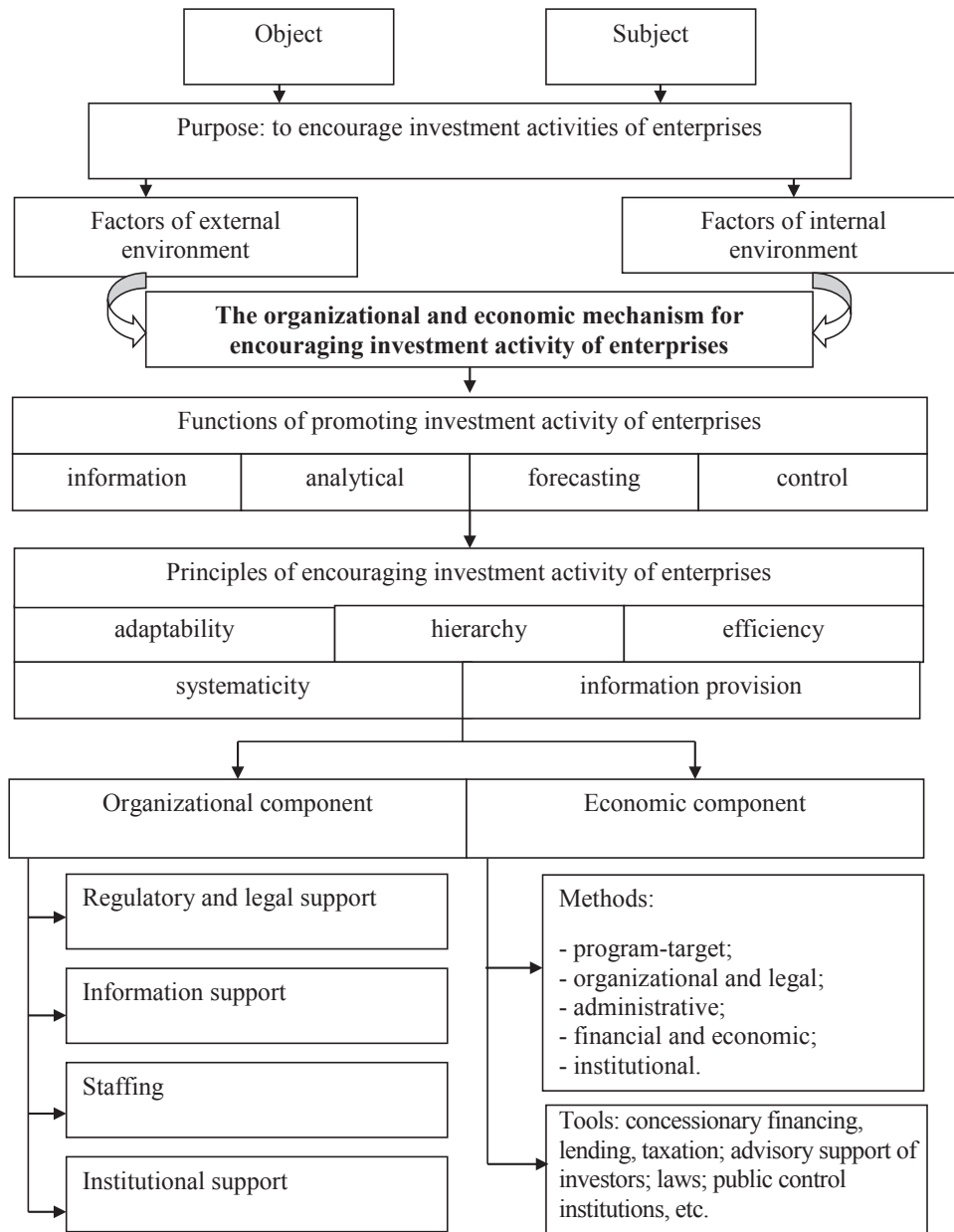


Figure 1. The organizational and economic mechanism for encouraging investment activity of enterprises

The totality of subjects of the organizational and economic mechanism is determined by sources of financing of investment attraction, among which state, private, and mixed are traditionally distinguished. **The subjects of the organizational and economic mechanism for promoting investment activity of enterprises** are the state, enterprise owners, its management, and investors.

The basis of the organizational and economic mechanism for encouraging investment activity of enterprises is its principles. Based on the analysis of works by V.I. Meyta (2014), Ye. O. Holyshcheva (2012), O. I. Vyshnytska (2011), the authors identified the following principles of an organizational and economic mechanism for **promoting investment activity of enterprises**:

- the principle of **information provision** characterizes the formation and use of information base. The result of the analysis of investment activity is the preparation of an analytical conclusion on the current and future financial position of the company and the reasonableness of the planned activities;
- the principle of **adaptability** is to provide the flexibility of the mechanism created in accordance with the dynamics of the internal and external environment of the enterprise;
- the principle of **systematicity** determines that the mechanism should be considered in a single set of object and subject;
- the principle of **hierarchy** means that the structure should have several management levels, that is, for the division of decision-making powers;

– the principle of **efficiency**, that is, the choice of methods, means of influence, which lead to the achievement of objectives set by the authorities, as well as the coordination of objectives of the subject and object of management.

Besides the principles, a basic component of the organizational and economic mechanism for encouraging investment activity of enterprises is its functions. O. V. Savchenko, V. P. Soloviov (2013), S. S. Savina (2012), O. O. Seleznova (2012), and others give a full list of functions that are key and will help to solve problems related to stimulating enterprise investment activity.

Given the results of the analysis of the mentioned authors on the definition of functions of the organizational and economic mechanism, taking into account the peculiarities of promoting the enterprise investment activity, we distinguish the main functions: **information** one provides with all necessary information (collection, processing, grouping, and transfer of accounting data by appointment) in order to encourage investment activity of the enterprise; **analytical** allows revealing the influence of investment activity of the enterprise on its operating performance by conducting an estimation of the investment activity of the enterprise and determination of factors influencing its dynamics; **forecasting** creates the basis for the formation of current and perspective forecasts and contributes to the effective use of financial and economic tools to encourage the investment activity of the enterprise; **control** creates preconditions for preventing and overcoming crisis situations by assessing investment activities from the point of view of legality and expediency, observance of resource expenditure rates; the use of operational, tactical, and strategic measures, associated with the occurrence of deviations in the activities of subdivisions, etc.

Ensuring investment activity of enterprises and increasing the efficiency of its promotion processes is ensured by program-target, organizational-legal, administrative, financial-economic, and institutional **methods**. Each method requires the use of appropriate **tools**.

Traditionally, all methods and, accordingly, promotion tools that underlie any organizational and economic mechanism are divided into direct and indirect (Voloshin, Shekhlovich, 2014; Tarakanov, 2016). In the mechanism for encouraging investment activity of enterprises, the state plays a leading role through the forms of direct and indirect influence on the investment attraction by enterprises, each of which is realized by means of specific methods and instruments. Direct ones include program-target methods and their corresponding tools, by which investment resources are allocated to the execution of a specific program or project. Indirect methods

that promote the creation of favourable conditions for attracting investment and releasing financial resources for investment needs should include financial, economic, and institutional methods and tools. The authors propose to associate administrative and organizational-legal methods based on their implementation tools and application specifics with mixed methods of promoting investment activity of enterprises. As a component of the organizational and economic mechanism for encouraging the investment activity of the enterprise, particular attention is required for:

**program-target methods**, which include: budget financing of priority investment projects determined by the state; state risk insurance of enterprises investing in priority sectors for the development of high-tech industries; government procurement of products of innovatively active enterprises investing resources in upgrading and modernizing the priority industries (**tools** – investment out of budget funds, subsidies, subventions, grants, government procurement, etc.);

**organizational and legal methods** are, first of all, legislative and statutory provision that guarantees the legal protection of investors' interests, ensuring the transparency and efficiency of the judicial system (**tools** – target investment programs, laws, regulations, and documents, which clearly define the guarantees of investor rights, precedents for settlement of investment disputes, competition laws);

**administrative methods** include the development of an effective investment development strategy of the country and its individual regions aimed at creating favourable conditions for investment activities and support of investors, the formation of an appropriate investment policy (**tools** – advisory support of investors, patent and licensing policy, etc.);

**financial and economic methods** include the formation of differentiated tax and flexible depreciation policies, creation of conditions for attracting non-traditional investment sources (leasing, crowdfunding, forms of venture financing, etc.), financial and credit methods of promoting investment activity of enterprises, simplifying access of enterprises to credit resources (**tools** – concessionary financing, lending and taxation; simplification of the procedure for attracting investment resources in the financial market; creation of development banks; and also prices, bonuses, rates, subsidies, tariffs, etc.);

**institutional methods** provide an opportunity for more intensive promotion of investment resources through the simplification of the interaction of formal and informal institutes and institutions – statuses, constraints, sustainable way of thinking, contracts, patterns of behaviour and decision-making, legal norms, rules, regulations, rights of individual social strata and groups, and other systems of ties between



subjects of investment relations (**tools** – facilitating the development of institutions of public control over the activity of state authorities in the investment sphere; transformation of the mental stereotypes of the conduct of economic relations).

**The regulatory support** for the organizational and economic mechanism for promoting investment activity of enterprises is the regulatory framework, determines the position of the subject of investment activity, establishes legal responsibility, and exercises control over the relations between the participants and the state.

The regulatory support in the sphere of investment activity includes the Law of Ukraine “On Investment Activity” that is aimed at ensuring equal protection of the rights, interests, and property of the subjects of investment activity, regardless of ownership, as well as effective investment of the Ukrainian economy, development of international economic cooperation and integration. The Law of Ukraine “On Protection of Foreign Investments in Ukraine” aims to protect investments, profits, legal rights and interests of foreign investors on the territory of Ukraine. The features of the regime of foreign investment in Ukraine were established by the Law of Ukraine “On the Regime of Foreign Investment”. The Law of Ukraine “On Special Regime of Investment and Innovative Activities of Technological Parks” defines the legal and economic bases for the introduction and functioning of the special regime of investment and innovation activities of technological parks and other legislative acts.

The peculiarity of domestic investment legislation is that certain aspects in the investment sphere, in addition to the above-mentioned regulatory acts, are also regulated by the provisions of the Commercial and Tax Codes and other legislative acts aimed at supporting the increase of investment activity of the Ukrainian economy.

**Information support** of organizational and economic mechanism for promoting investment activity of enterprises is a process of continuous targeted selection of relevant information indicators for internal and external users of the enterprise for analysis, planning of control, and preparation of effective management decisions in all aspects of investment activities. Information support is aimed at providing the necessary information to management personnel, owners of the enterprise, as well as interested users. Formation of information provision of organizational and economic mechanism for encouraging investment activity of enterprises, definition of content and composition of management information are carried out by means of detection and use of dependencies and regularities of behaviour of subjects and objects of investment processes; construction of information models,

the basis of which is structural-functional analysis, forecasting, and dynamic situational modelling.

**Staffing** of organizational and economic mechanism for promoting investment activity of enterprises is the training of staff in accordance with the needs of investment processes in the economy, as well as the continuous staff development in connection with the development and implementation of investment projects in the enterprise.

**Institutional support** of the organizational and economic mechanism for promoting investment activity of enterprises is a special kind of incentive of economic entities to manifest investment activity, which is formed through the establishment of certain rules (institutions) that allow regulating the economic behaviour of enterprises, as well as a set of certain alternatives, of which indicated actors make their choice.

The subjects of institutional support are state authorities of investment activity management, which perform functions of promotion and regulation with the help of institutional methods and tools, and using the system of ensuring the activities of various institutions affect the object of institutional encouragement – the investment activities of enterprises through the formation of a favourable institutional environment. State regulatory and administrative authorities of different levels define and form priorities, directions, goals, and tasks of investment development of the economy as a whole, its individual spheres and sectors. This is reflected in legislative, regulatory, and program documents (formal institutes).

#### 4. Conclusions

Thus, encouragement of investment activity of enterprises is carried out through the organizational and economic mechanism, which is a system of relations arising from the attraction of investments, the main elements of which are the subjects of investment activity, their purpose, a set of methods and tools, staffing, regulatory, informational, and institutional support on the basis of the principles of promoting investment activity in order to achieve a certain goal in the conditions of external and internal environment of the enterprise.

The determined organizational and economic mechanism for stimulating investment activity is based on the application of program-target, organizational-legal, administrative, financial-economic, and institutional methods and corresponding tools in resources allocation, which ensures target allocation of resources and maximum efficiency of investments. It allows investors to minimize investment costs, reduce risks when entering into an investment agreement, or more accurately estimate future revenues from project implementation.

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# METHODOLOGICAL BASES OF CLASSIFICATION OF SOCIAL RISKS

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**Abstract.** *The purpose* of the study is to develop methodological principles of classification of social risks in the context of requirements of social risk management. The risk is considered as possible occurrence of a risk of a negative state of a particular phenomenon or event, undesirable by the object. Social risks are proposed to be all risks arising in the social sphere. When analysing the existing solutions to the problem, classifying social risks according to the requirements of social risk management, the paper uses the following *research methods*: system approach, analysis and synthesis. *The research subject* – social risks in the light of their classification by certain characteristic features from the perspective of requirements of social risk management. Analysis of the application of hierarchical and facet methods for the classification of social risks is carried out. The use of a combined approach, i.e. when at some levels of classification risks are classified by using the hierarchical method, and at others – by facet one, is proposed. The necessity and sufficiency of 6 levels of risk division are shown. The 1st level of classification is directed to the division of a set of risks by nature and character of occurrence into macrolevel categories, accordingly, into natural, technogenic, economic, and social. The 2nd level is classified by factors of risk formation. These are risks of social policy, risks of stochastic nature of the formation, physiological risks, and behavioural risks. The 3rd level of classification – risks that are combined in the following forms by the sphere of activity: risks of reproduction of the population, employment of population, income and expenditure of population, living conditions and housing and utilities, education, healthcare, law enforcement, environment, risks of deteriorating social indicators when compared with other countries in the world. The 4th level of classification – by risk types, and the 5th – by levels of the hierarchy of public activity. The 1st, 2nd, and 4th levels are classified by the hierarchical method, 3rd and 5th – by facet method. The 6th level is facet with the horizontal distribution of risks into facets by different features. *Conclusion.* It is substantiated that obtained results arise from the provisions of economic theory and are in agreement with the acting organisational structure of societal life, which will contribute to creating better conditions for managing social risks. Social risk management begins from the definition of type and nature of risk, place and level of its formation, presentation of its determined characteristics. Here a need arises to divide a set of risks based on the defined signs and criteria into separate subsets. That is, a need arises to classify risks into more concrete groups with similar features. Accordingly, risk classification is important and necessary stage of social risk management. In practice, risk classification is carried out, as a rule, by using facet method when each facet includes an aggregate of risks with homogeneous values of this classification feature. Facet classification is single-level, that is, it does not stipulate for further division of risks into more detailed groups, however, the need for vertical hierarchical multilevel specification arises. The analysis shows that multilevel combined classification system when hierarchical method alternates with facet one satisfies the requirements of social risk management.

**Key words:** social risks, social risk management, methods of classification, social risk classification by sphere of activity, classification by levels of hierarchy of society.

**JEL Classification:** J11, J18, G17

## 1. Introduction

In the process of activity, people face a number of various risks. Studying theoretical issues related to the management of risks, including social ones, is a relevant scientific and practical task. Along with this, in addition

to the definition of nature, main characteristics and functions of risks, risk classification and analysis of the causes of their formation are of great importance. The research object is social risks in the light of their classification by certain characteristic features from the

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perspective of requirements of social risk management. The purpose of the study – to develop methodological principles of classification of social risks in the context of requirements of social risk management. The following research methods are used in the paper: system approach (for building the author's approach to the classification of risks as a system of interrelated elements), analysis and synthesis (when analysing the existing solutions to the problem, classifying social risks according to the requirements of social risk management).

Studies on the issue of social risks have been taking place for several centuries. Their appearance is associated with various factors: aggravation of capitalist competition and the spread of gambling, in particular, stock market games etc. However, these studies were able to obtain real scientific foundation only after philosophical works by G.W.F. Hegel (1770-1831) and sociology created by A. Comte (1798-1857) and E. Durkheim (1858-1917). They have developed a special view of society as an *emergent* system, i.e. a structure that has its own characteristic features different from features of subjects of society. A lot of works of foreign scholars are devoted to this research area: J. Galbraith, R. Holzmann, A. Giddens, M. Douglas, A. Mozgovaya, N. Luhmann, B. Norman, O. Renn, P. Slovic, O. Yanitskii, and others. They reveal the concept of risks and classify them according to various features and types, consider the issue of sources of "social risk" as a special variety.

In Ukraine, there are also many works devoted to the research topic, among which, first of all, we should note works of members of Ptoukha Institute for Demography and Social Studies of the NAS of Ukraine conducted under the guidance of Academician E. M. Libanova (Libanova, 2014, 2015; Nadruga, 2015). These works formulated the most weighed definition of social risks as threats that emerge and are manifested within the social sphere of society, have negative social consequences, influence the vital activity of individuals, social groups, and society as a whole. There are also presented some approaches to the classification of risks.

Among the developments of other scholars, one should distinguish works by (Libanova, Gorbulin, 2015; Vlasyuk, 2015; Donets, 2014; Shopenko, 2011) and many others. They study both general scientific topics and applied issues of risk classification. Other works are of general-theoretical direction, for example, the paper by (Beck, 2010) where the author proposes to consider all the sociology and economy through the lens of riskiness, or the work by (Topyshko, 2017) that offers to withdraw from strict mathematical methods and assess risks on the basis of the so-called theory of fuzzy sets, and so on. Now, studies are taking place by using methodological tools of such disciplines as: system theory; probability theory; mathematical theory of games; social theory; economic theory; prognostics; riskology, etc. Many educational publications are devoted to separate issues of determining the

essence and directions of classification of social risks. As a rule, simplified types of risk classification by some characteristic features are used there. In general, it can be stated that although a lot of publications and research studies are devoted to the problem of risk classification, such its aspects as a justification of approaches to the classification of social risks according to the requirements of social risk management remain relevant and extremely important for further research.

## 2. Essence and problems of classification of social risks

Risk as a complex phenomenon has many characteristics. More often it is defined as the danger of loss of resources or lack of income compared with the option designed for the rational use of resources. The risk is also defined as a conscious possibility of the risk of unexpected losses of expected profits, property, money in relation to accidental changes in the conditions of economic activity, adverse circumstances (Libanova, Gorbulin, 2015). The complexity and diversity predetermine the possibility of existing of several definitions of risk concept from different points of view depending on the research goals. Nevertheless, risks have their own features (all of them presuppose the danger of loss, come in the form of natural phenomena or events in society, etc.), which gives the author the possibility to give their unambiguous general definition in the form: **risks – phenomena or events, the probable or foreseen occurrence of which will lead or may lead to negative consequences**. Such a definition is most general and to a great degree corresponds to the concept of risk management, which will contribute to more effective management of risks. The most widespread category of risks is social risks that affect the level and quality of life of the population. Their concept can be formulated in the following form: **social risks are risks that appear in the social sphere of society**. Or a more complete definition – **social risks are phenomena or events that appear in the social sphere of society and the probable or foreseen occurrence of which will lead or may lead to negative consequences**.

In the majority of works, the following essential features of social risks are distinguished:

- differentiation (social risks are assumed by the individual, separate segments of the population or society as a whole);
- the probability of occurrence;
- the inevitability of losses (social risks initiate problems that cannot be completely excluded, solved but only minimised, managed with one or another degree of effectiveness);
- social responsibility of all social and professional groups of society (social risk management is successful only along with effective partnership, interested cooperation of all the participants of this process).

According to the results of conducted analysis on nature of occurrence and manifestation, the following characteristic features of social risks also can be added:

- a) social risks arise in the social sphere. Natural, technological, and economic risks generally affect the state (budget) and particularly individuals as the loss of property, health etc.;
- b) formation and level of influence of social risks to a great extent depend on the acting system of social policy and manner of implementation of its main categories;
- c) social risks have risk objects and subjects;
- d) risks of social policy for risk object may be both negative and positive (almost all researchers, as a rule, consider negative results of risks only);
- e) risks of social policy and behavioural risks provide for several options for making a decision;
- f) in case of failure of risk option realisation, risk object suffers additional losses.

There are a lot of approaches to the classification of risks differed both by classification features and by aims and objectives of the study. So, for example, **by the area of formation** (natural, technogenic, economic, and general civil), **by the scale of action** (universal and special), **from the perspective of risk object** (by its manifestation for separate population groups), **depending on the probability of occurrence and cyclical nature of human life** (planned, predicted, unexpected). In addition to such a classification, there are many other its types, which are systematised in Table 1.

Such a division is acceptable only for preliminary analysis. In the event of the necessity of in-depth analysis, its disadvantages are:

- chaotic determination of classification features in the absence of a unified approach;
- different notions of the term of social risks when it means not all risks arising in the social sphere but only those covered by social protection;
- most of the classifications are designed to divide economic risks by reference to the general category "socio-economic risks" that do not always correspond to the requirements and essence of social risks;
- existing classifications do not correspond to the requirements of social risk management in terms of dividing risks into similar groups in order to determine management methods.

Accordingly, for a more detailed, essential analysis and development of measures of management of risk management tools, it is appropriate to investigate approaches to the classification from the perspective of economic theory, which considers classification as a system of distribution of objects (goods, phenomena, processes, concepts) into classes according to certain feature and research objective.

### 3. Methodological approaches to the classification of social risks

Hierarchical, facet, and descriptive methods of object classification are distinguished in economic theory. **The hierarchical classification system** is built as follows: the initial set of elements is the 0 level and is divided according to the selected classification feature into classes (groups) that form the 1st level; each class of level 1 in accordance with its characteristic classification features is divided into subclasses that form the 2nd level and so on.

Table 1  
**Classification of social risks by various features**

Classification feature	Division of risks into classification groups
By nature of causes	Intentional, unintentional
By the time of formation	Retrospective, current, perspective
By factors of formation	Political, economic
By place of formation	External, internal
By consequences	Pure, speculative
By area of formation (nature of activity)	Business risks: production, commercial, financial, insurance risks; and also occupational, investment, transport and other risks
By hazard type	Technogenic, natural, and mixed
By level of formation	Macro, meso, and micro level
By degree of definiteness	Known, foreseeable, unforeseeable
By stages of formation	Project, planned, actual
By degree of reasonableness	Reasonable, unreasonable
By degree of potential losses	Tolerable, critical, catastrophic
By the scale of consequences	Global, regional, local
Depending on the form of impact on society	Direct, indirect
Depending on the probability of occurrence and cyclical nature of human life	Planned, predicted, unexpected
By possibility of prediction	Foreseeable, unforeseeable
By duration	Short-term, long-term

Source: systematised by the author

The **facet classification system** allows selecting classification features independently as from each other, so from the semantic content of the classified object. Classification features are called facets. Each facet includes a set of homogeneous values of this classification feature. The classification procedure consists in assigning to each object the corresponding values from the facets. In this case, not all facets can be used, but only some that are characteristic of this feature.

The **descriptive classification system** is designed for the organisation of information search, maintenance of thesauruses (vocabularies). It is especially widely used in the library search system. The essence of this classification method is as follows:

a set of key words or phrases describing a particular subject area or a set of homogeneous objects is selected. And among the keywords can be synonyms; the selected keywords and phrases undergo normalisation, that is, from the set of synonyms one or several most used ones are selected; a dictionary of descriptors is created, that is, a dictionary of key words and phrases selected as a result of the normalisation procedure.

The existing classifications of social risks are usually limited to the facet method. In this case, the classification is carried out on the basis of only individual, arbitrarily selected and clearly visible properties of objects. Hierarchical classification is based on the division of risks into individual characteristic risk groups, followed by their division into types with more detailed features, i.e. groups combine specific types of risks by the essential feature of this group. Unlike the facet, it is based on the full understanding of the essence of the objects being classified, and is not just identifying, but identifying-explanatory. It explains the common characteristics of the classification groups and the nature of the relationship between them. The detailing can be multilevel, in the form of a “tree of signs”, which are united into a single system. Fig. 1 shows the classification scheme by hierarchical and facet methods. As an example, there is shown the division of the set of risks into subclasses based on the category into

natural and others (it can be technogenic, economic, etc.). Further, the natural risks are divided into smaller groups by their feature (for example, by the factor of occurrence), and so on.

The same set of risks can be classified by a facet method into two or more types, for example, by scale of consequences into global, regional, and local. Or the same set can be divided by another sign. Depending on the purpose of the classification, the researcher or the manager chooses the appropriate method.

**4. Social risk classification according to requirements of social risk management**

The main requirement of social risk management in relation to the classification of social risks is their detailing to a level that would provide the possibility of its unambiguous definition for the analysis and selection of the model of risk management. The general scheme of the proposed combined classification of social risks is shown in Figure 2.

**5. Social risk classification by categories of the formation**

Although all types of risks are diverse, by a set of features they can be grouped into macro categories. The categories should be understood as grouping at the macro level of risks by essence, factors, nature of the occurrence, etc. In literary sources, the following categories of risks are usually distinguished: natural, technogenic, domestic, socio-political, technical, economic, climatic, environmental, political, socio-economic, etc.

Almost all lists include the category of natural risks associated with natural phenomena. Sometimes the climatic risks are isolated, although they are also natural, and therefore it is not meaningful at the macro level to allocate climatic phenomena as a separate category. Technogenic and technical risks have uniform factors of the formation. In addition, they are prevented by similar methods. Accordingly, it is advisable to combine them into one category – technological risks. Socio-political,

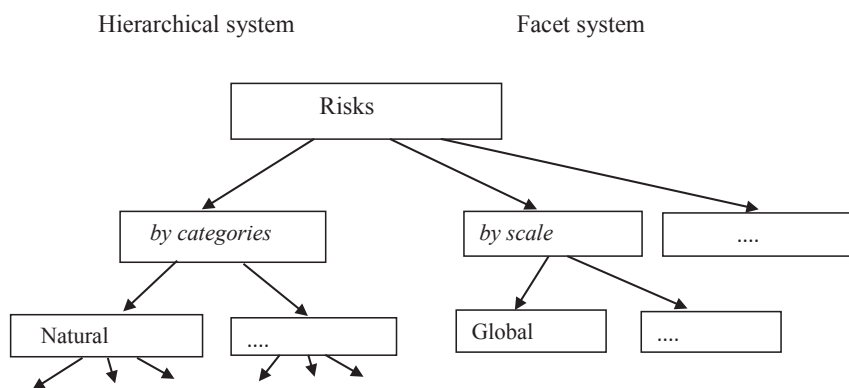


Figure 1. Scheme of risk classification by hierarchical and facet methods



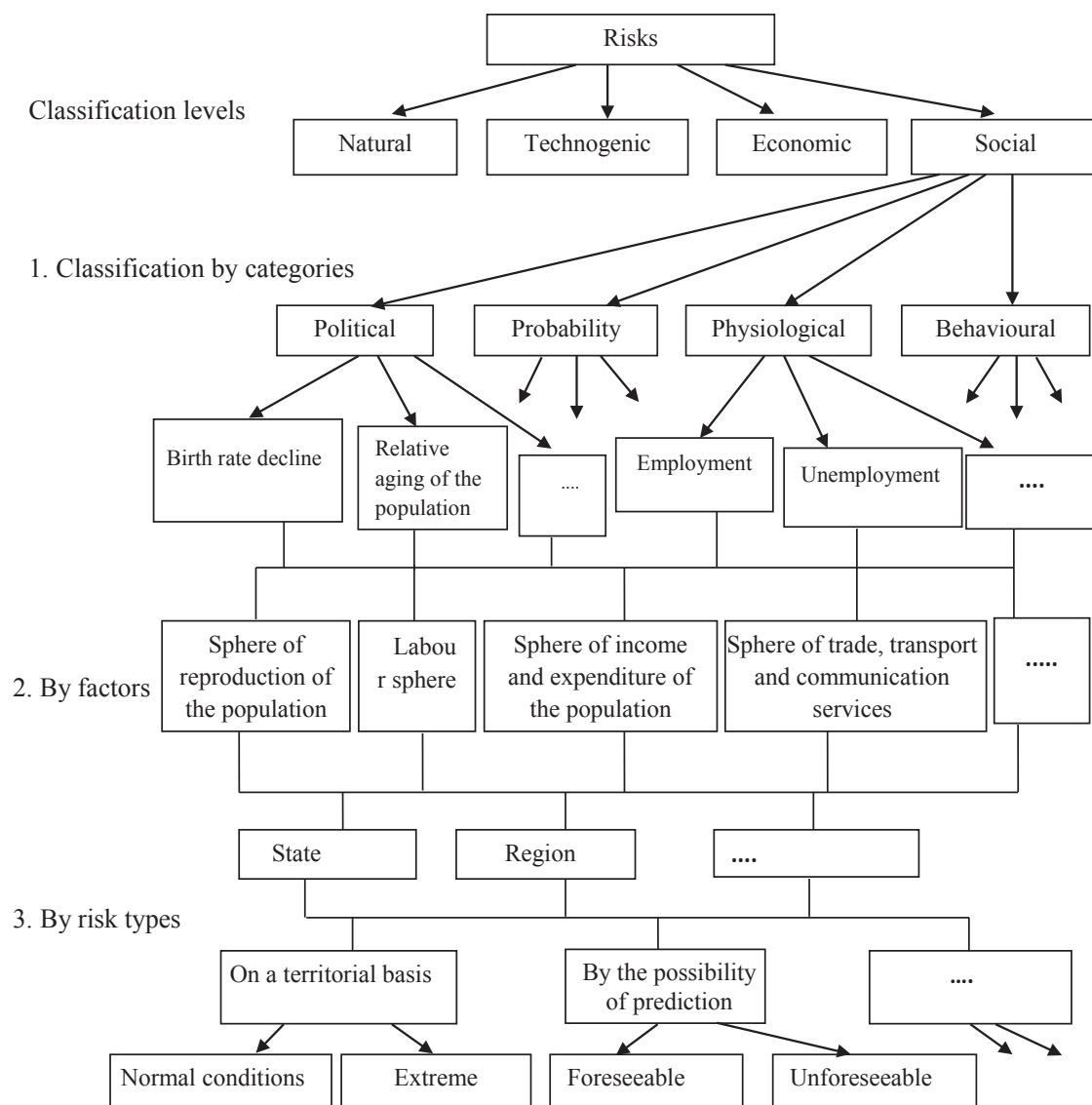


Figure 2. Scheme of combined classification of social risks

Source: developed by the author

domestic, and socio-economic types of risks cover the risks arising in the social sphere of life of society and in the production of goods and services. They are distinguished both by the sphere and the causes and factors of origin, and the feasibility of their independent research is not in doubt. That is, in the list, there should be separate categories – economic risks and social ones. Political risks are the risks generated by the socio-economic policy. It is quite clearly divided into economic and social policies. Accordingly, the risks of socio-economic policy should be divided into economic and social ones and added to the categories of economic and social risks respectively, the more so they differ in methods of prevention or minimization. The analysis conducted shows that all risks by nature, causes, character, and factors of their occurrence should be divided into natural, technological, economic, and social.

### 6. Social risk classification by factors of the formation

The analysis shows that on the basis of the probability of occurrence, sources of origin, and nature of the action, social risks should be classified into the following groups: social policy risks, risks of probability type, physiological risks, and behavioural risks. The classification of risks by categories, factors of formation, and types of risks is given in Table 2.

Risks of social policy are related to risk decisions of subjects of social policy. These are risks arising in the sphere of services (education, culture, healthcare, public utilities, transport and communication, etc.), demographic and social risks (many children, single-parent family, orphanhood), environmental risks, etc.



Table 2

**Types of risks by categories and factors of the formation**

Category of risks	Causes of risks	Types of risks
<b>Natural risks</b>	<b>Natural and climatic phenomena</b>	earthquakes; cyclones; hurricanes; floods; tornadoes; landslides; climate change; volcanic eruptions; soil erosion; drought; fire, epidemics, etc.
<b>Technogenic risks</b>	<b>Accidents, service deficiencies, errors</b>	transport accidents and catastrophes; accidents at NPPs and TPPs; accidents at chemical combines; accidents in gas and water supply systems; technogenic pollution of the environment; design errors; errors in the manufacture of objects; false actions of the personnel; poor service; low-quality repair; physical wear of equipment, etc.
<b>Economic risks</b>	<b>Subjects of economic policy</b>	production risks; transport risks; commercial risks; trading risks; financial risks; risks of inflation and deflation; currency risks; investment risks; liquidity risks; business risks, etc.
<b>Social risks</b>	<b>Social policy of society</b>	risks of population reproduction; unemployment risks; risks in the field of social services, etc.
	<b>Security policy</b>	temporary or permanent loss of labour capacity; labour injury; loss of a breadwinner, etc.
	<b>Physiological phenomena</b>	age; birth; death; disability, etc.
	<b>The behaviour of an individual, group of persons</b>	behavioural risks of individuals, groups, associations of persons; alcoholism; narcotic addiction; corruption; theft; street crime; poverty; mass protests, etc.

Source: developed by the author

*Security policy risks* – risks that occur accidentally in the social sphere as a result of non-compliance with labour protection requirements or violations of established safety rules (labour injury, temporary or permanent disability, occupational disease, etc.).

*Physiological risks* are risks, the causes of which are physiological reactions or properties of an organism of a particular person (birth, pregnancy and childbirth, old age, death).

*Behavioural risks* – risks, the causes of which are decisions and actions of specific people acting as independent persons. They can be both motivated and non-motivated decisions of individuals or groups of individuals. These include alcoholism, drug addiction, corruption, crime, mass protests, etc.

The presented division of risks meets the requirements of risk management in terms of determining the methods of risk management that can largely reduce their consequences.

## 7. Classification of social risks by types

This level is classified by the hierarchical method. It provides for the division of each group of risks, which is determined by factors of formation, into separate risks included in this group. So, for example, in the group of physiological risks, there are risks of old age, death, etc. The logic of interaction and interrelation of the main categories of social policy shows that the basis for defining the spheres of social risk formation should be the signs of the corresponding spheres of social activity, that is, the part of an economic activity that serves the specific social needs of society.

List of spheres of activities is widely used in modern economics. It is, for example, the classification of economic activities (KVED 2010), chapters of statistical reporting (annuals of State Statistics Service of Ukraine) and so on. For conditions of social risk management, it is appropriate to take the division of the social part of annuals of State Statistics Service of Ukraine (for example, Ukraine in Figures 2017)

into chapters called “Population”, “Employment”, “Income and expenses of the population” etc. as the basis of such list of spheres. Clarifying a little the name and highlighting separately the sphere “Social Assistance”, social risks in the context of risk management should be divided into the following spheres of social activity:

- 1) *sphere of reproduction of the population;*
- 2) *labour sphere;*
- 3) *sphere of income and expenditure of the population;*
- 4) *sphere of trade, transport and communication services;*
- 5) *sphere of housing conditions and utilities;*
- 6) *education sphere;*
- 7) *sphere of healthcare;*
- 8) *sphere of law enforcement;*
- 9) *sphere of ecology;*
- 10) *sphere of the universe (comparison with countries of the world).*

Somewhat unusual in this classification is the allocation of the sphere of the universe. However, in conditions of growing globalization of the world, it is extremely necessary to compare the indicators of the state and dynamics of our state with the indicators of other countries. Such a comparison not only gives an idea of the current state of society but also directs development to use the experience of other countries. This level of classification is facet.

Social risks arise and are implemented at different levels of **social activity**: state, regional, local, etc. All levels of social activity and, accordingly, risks appearing on them, are in continuous interaction, are interdependent, and make up a single system. Nationwide social policy is implemented at the macro level and provides for the choice of social priorities, directions of the government and other subjects of social activity, targeted promotion of certain spheres, implementation of social and environmental programs, etc. At the regional level, there is a social activity, which is an integral part of the policy of socio-economic development of the state. Here are solved regional problems related to the development of

the society in the region. It is obvious that making risky decisions both at the state and regional levels requires not only prior attention but also the preparation of measures to prevent the occurrence of negative situations.

Local self-government bodies are now dealing with a significant part of the issues of education, healthcare, culture, housing and communal services, consumer services, etc. It includes support for the livelihoods of the weak members of society – the disabled, the elderly, single, displaced persons, etc. Naturally, there may be risks at this level too, so anti-risk measures to overcome their consequences should be foreseen.

As a rule, researchers and practitioners in their works are limited with three hierarchical levels of occurrence and formation of social risks: state, regional, and municipal (local). However, it should be noted that in addition to the listed ones, risks also occur at the level of corporations, various associations (it seems fair to say, at the level of different groups), at the level of particular individuals. Besides interstate levels of occurrence of social risks, in recent years, the external (world) level, where an intergovernmental social policy is formed and where appropriate risks arise, becomes more and more important. That is, the three-level system of hierarchy of occurrence of social risks has turned into a multilevel system. In this case, the list of hierarchical levels of social risks' formation should include:

1. *State level.*
2. *Regional.*
3. *Municipal.*
4. *Group.*
5. *Individual.*
6. *Global risks (interstate).*

In addition to 5 considered levels of classification, the need to divide risks according to other features may arise in practice. For example, the researcher or manager needs to identify risks by place or time of occurrence. In such a case, the 6th level of classification can be used where necessary features can be added in facet form. So, Figure 2 shows additional types of classification on a territorial basis and on the possibility of predicting the occurrence of risks.

Territorial risks constitute a special group. They concern the population living and working in usual or extreme, unfavourable natural and climatic conditions (northern territories, mountainous, arid areas etc.). Their activity is carried out taking into account features of territorial risks. This relates to the age of retirement, labour experience, insurance premiums, and the like.

According to the possibility of prediction, there are two groups of factors of social risk: foreseeable (actions that can be expected, evaluated, they are sufficiently studied by science, are subject to management) and unforeseeable (it is not possible to mark them on an a priori stage of a risk analysis, some may arise for the first time; this group of risks is most difficult to manage).

Risks of the first group can be felt, predicted, and marked for the future by studying, analysing the current situation, historical factors, as well as other indicators that

may be involved in the field of social activity. Unforeseen risks are not comparable. It is impossible to determine the time and probability of their active development and occurrence based on historical and other analyses.

Subjective and object risks are also distinguished. Subjective risks are the risks that arise in the decision-making process by the subjects of power. Object risks arise as a result of decision-making by risk objects (for example, an individual's decision to play casinos, etc.).

By the way, in the scientific literature, one can find classification of the segregation of residents by income, which expresses the probability of occurrence of risks of a certain level (Giddens): beggarly – 10.7%; poor – 13.7%; proto-middle – 46.7%; middle – 20%; wealthy – 9%.

Although classifications of the 6th level characterise risks only from separate perspectives, along with previous types of risk division they make good sense for a more complete identification of risks.

In conclusion, it can be argued that the proposed approaches to the classification of social risks more completely reflect the essence of this complex concept and will contribute to a better use of risk management methods in the process of social risk management.

## 8. Conclusions

1. Social risk management begins from the definition of type and nature of risk, place and level of its formation, presentation of its determined characteristics. Here a need arises to divide a set of risks based on the defined signs and criteria into separate subsets. That is, a need arises to classify risks into more concrete groups with similar features. Accordingly, risk classification is important and necessary stage of social risk management.

2. In practice, risk classification is carried out, as a rule, by using facet method when each facet includes an aggregate of risks with homogeneous values of this classification feature. The classification procedure consists in assigning to each risk the corresponding values from the facets. Facet classification is single-level, i.e., it does not stipulate for further division of risks into more detailed groups. However, in the process of social risks management, the need for risk division into separate groups arises followed by their division into groups with more detailed features. That is, the need for vertical hierarchical multilevel specification arises. The analysis shows that multilevel combined classification system when hierarchical method alternates with facet one satisfies the requirements of social risk management.

3. Study of the structure of social risk classification system showed the necessity and sufficiency of 6 levels of risk division. The 1st level of classification is directed to the division of a set of risks by nature and character of occurrence into macrolevel categories, accordingly, into natural, technogenic, economic, and social. The 2nd level is classified by factors of risk formation. The 3rd – by spheres of activity, the 4th – by risk types, and the 5th –

by the levels of the hierarchy of society. The 1st, 2nd, and 4th levels are classified by the hierarchical method, 3rd and 5th – by facet method. The 6th level is facet with the horizontal distribution of risks into facets by different features. The latter are determined by researchers or managers depending on the objectives to be achieved.

4. The expediency of social risk classification by spheres and hierarchical levels of social activity is explained

by the need to have risk characterisation from this perspective. Classification by spheres of activity indicates not only the place of risk formation but also the subject of responsibility, the state authority in the sphere of which there is a danger. Information on the level of the hierarchical structure of public life gives the specialists of risk management an insight into choosing a model to prevent its impact on the course of social activity.

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# ILLEGALLY-OBTAINED INCOME AS A STRUCTURAL COMPONENT OF SHADOW PROCESSES IN THE ECONOMY

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**Abstract.** The study of shadowing processes in the economy is an integral part of the methodological knowledge, aimed at forming the security environment of the world community, its development on the way to overcoming crisis situations in the economy, politics, and society. This being said, it is difficult to overestimate the role of the state in determining appropriate approaches to assessing the results of such activities, justifying the selection of certain current methods of influencing public relations in the economic field in order to ensure their functioning within the legal framework. Drawing empirical conclusions and recommendations in this article are aimed at substantiating the links between the result of economic activity and economic activity as such, which determines the characteristics of welfare and well-being of a person, his/her enrichment. Thus, the formation of a cognitive social link between human welfare, emotional factors, and the economic crisis situation in the state has a common denominator, which makes it possible to assess the level of economic development of the country as a whole, to identify processes of shadowing of the economy, provided that illegally-obtained income is determined in its structure. Coming up with "regulatory filters" that allow synthesizing the object (illegally-obtained income), at which measures for detecting and transforming it into the legal economic field are aimed, it is possible to achieve a real result in counteracting the shadowing of national economies. Certain measures currently being taken at the level of national legal systems in this area should be compatible with those adopted by the European Union and, at least, as stringent as other measures applied at the international level. The specified determines the necessity to search for optimal ways of defining the concept of illegally obtained income, its place and role as a structural component of shadow processes in the economy. *Methodology.* The solution to the set goal is realized using the cognitive potential of the system of philosophical, general scientific and special methods. Analysis and synthesis allowed identifying the signs of illegal income, the shadowing of the economy, counteracting the shadow economy, and forming the last concept. Methods of grammatical review and interpretation of legal norms contributed to identifying gaps and other shortcomings of legislation on problems of ensuring counteraction to the legalization (laundering) of illegally-obtained income, developing proposals for its improvement, in particular, regarding the specifics of defining the meaning of the concept of "illegally obtained income" in domestic legal framework, the relationship of this concept with other economic and legal concepts. The comparative legal method allowed determining the development directions for domestic normative acts in order to bring them in line with the generally accepted European standards.

**Key words:** income, shadow economy, shadowing of economy, money laundering, legalization of income, economic crimes, unlawful enrichment.

**JEL Classification:** E64, O15, P24

## 1. Introduction

Reducing the scale of the shadow economy is an integral part of the strategy of reforming any legal state of the world and a pledge of promoting a system of guarantees for the decent development of man and citizen. Achieving high social security standards with the recognition of the priority of balancing national

and individual interests, free economic development, is possible only on condition that each member of the society is aware of his/her role in preventing illegal activity in the sphere of economy and other areas that are recognized as components of national security of the country. This being said, it is difficult to overestimate the role of the state in determining appropriate approaches

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to assessing the results of such activities, justifying the selection of certain current methods of influencing public relations in the economic field in order to ensure their functioning within the legal framework.

In this regard, it is understandable that scientists from different countries of the world are interested in identifying such key indicators of the level of economic security of the country as the level of shadowing of its economy, which should be calculated based on generally accepted methods, taking into account the peculiarities of the formation and development of national economic and legal doctrines.

Undoubtedly is a provision formulated by the Nobel Prize winner D. North who devoted a series of papers to the analysis of transformational economies of post-Soviet countries, regarding the fact that the economy and finances of countries that adopted formal rules of the game, developed under other economic and financial systems, were doomed to failure from the very beginning. Moreover, the so-called "shock therapy" and hasty, unconsidered privatization destroyed not only the old (planned) economic system but also the main motivational incentives for development, led to unprecedented corruption at all levels of power and criminalization of society. The most acute contradictions have appeared in the institutes of financial and credit sphere, which caused high rates of inflation and galloping depreciation of national currencies, imbalances of state budgets and balance of payments, and were accompanied by the collapse of investment programs and a high level of shadowing of the national economy (Savych, 2014).

Recognizing the state of economic shadowing as an indicator of economic security, it is obvious that the task of determining the structure of the economy's shadowing is also determined, taking into account the changes and trends of macro- and microeconomic processes. At the same time, it is indisputable that the definition of the content of each structural element should be clearly defined, which will ensure the quality of observation, analysis, relevant calculations, and the authenticity of the results. Such a definition needs to be consolidated at the level of a legal act.

## **2. Identification of signs and structural components of the shadow economy**

According to the said thesis, it should be noted that in Ukraine, the definition of the shadow economy is proposed in the Methodological Recommendations for Calculating the Level of Shadow Economy, approved by the Order of the Ministry of Economic Development and Trade of Ukraine № 123 as of February 18, 2009. In this by-law, the shadow economy is recognized as the economic activity of an economic entity that is not registered in the established procedure, which is characterized by minimizing the cost of production of

goods, performance of works, and provision of services, evasion of taxes, fees (obligatory payments), statistical questionnaires, and submission of statistical reporting, the result of which is a violation of the established norms (the level of minimum wage, the length of working time, conditions and safety of work, etc.) (Order of the Ministry of Economy of Ukraine № 123, 2009). Such a definition generates many discussions and observations on the deficiencies of the formulated features, which do not allow specifying, which of them are key, which will allow distinguishing such activity from other economic activities. Moreover, if we assume that the main characteristic of the shadow economy is economic activity itself, then it would be logical to expect methods of calculating the level of the shadow economy on such a basis in the said document.

However, the first of these methods, called "direct" and the one used to calculate macroeconomic parameters of the shadow economy, relates to the calculation of the level of the shadow economy by the method of "population expenditure – retail trade turnover" and is to identify the existence of an excess of consumer cash expenditures on the purchase of goods over the total volume of sales to the population by all economic entities in the legal sector of the economy (Order of the Ministry of Economy of Ukraine № 123, 2009). This method is based on the comparison of specific indicators of "cash expenses" and "amounts of monetary turnover", which leads to the conclusion that the amount of the excess of costs relates to such characteristics of economic activity as shadow. The analysis of other methods also allows us to conclude on such a necessary sign of the shadow economy as a "result" of economic activity, which in fact is the main goal of the implementation of such an activity and an indicator that allows setting the volume of the shadow economy. Accordingly, the following characteristics of economic activity: "unregistered in an established manner" resulting in "violation of the established norms" should be extended in relation to the description of its results. As a rule, such results are referred to as "revenues", "funds" and so on.

One should agree with the thesis that the scale and conditions for realization of certain types of economic unregistered activities, which in most of the still valid laws and regulations and scientific works are attributed to the so-called "productive part" of the shadow economy, are to be substantially modified today. Actually, it needs to be reviewed, especially in the theory, what exactly should be attributed to this "productive part". Previously, as an example, the results of households, tutoring, etc. were often presented. Today, such economic activity is regulated and its results make up a significant part of the population's income (Tylchuk, 2017). Among the factors hampering growth in countries such as Ukraine, Kazakhstan, Brazil, Russia, the World Bank names badly deteriorated household balances. Also, the World Bank pointed to a transport blockade of uncontrolled

territories in the Donbas, which led to weak data of industrial production (The World Bank has improved the forecast of Ukraine's GDP growth in 2018).

Accordingly, it is possible to determine economic performances of households as a part of the shadow economy only if it is implemented in violation of legal requirements. Such violations may have signs and be qualified as: civil, property, disciplinary, administrative, criminal. Depending on the composition of the offense to be established, measures are taken to influence the offender concerned. Actually, for the specified types of offenses, it is proposed to carry out gradation of measures of influence in order to stop the spread of shadow processes in the economy. The most widespread among them are: measures of property liability/liability for damage, administrative influence, including administrative responsibility, the most severe are measures of criminal law influence, involving the bringing of persons to criminal liability.

It should be noted that some scholars point out that the shadow economy – the economic activity associated with tax evasion, the types and methods of tax evasion are both forms and ways of concealing the “shadowing” of activity (Nesterova, 2008). Others – focus on the requirements of the United Nations System of National Accounts (1993), according to which the economic activity is an activity that meets the following requirements:

- firstly, it is carried out with the aim of obtaining an economic benefit from the production and sale of goods and services;
- secondly, the activity is possible if there is a certain solvent demand for the goods and services being produced;
- thirdly, all agreements between sellers and buyers are concluded by mutual agreement (the United Nations System of National Accounts, 1993).

Accordingly, it is proposed to exclude criminal activity and its results from the shadow economy, arguing that there is no sign of voluntary agreements between entities, which is contrary to the recognition of such activity as an economic one (Cheremisina, 2007).

This thesis once again indicates the absence of a single approach to defining the concept of “shadow economy”, as well as its structure, methods of calculation, related to the complexity of the phenomenon, the peculiarities of its genesis in different countries. However, summing up the numerous discussions, the attention is drawn to the need to consider that most of the program documents, reports from both domestic and international experts, international monitoring organizations contain provisions that the shadow economy is the basis of a complex, organized multilevel system, which includes money laundering, and the whole shadow infrastructure that provides for its functioning (legislative, judicial, political, ideological, cultural, ethical, system of values and codes of conduct) actively influences the state of the shadow processes.

As an example, the following data is available: as of May 2013, according to estimates by the international association OXFAM, losses in the form of tax revenues to the budgets of countries around the world amounted to more than 156 billion USD, which is twice the amount needed to end poverty. Ukrainian companies do not actually trade in direct contracts with direct importers of domestic products and use offshore zones to generate profits abroad. From 2012 to September 2015, only four main trading countries with low tax jurisdiction (Switzerland, Virgin Islands, Great Britain, and Cyprus) account for about 64% of exports of cereals and oilseeds, as well as products of their processing, 44% of exports of ferrous metals and products of them, and 61% of exports of ore and energy products; the volumes of potentially lost taxes only in the area of trade in grain and oil crops from 2012 to September 2015, according to assumptions, amount to 1.5-1.7 billion USD that could be used to improve the socio-economic situation and innovative development of Ukraine (Kravchuk, 2016).

The above emphasizes the urgency of unifying the approaches to defining the concept of “shadow economy” taking into account the best ways to eliminate these inconsistencies, which lead to real inhibition of activities to ensure counteraction to shadow processes in the economy, in particular, legalization (laundering) of illegally obtained income, not only for the purpose of serving the national interests of Ukraine, but also of the whole world. In this definition, the characteristics of such features as economic activity and its results should be pointed out: income, money, etc. In terms of both the calculations and the formation of a system to counter the spread of shadow economic activity, it is required to indicate the unlawful nature of the activity, which leads to the formation of relevant results (revenues, funds).

### **3. Defining the state policy directions on the prevention of money laundering**

Each state determines the priority directions of ensuring that the said incomes fall into the legal circulation and bringing to justice the persons committed crimes in the economy by shadowing it. Studying the experience of foreign countries, it is possible to state that attention is paid to countering the legalization (laundering) of illegally obtained income.

Measures taken at the level of the national legal systems in this field should be consistent with those adopted by the European Union and, at least, as stringent as other measures taken at the international level. In this direction, subjects of national systems for counteracting shadow economy are guided, in particular, by the FATF Recommendations and the instruments of other international bodies engaged in combating money laundering and terrorist financing in organizing and providing the said counteraction.

As for other types of offenses (civil, property, disciplinary, administrative, financial), it is necessary to



state the absence of strategically defined approaches in the individual countries (including Ukraine) about the comprehensive impact on the persons who commit them.

In the aspect of taking into account the positive experience, one should point out that in the Republic of Belarus, the Law “On the Bodies of Financial Investigations of the State Control Committee of the Republic of Belarus” as of 16.07.2008 is in force that, among the tasks of the financial investigation authorities, provides for the protection of the interests of society and the state from criminal and other illegal encroachments in the sphere of economy, ensuring economic security of Belarus, investigation of criminal cases, administration of the administrative process in accordance with the competence of the bodies of financial investigations (Law “On the Bodies of Financial Investigations of the State Control Committee of the Republic of Belarus”, 2008). That is, attention is focused not only on crimes, as well as the counteraction to the legalization of the proceeds from their commission, but also on other types of offenses, which make up a significant part of the shadow economy.

It is worth mentioning also about the approach used by the policy maker of the Lithuanian Republic. It meets the requirements of the FATF Guidelines on Anti-Money Laundering and Anti-Terrorist Financing, while in the provisions of delegated legislation devoted to the characterization of financial investigations in the Republic of Lithuania, the possibility is provided without collecting data about the criminal origin of income, but having established that the property of a person whose value exceeds the amount fixed in the legislation, in particular, 500 minimum subsistence levels, is not proportional to his/her legal income, to decide on the launch of a pre-trial investigation, a suspicion of wrongdoing under Article 189-1 (Illegal enrichment), and the implementation of measures of procedural influence in order to ensure the confiscation of property or extended confiscation (Order “On Recommendations for Financial Investigations”, 2013).

#### 4. Conclusions

An example of another approach to ensuring the impact on the shadow processes, in relation to dealing with the proceeds received by an illegal but not criminal way, is the proposals and adoption of the Laws on their “legalization” – the introduction into official circulation. Such an approach is supported not by all scholars and ordinary citizens but is occasionally initiated and implemented.

So, we can quote suggestions from individual scholars and politicians in Ukraine regarding the so-called “legalization of income”. In particular, the authors of the draft Law “On Amendments to the Tax Code of Ukraine (regarding the legalization of property in connection with the voluntary declaration of property status and undeclared personal incomes)” indicate that in connection with the need to unshadow the economy of Ukraine in general and property relations in particular, return private capitals to the economy and fill the budget of Ukraine, the legalization of property should be introduced in connection with voluntary declaration of property status and undeclared personal incomes. The Institute for similar legalization of incomes (zero declaration, tax, economic, financial amnesty, etc.) since the end of the XX century is used periodically in many countries – the USA, Belgium, Germany, Italy, France, Sweden, Switzerland, Kazakhstan, Latvia, and so on. Usually it is implemented, firstly, with the purpose of establishing a sort of relationship between the state and taxpayers, and secondly, to increase budget revenues and increase the volume of legal investments into the economy (Draft Law, 2017).

The above proposals are not new, there have already been attempts of a similar nature; it is worth mentioning the “tax compromise” in Ukraine that did not bring the expected results. Therefore, the need for a strategic definition of approaches to the complex impact on persons committing crimes and other types of offenses (civil, property, disciplinary, administrative, financial) in the field of the economy, which results in the formation of incomes of illegal origin and increase in the size of the shadow economy, is urgent.

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# AUDIT AS A FORM OF CONTROL OF THE STATE FINANCIAL INSPECTION OF UKRAINE

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**Abstract.** *The aim* of the article is to review the audit as a form of control of the State Financial Inspection of Ukraine and to analyse its forms and types. *The subject* of the study is the audit as a form of control of the State Financial Inspection of Ukraine. *Research methodology.* The research is based on the use of general scientific and special-scientific methods and techniques of scientific knowledge. The dialectical method made it possible to investigate the definition of the audit as a form of control of the State Financial Inspection of Ukraine and the procedure for its appointment. The comparative legal method was used in order to compare doctrinal approaches to this issue. Interpretation of the content of normative legal acts of domestic legislation was carried out with the help of the normative-dogmatic method. These acts regulate the problem of appointment and conduction of the audit. The system-structural method was used for the study of the audit institution as a whole (system) with the coordinated functioning of all its elements. Methods of analysis and synthesis helped to study some parts of this institute to formulate further conclusions about its most optimal functioning. *Practical impact.* The analysis of types of audits, as well as their characteristic features, helped to develop recommendations for improving the procedure for conducting audits by the State Financial Inspection of Ukraine, as well as to identify problematic issues that require further consideration and research. *Correlation/originality.* In the research, there was made a proposal about audits, which are carried out by the State Financial Inspection of Ukraine and its territorial bodies. The proposal was to make them a form of forecasting control. It was recommended to qualify the fact of prevention the officials of the controlling body from carrying out the audit, checking or not providing the necessary documents for audit and verification as an administrative offense. A special attention was paid to the timeliness of the selection of explanations from the involved persons during the detection of offenses.

**Key words:** audit, form, control, State Financial Inspection of Ukraine, financial control.

**JEL Classification:** M42, M48

## 1. Introduction

The form of control is an external manifestation of concrete actions, carried out by the State Financial Inspection's bodies of Ukraine, for the realization of the tasks assigned to them. Forms of control are very different, as the main function of the State Financial Inspection.

Specific forms, in which control can be made, are set with the help of different regulatory and legal acts, depending on the type of control (departmental or under departmental): from laws to internal acts, which are extending exclusively to the system of bodies of the State Financial Inspection. Taking into account all the mentioned, we can make the conclusion that the legal regulation of the forms of state financial control of the State Financial Inspection of Ukraine and its territorial bodies includes a number of problematic issues. Their solution will increase the effectiveness of control

activities. Besides, we need to mention the fact that today the number of forms of financial control of the SFI of Ukraine has increased due to the allocation of the check of public procurement inspections. That is why many scientists pay attention to this mentioned form. This has led to the fact that many scientists did not pay the necessary attention to the most forms in this field. Particularly, we are talking about such a form as an audit.

## 2. State of research

Certain problematic issues of the forms of control of the SFI of Ukraine were considered only in the context of related issues. Such scientists studied these issues as: L. P. Bila, Yu. P. Bityak, G. V. Atamanchuk, A. M. Bandurka, O. M. Kurakin, A. F. Melnik, V. V. Novikov, O. P. Orliyuk, O. A. Pavlyukh, Yu. M. Starilov, V. V. Kopeichikov and many others.

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However, in spite of the considerable amount of scientific developments, in the legal literature, there is no comprehensive study of certain forms of control, which is carried out by the State Financial Inspection, especially we are talking about the audit.

That is why the aim of the article is: to consider the audit as a form of control of the State Financial Inspection of Ukraine.

### 3. Presentation of the main material

At the beginning of studying the main issue, we should note, first of all, that the audit is carried out to identify the facts of violation of legality, probability, and expediency. The financial and economic documentation, regarding the correctness of accounting, storage of resources and material resources, timeliness and completeness of reporting, are analysed during the audit (Voronova, 2006). In our opinion, such a description of the purpose and nature of control in this form significantly narrows the content of the phenomenon. And surely we should note that the definition of the purpose of the audit as the detection of violations of legality, probability, and feasibility is largely due to the design of item 2 of the Procedure for Conducting Inspections by the State Financial Inspection, Its Territorial Bodies, approved by the decision of the Cabinet of Ministers of Ukraine as of April 20, 2006 No. 550 (Kabinet Ministriv Ukrainy) (hereinafter – Procedure for Inspection No. 550). In this decision, it is stated that the audit “should ensure the detection of violations of the law, the establishment of guilty in their admission of officials and financially responsible persons.” As we can see, the obligation to detect violations is established and this fundamentally differs from the predictive nature of control. As we have noted, this very formulation of the question directly affects the direction of control activity, bringing the punitive function of control to the forefront and the efforts of controllers to identify the facts of violations, in order to determine the control measure effective under all circumstances. As it was proved, today it is necessary to change the purpose of the control. And such changes, we consider, should find their reflection in item 2 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy). It should be made in order to make audits, conducted by the State Financial Inspection of Ukraine and its territorial bodies, as a form of forecasting control. First of all, it should be aimed at developing the system, adjusting the measures, and if necessary (in case of detection of the violation) – establishing the perpetrators and bringing them to some responsibility.

There are such audits with the following features:

1. By content: they can be documentary and actual. Documentary audits can include an audit of various financial documents. During the actual audit, not only the documents are checked, but also the availability of cash and property.

2. During the period under review, audits can be frontal and selective. In the frontal (full) audit, the entire financial activity of the entity for a certain period is checked. The selective (partial) audit is a check of financial activity only for a limited period of time (Kapaieva, Liakh, 2004).

According to the criterion of control, L. K. Voronova in addition to full and partial audits also allocates complex audits, which are usually carried out by a group of specialists. They study a wide range of interdependent issues and make thematic (or targeted) revisions, which are aimed at clarifying certain issues, exploring a particular area of work (topics), a particular area of activity of the subject being examined or a particular type of operations. The scientist calls the cross-check as one of the subspecies of complex testing. It covers the financial and economic activities of several organizations or enterprises, related to each other by subordination relations (Voronova, 2006). We fully agree with the existence of these types of audits, but we consider that allocation of all four types, according to the audit criterion, is not totally correct. We consider that it is necessary to distinguish thematic and complex audits (and this is the point 3 among types of audits) according to this criterion, and frontal (full) and partial (selective) should be allocated by the criterion of the control period.

3. On an organizational basis: they can be planned (provided in the plan of work of the relevant body) (Kapaieva, Liakh, (2004); unscheduled (they are conducted to some extent, suddenly, out of plan, if there are important grounds established by the current legislation: in case of complaints from citizens or other information on violations of financial discipline, or oversight in work that requires urgent verification; or at the request of the competent state authorities) (Voronova, 2006). L. M. Kapayeva and M. S. Lyakh, according to this criterion, also distinguish complex audits, which are conducted jointly by several supervisory bodies. We believe that the selection of this type of audits should be carried out according to another criterion. Particularly, it is necessary to allocate such criteria for the distinction between different types of audits as the basis for conducting audits and subjects of financial control. Moreover, the allocation of this kind of revision is rather doubtful, because the analysis of paragraph 2.32 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy) indicates the coverage of the concept of a complex audit of a certain set of financial and economic activities of the object of control. It is unlike the audit, during which only certain issues of the financial and economic activity of the object of verification are checked (and this is paragraph 3). Therefore, it is expedient to distinguish between audits with the involvement of specialists and joint audits, which are conducted together with the other bodies of control. They differ from the audits carried out



exclusively by officials of the State Financial Inspection of Ukraine and its territorial bodies (this is the 5th type).

4. L. K. Voronova proposes to allocate such audits, according to the basis of the appointment as: repeated (they are conducted after a certain time after the initial financial audit, in the case when the audit process was defined as bad, or in order to control the elimination of the revealed violations. Such an inspection is carried out on the same issues and for the same period as the original one); additional (to identify issues that were not addressed before the initial inspection, and mainly – due to new circumstances) (Voronova, 2006).

We believe that the criterion for differentiation of these kinds of revisions is rather exact because, on the basis of the distinction, we can distinguish scheduled and unscheduled audits. The same types of data are allocated based on the necessity of assigning another, except for the primary audit, due to quality or new circumstances.

5. Based on destination, L. K. Voronova proposes to highlight such audits as a repeat (it is conducted after a certain time after the initial financial audit if it is recognized as poorly conducted, or in order to control the elimination of the revealed violations).

6. By place of conduct: audits can be field (carried out at the location of the object of control) and cameral (conducted at the location of the financial control body).

7. By the nature of the monitored indicators: the formal ones, which verify the correctness of the documents (for example, when it is necessary to determine the validity of signatures, the presence of corrections, the correctness of filling the requisites); arithmetic (they evaluate the correctness of mathematical calculations and taxonomy) (Voronova, 2006). Regarding the procedure for audits and the implementation of their results, as in the case of public procurement audits, planned audits are conducted on the basis of the audit program, which consists of two copies, with the handing of one of them to the object of control under the receipt (Clause 4-7 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy)). Unplanned audits have well-defined bases for conduction, without which audit out of the plan is not allowed. Particularly, such bases are introduced in Art. 11 of the Law of Ukraine “On the Basic Principles of Implementation of the State Financial Control in Ukraine” as of 29 January 1993 No. 2939-XII (Verkhovna Rada Ukrainy). Unplanned field audits of subjects of economic activity, regardless of ownership, which are not assigned to the controlled institutions by the mentioned Law, are carried out by the state financial control bodies by a court decision, adopted on the basis of a petition of the investigator, the prosecutor to ensure the investigation during the criminal proceedings. A public financial control body, prosecutor or investigator initiating an unscheduled outbound audit, submits to the court a written substantiation of the grounds for such an audit and the date of its commencement and

termination, and documents, which according to parts five and seven of this article proves about the origin of the bases for such an audit, and for the request of the court – they give other information (Poriadok provedennia perevirok orhanamy derzhavnoi finansovoi inspektsii Ukrainy).

One of the distinctive features of a planned and unscheduled audit is the announcement of their beginning of the control object. If during the conduct of a planned field audit, the subject of control reports to the control object one of the specified methods on the dates of its beginning and ending (at the same time, the planned field audit starts no earlier than 10 calendar days after the message control object is sent). But unscheduled audits are conducted without any notice (paragraph 8 of the Inspection Procedure No. 550).

In order to begin the field audit, officials of the controlling body and the involved specialists should be admitted to the objective. In the presence of the bases provided in the law, it is necessary for admission to show the direction and the copy of the judgment, which should be presented on a receipt (in case of unscheduled field audit by a court decision) (Clause 12 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy)). The direction for the audit should include the date of its issue, the name of the state financial control body, purpose, type, grounds, the date of the beginning of the audit and the date of its completion, the position, title and surname of the officials of the state financial control body that will conduct the audit. The audit direction is valid on the condition of the existence of the signature of the head of the state financial control authority, which is sealed by the state financial control body. A court decision on permission for carrying an unscheduled field audit, which copy is submitted to the object of control, it should include the bases for such an audit, the date of its beginning, and the date of termination. And in case of carrying out an audit of subjects of economic activity that are not covered by the Law of Ukraine “On the Basic Principles of Implementation of the State Financial Control in Ukraine” dated January 26, 1993, No. 2939-XII, to the controlled entities, there also should be a number of criminal proceedings, body conducting the pre-trial investigation, date and grounds for notification of suspicion of a criminal offense (Poriadok provedennia perevirok orhanamy derzhavnoi finansovoi inspektsii Ukrainy).

In this context, it is necessary to pay attention to the problem of legal regulation of counteraction to officials of the State Financial Inspection of Ukraine and its territorial bodies, and to specialists, who are involved in the audit, or their absence of access to the objects. The matter is that the structure of such offense as “impeding employees of the state financial control body in carrying out audits and inspections” is provided in Art. 164-2 The purchase of the AP, entitled “Violation of the legislation on financial matters” and it includes, in addition to the specified composition, five more.



From their number, four relate to the object of control of the event (accounting reports, accounting, etc.), one relates to the conduction of it (interference), and the last relates to the period after the control measure (rejection of measures to compensate the perpetrators for losses from shortages, wastes, theft and mismanagement). As we can see, the composition of offenses is composed in one article, but it should be resolved in some separate articles while specifying the objective side of such an offense as an obstacle. Particularly, it seems necessary to clearly state that the prevention of officials of the controlling body to carry out audits, inspections or non-provision of necessary for audit, and checking documents is among the number of actions that should be classified as an administrative offense: for today it is "Violation of legislation on financial issues", in the future, we consider it will be a separate article. If we talk about the audit, then the place and access to information, documents of the controllers should be provided to the objects. The audit in accordance with paragraph 16 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy), as well as the examination of public procurement, is carried out by two complicated content methods: actual or documentary verification. An actual check can include an inventory, inspections, and control measurement of the performed works, the correctness of use of raw materials and materials consumption norms, the output of finished goods and natural losses by organizing control starts into production, control analyses of finished goods and others of similar actions with participation of the corresponding specialists of supervisory authority or other bodies, enterprises, institutions and organizations.

In accordance with clause 18 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy), in case of detection of violations of the legislation, officials of the controlling body should require written explanations from the employees of the control object, who are involved in the revealed violations. Officials of the controlling body may require written explanations from the employees of the object of control in order to clarify the individual circumstances of the financial and economic activity of the object of control. Besides, they can also require information from other persons in accordance with the Law. We want to pay attention to the principled discrepancy of the control subjects in case of detection of violations of persons involved in violations, and other employees of the object of control. The audited officials are required to take an explanation from them when it comes to the involved persons. And this is logical in view of their further use in the case file of the violation. The timeliness of the selection of explanations will contribute to their objectivity. The lack of time for discussion and understanding and judgment of the revealed violation allows obtaining accurate information. And on the contrary, when the discussion took place, and the person had some time to think, then

explanations can differ radically from those, which were received by auditor's right after identification of the fact. Therefore, the obligations to collect explanations from all persons are quite logically available in a complex of powers of the body of financial control.

In contrast to this obligation, the right of the controller to collect additional information about the fact of the commission of the offense also exists. They can do it due to the selection of explanations from the employees of the control object or other persons not involved in the commission of the offense. Such explanations are extremely important regardless of the subject, who will consider and make decisions on drawing up the protocol, the opening of criminal proceedings, and further consideration of the case.

Separately we should mention the right to initiate the issue of extracting originals of financial and economic and accounting documents, which testify about the violation of the law. Besides, the object of control is not guaranteed their preservation and the possibility of their forgery is not excluded also (paragraph 20 of the Procedure for Inspection No. 550 (Kabinet Ministriv Ukrainy)). Such rights, as well as the obligation to take explanations, in the future, can ensure the possibility of proving certain persons in committing an offense (either criminal, or administrative, or any other) in the manner prescribed by law.

#### 4. Conclusions

Thus, the State Financial Inspection of Ukraine during making the control in the form of an audit, its results and conclusions are included in such act as a document, which officially formalizes the course of the control measure, its results and conclusions made by the subject of control. In this context, it should be noted that in practice there are some unusual facts when, during establishing violations or their features, the auditors do not carry out a proper set of audit activities. And, as a result, such facts are not qualified as a violation, and its amount is not calculated and accordingly, it is not presented to the guilty parties. And therefore, the violation can be mentioned in the act (certificate), but however, the responsible person is not identified and nobody deals with the return of the lost sums of money. There is also a practice of not well quality documentation of violations, ranging from elemental lack of references to violated legal acts and grammatical mistakes ending with illegal and unconfirmed conclusions. Sometimes, these mistakes make it impossible even to understand the essence of the statement outlined in the act. That is why, there is no doubt that only the competent, consistent, complete statement of information, which was received by the auditors during the control measure, contributes to the achievement of the objective of financial control. Therefore, managers have to pay attention to these issues constantly.

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# ESSENCE AND CONTENT OF CATEGORY “FINANCIAL INVESTIGATIONS” AND CONCEPT DEVELOPMENT AMID EUROPEAN INTEGRATION

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**Abstract.** The article carries out analysis of essence and content of financial investigations as one of the main countermeasures to shadowing the economy and, in particular, anti-money laundering. Features of the implementation of the FATF Recommendations and other international organizations regarding the legal and institutional support of conducting financial investigations in Ukraine and other European Union countries are determined. Systematization of scientific views on the definition of “financial investigation” and the practice of carrying out the relevant activities both in foreign countries and in Ukraine allowed formulating approaches to the unification of the term “financial investigation” in the national scientific format. *The methodological basis of the research* consists of general scientific and special methods and techniques of scientific knowledge, which are used as a single set, namely, the logical-semantic method, the method of convergence, and also the formal-logical method are chosen to define the concepts of “financial investigation”, “analytical research”, “anti-money laundering”, “interaction of subjects of the national system of anti-money laundering”, etc. The comparative legal method is used to study the positive foreign and domestic experience of institutional and legal provision of financial investigations in the fight against money laundering, as well as to analyse and characterize the requirements of international organizations regarding the implementation of European Union legislation in the domestic legislation on issues of the legal framework for anti-money laundering. *Practical implications* of the paper are to reveal and systematize problems to be solved by improving the domestic legal and regulatory framework for organizing financial investigations in the system of anti-money laundering measures, while the new principles of its formation proposed by the authors can be implemented in practical terms and result in improving the information and spatial format and enhancing the interaction of the subjects of ensuring national economic security.

**Key words:** economic security, financial security, state security, legal regulation, shadowing of economy, fight against corruption, legalization (laundering) of illegally obtained income.

**JEL Classification:** F52, H56, D73

## 1. Introduction

The organization of the work of subjects of national systems for combating crime and other economic offenses, in particular, the legalization (laundering) of illegally obtained income, terrorism financing, and proliferation of weapons of mass destruction, is constantly monitored and controlled by the Committee of Experts of the Council of Europe on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism – MONEYVAL. Experts of MONEYVAL determine the criteria for evaluating the technical compliance with each of the FATF Recommendations and the results, indicators, data, and other factors used to assess the effectiveness of implementing the FATF

Recommendations (FATF Recommendations dated 16.03.2012) by a country that is undergoing a certain round of mutual evaluations. In this case, the maximum compliance with the above recommendations for the introduction of measures to counteract the legalization (laundering) of illegally obtained income is required. Among such measures, an important place belongs to financial investigations.

In accordance with these recommendations, the term “financial investigations” means the study of financial affairs related to criminal activities for the purpose of: determining the extent of criminal networks and/or crime rate; establishing and tracking illegally obtained income, terrorist funds, or any other assets, which

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are subject to or can be subject to confiscation and submission of evidence that may be used in the course of criminal prosecution (FATF Recommendations dated 16.03.2012).

As scientists point out, financial investigations include measures to counteract plundering of state funds, cybercrime, corruption, tax evasion, money laundering, terrorist financing, trade in arms, drugs, people, etc. (Cherniei, 2017). Striving to ensure compliance with the obligations of countries regarding European integration, one should listen to Eberhard Schmidt-Aßmann's warning regarding the interpretation in accordance with the current law of European communities, in particular, the EU directives, which has already been recognized, however, given it, the preconditions and implications are still rather an uncertain instrument. It should cover all national legislation, and not only laws specifically adopted for the purpose of implementing a directive, and should also be binding not only for judges but also public administration bodies of the member states. All this makes sense in the policy of integration. However, here too, one cannot ignore some of the warning processes. These warnings relate to the fact that constitutional European law often uses very broad and uncertain in this sense terms. Instead, being bound by the law, in any case, implies a certain degree of justification. One cannot ignore the threat that the uncertain provisions of directives will be transposed to the national legislation and will cause the formation of discretionary powers of the subjects of law enforcement (Eberhard Schmidt-Aßmann, 2009).

## **2. The concept “financial investigation” in theory and legal acts**

The concept “financial investigations” has come into a modern lexicon and practice. As a general rule, it is a specific activity related to the study of documents and other sources in order to find out information about the turnover of funds, origin and establishment of property, etc. Such activity is carried out by various entities: financial intelligence, control and supervisory bodies, law enforcement agencies, consulting companies. So, putting one or another content in this concept, it is used by ordinary citizens, representatives of mass media, scientists, practitioners, it is mentioned in draft laws and regulations, which propose to determine the status of special subjects that will specialize in the specified types of investigations.

Some scientists believe that “financial investigations” as a procedural activity should be understood as the collection, consolidation, comprehensive consideration, study of essential data relevant to the case, the circumstances of the committed violation associated with the encroachment on the relations regarding the formation, distribution, redistribution, and use of monetary funds (financial resources) of subjects

of economic relations. Combining in this definition “procedural activity” which is a certain “hybrid” of financial control and work of law enforcement bodies with the classical definition of finance, we consider “violation in the financial sphere” as a movement of money outside the legal framework (Pimenov, 2003).

Other scholars point out that financial investigations should be considered as a practical (procedural) activity and as a scientific direction. Under the financial investigation as a procedural activity, they understand the collection, comprehensive consideration, study of the essential circumstances of the committed violation in the field of monetary relations that arise in the process of distribution and redistribution of the value of gross social product and a part of national wealth in connection with the formation, distribution, and use of monetary funds. At the same time, under financial investigations, they consider the direction of scientific research on violations in the financial sector that aims to develop an effective methodology, methods of prevention, detection, and investigation of these violations, as well as recommendations for building an effective financial system that basically prevents committing violations (Kondrateva, Goriunov, 2003).

Periodically, proposals are made, in particular, for the Action Plan of Ukraine to improve the national financial monitoring system by the results of Round 5 of the MONEYWAL assessment regarding the definition of the term “financial investigations” in national legislation. At the same time, certain members of the said Council on the Prevention and Counteraction of the Legalization (Laundering) of the Proceeds from Crime, Terrorist Financing, and Financing of the Proliferation of Weapons of Mass Destruction, objected to this proposal, substantiating this with the fact that one of the elements of the pre-trial investigation today is conducting investigative (search) actions, which in their content actually are a “financial investigation”. In this regard, the separation of the obligation to support financial investigations of pre-trial investigations is superfluous (Materials of the 5th Convocation of the Council meeting, 2018). These arguments are not indisputable, in particular, taking into account the experience of legal regulation of financial investigations by countries with the post-Soviet past.

For example, in the Republic of Lithuania, measures are actively being implemented to implement anti-money laundering standards and in Order of the Prosecutor General of the Republic of Lithuania No. I-73 as of 19 March 2013 “Recommendations for Financial Investigations”, the definition of the concept of financial investigation is proposed.

In accordance with the said legal act, a financial investigation is disclosed as a process of collecting information about the property of any form belonging to a person or related individuals and legal entities, agreements and financial transactions in order to find property possibly



obtained by a criminal or other illegal means or property of an appropriate value to ensure possible confiscation or extended confiscation or a possible civil claim, and to collect other information relevant to the investigation related to property transactions and financial transactions (Order of the Prosecutor General of the Republic of Lithuania, 2013). The same Order stipulates that a financial investigation shall be related and carried out in such types of investigation as: pre-trial, criminal intelligence, or other, in accordance with the law. Moreover, in contrast to the provisions of Ukrainian legislation, in which the concept of financial investigation and its relation to other criminal proceedings in general are not defined separately, the Order determines that the financial investigation is conducted in parallel with the pre-trial investigation, while the principles of procedural interaction of subjects who conduct a financial investigation and a prosecutor – procedural leader of the pre-trial investigation (Order of the Prosecutor General of the Republic of Lithuania, 2013).

In this approach, a reasonable understanding of the ratio of financial investigation and criminal proceedings is formed. It is recognized that these activities differ in content, direction (by object and purpose), and methodology, respectively, the concepts of “financial investigation” and “criminal proceedings” are not identical.

By formulating and consolidating the concept of financial investigations, one should consider the experience of countries where there is the active practice of financial investigations and their scientific and methodological substantiation within the scope of activities of economic entities. In particular, the service “financial investigations” is quite common in the field of consulting. Many consulting and audit companies have specialized financial investigative units, so-called “forensic” groups (Efimov, Bushueva). Financial investigations are carried out in the form of a retrospective verification of the company’s activities, estimation of losses and lost profit, a search of guilty persons, and collection of evidence by private organizations (Tylchuk, 2017). In particular, Kreston GSG is a representative of an international network in the field of audit and consulting services with resources of over 20,000 professionals in 108 countries around the world. It is appropriate that financial investigations involve the detection of facts of bribery and other corruption manifestations, misappropriation and dispossession of assets, falsification of financial reporting, theft of information, negligence.

It is equally important to understand the concept of “financial investigation” to clarify the concept used sometimes as synonymous to “forensic accounting”, which is revealed with a reference to the Webster Dictionary by combining the concepts of accounting and forensic medicine. As a result, this activity is disclosed as by methodologies in the field of accounting used for the application of the system of documentation and analysis of economic and financial transactions for resolving legal issues (Dedkov, 2004).

It should be considered that financial investigations are not tasked to cover the entire set of financial flows and financial information for verification, established rules and regulations. There is a task before financial investigations – by conducting a specialized study to identify and fix the financial component of the criminal activity. It may differ from the deviations found during the financial control, special complexity, intent, and concealment of traces of illegal activity. All of this implies the presence of a special methodology in the financial investigations, and also the active use of additional information sources, such as extended databases, results of operational-search and investigative measures (law enforcement agencies), the results of private detective activities and the practice of purchasing the necessary restricted information (company security and consulting services).

In this regard, interesting is the experience of the Republic of Belarus, where the Decree of the President of the Republic of Belarus as of 23.10.2012 “On Some Measures to Prevent Illegal Minimization of Amounts of Tax Obligations” is in force, which regulates the systematic conduct of measures to terminate pseudo-structures, include them to a special register, and bring their clients to the responsibility prescribed by law. This Decree discloses the concept of the Register of commercial organizations and individual entrepreneurs with an increased risk of committing offenses in the economic sphere, as well as criteria for assigning business entities to this register (Decree of the President of the Republic of Belarus as of 23.10.2012). Unlike this country, in Ukraine, until now, no decision was made on the compulsory general electronic declaration, the introduction of which was announced in March 2018. This would significantly contribute to narrowing the range of opportunities for money laundering.

### **3. Features of financial investigations in the study of intangible assets**

International experience shows that regulatory authorities should have sufficiently wide powers to exercise control over financial institutions, collect and transmit information about suspicious transactions. The effectiveness of combating money laundering is closely linked to the ability of regulators to access the necessary information, even if the law contains provisions on commercial and banking secrecy. Money laundering schemes are constantly being improved, and the reaction to the emergence of new forms of legalization through the length of the legislative process will be constantly late.

For example, money laundering schemes using such an instrument as intangible assets are usually quite confusing and intangible assets in such cases serve as a convenient tool for redistributing cash.

Since intangible assets are not physical, and the definition of their value is imperfect and non-



transparent, so operations with them can be a convenient tool for achieving various goals, including those used in various schemes for the legalization of illegally obtained income:

- in order to create the visibility of the legality of income (royalty) of individuals;
- for the withdrawal of funds to foreign jurisdictions;
- to reduce the tax burden on business entities.

In fact, the main weakness of intangible assets in such cases is the subjectivity of their pricing and their actual availability. In some cases, offenders complicate the schemes of money laundering with intangible assets, using financial instruments that mask the very nature of transactions or several additional intermediaries. It should be noted that such operations can be related directly to the very predicate crime and to money laundering.

Analysing this issue, it is necessary to pay attention to another instrument of money laundering, this is the establishment of facts of using the mechanisms of financial assistance to conceal illegally obtained income, here problematic issues appear in the course of collecting evidence base to establish the origin of funds legalized in the activity of economic entities of the real sector of the economy by providing financial assistance. It is advisable to provide for the possibility of prosecution not only for money laundering, even in the absence of a sentence for a predicate crime, as recommended by experts, but also for actions aimed solely at providing the legalization of illegal income that may be obtained in the future.

#### 4. Conclusions

The analysis of theoretical developments, as well as the provisions of certain laws and regulations regarding the definition of “financial investigation”, allows us to state that there is no single approach to its formulation. This can be explained by the following basic circumstances: a) features of national economic and legal doctrines; b) features of the formation of the national procedural, in particular, criminal procedural law; c) the selection of certain means of interpreting international FATF standards and their implementation into national legislation; d) branched sphere of practical application by many subjects with different legal status.

In this connection, financial investigation in countries with legal systems close to Ukrainian one is formulated as: criminal proceedings in cases of crimes committed in the sphere of economy and finance (i.e., criminal proceedings) or as an economic category used to designate measures of ensuring economic and financial security of enterprises, consisting of: due diligence, assets recovery, judgement enforcement, litigation services, bankruptcy fraud, corporate fraud investigation, forensic accounting and fraud.

Establishing the ratio of financial investigation and criminal proceedings, it is worth recognizing that these activities differ in content, direction (by object and purpose), and methodology, respectively, the concepts of “financial investigation” and “criminal proceedings” are not identical because depending on the purpose of conducting “financial investigation” it may include criminal procedural activities.

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## FOREIGN EXPERIENCE FOR FINANCING SMALL AND MEDIUM BUSINESS

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**Abstract.** *The aim* of the article is to study the peculiarities of the financial and credit mechanism of supporting small and medium enterprises in foreign countries with the purpose of identification of key areas for the development of financial and credit support for small and medium enterprises in Ukraine. *The subject* of the study is the foreign experience of financing small and medium-sized businesses. *Methodology.* The research is based on a comparison of financial and credit support of small and medium business in Ukraine and in foreign countries. The advantages and disadvantages of different support systems for small and medium-sized enterprises are determined on the basis of an analysis of the specifics of financing small and medium-sized businesses in Germany, the USA, the UK, Italy, Japan, and some other countries. The possibilities and limits of the application of positive foreign experience in this area are determined on the basis of a comparative legal study of certain provisions of Ukrainian legislation. The results of the study showed that the peculiarities of the financial and credit mechanism for supporting small and medium-sized businesses in foreign countries, which were studied, are as follows: the predominance of indirect support methods, provision of state financial help only on a competitive, turnaround, and paid basis; effectively functioning system of state guarantee of loans, which were provided to small businesses by commercial banks (guarantee from 60 to 90% of the loan); creation of a network of special banks, which serve small businesses at different levels; strong financial stimulation for small businesses in their innovation activity; stimulating taxation system and special depreciation procedure; creation of conditions for equal access for all entrepreneurs to information and consulting services (especially on taxation, lending, and insurance issues). *Practical implications.* The positive experience of financing small and medium business shows that the foreign practice of functioning of the financial and credit mechanism for supporting small business is not based on the fact that, on preferential terms, small enterprises can receive all the necessary financial and credit resources for their development and support small business at all costs. But this practice is aimed to create a favourable economic and legal climate that allows small businesses not only to survive but also to successfully develop. *Correlation/originality.* A comparative analysis of small and medium business financing systems is the basis for developing the most promising directions for the development of domestic legislation in this field.

**Key words:** financial and credit mechanism, small and medium business, venture financing, preferential taxation.

**JEL Classification:** O23, E52, H21

### 1. Introduction

Small and medium-sized businesses traditionally play an important role in the functioning of the economy of any country. Thus, the share of small and medium-sized businesses in developed economies usually exceeds 90% of the total number of operating companies. Small and medium-sized businesses are the drivers for introducing innovations both in production and in the service sector. Despite the highest technological flexibility, small and medium-sized businesses are more

susceptible to market fluctuations and crises, with no stock strength that is typical of most large enterprises.

The SME sector also has an important social function, providing jobs for about 75% of employees.

Against this background, it can be argued that small and medium-sized enterprises should develop and receive financial support from the state and credit institutions along with large enterprises. Small and medium-sized businesses should not be opposed to large enterprises. But the small and medium-sized

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business in difficult times experienced by most large enterprises can be a reliable source of budget revenues and a means of reducing social tension by creating jobs. In developed countries, the share of small and medium-sized enterprises loans in GDP is 13%, while in developing countries only 3% (Synoverskyi, 2016).

Since Ukraine can be considered a country with a developing economy, it will be appropriate to compare its indicators of lending to the SME sector with indicators of countries close to Ukraine in terms of economic development, such as Bolivia, Paraguay, Uruguay, Peru, Colombia, etc. (COSME).

As stated in the National Program for the Promotion of Small Business Development in Ukraine, the situation with the financing of small business requires the urgent construction of a non-bank financial and credit sector aimed exclusively at small businesses and self-employment. Consequently, the financial and lending support of small business aimed at should be aimed at:

- formation of a network of regional funds for supporting entrepreneurship and credit and guarantee institutions;
- development and introduction of effective credit and guarantee mechanisms of micro-crediting of small business entities;
- creation and support of financial institutions working for the development of small business (Zakon Ukrainy «Pro Natsionalnu prohramu spriyannia rozvytku maloho pidpriemnytstva v Ukraini»).

This should also be facilitated by the Strategy for the Development of small and medium-sized enterprise in Ukraine, which provides for the following steps in this direction:

- expansion of lending to small and medium-sized businesses by commercial banks;
- creation of conditions for the security of deposits;
- use of loan guarantee schemes;
- activation of the use of bills;
- activation of lending to non-bank financial institutions;
- reduction of informational asymmetry by conducting a register of credit histories;
- reduction of the financing gap for small and medium enterprises by providing leasing services;
- reduction of financing deficit of small and medium enterprises by providing factoring services;
- use of opportunities for venture capital, attracting funds from informal investors (business angels), voluntary pooling of resources for project financing (crowdfunding);
- expansion of sources of financing of subjects of innovative small and medium enterprises;
- export financing, insurance, guarantees;
- introduction of international standards of financial reporting for small and medium enterprises (Rozporiadzhennia Kabinetu Ministriv Ukrainy «Pro skhvalennia Stratehii rozvytku maloho i serednoho pidpriemnytstva v Ukraini na period do 2020 roku»).

For the successful introduction of optimal directions of financial and credit support of small and medium enterprises in Ukraine, a special attention is paid to the study of the features of the financial and credit mechanism in foreign countries, which determines the relevance of our research.

Problems of financing small and medium enterprises in the conditions of market transformation of the economy, determining its role in the economic development of the country were the subject of research by such scholars as A. Basiluk, M. Butko, Z. Varnalii, L. Voronin, V. Heyets, Z. Gerasimchuk, M. Kozoriz, V. Kredisov, A. Maslak, A. Melnyk, I. Myssuk, G. Reverchuk, A. Filipchenko, A. Chukhno, T. Chernyak, and others.

The purpose of the paper is to study the features of the financial and credit mechanism for supporting small and medium enterprises in foreign countries in order to identify key areas for the development of financial and credit support for small and medium businesses in Ukraine.

## 2. Presentation of the main material

Unlike Ukraine, international financial institutions are of great importance in lending to small and medium-sized businesses in Europe and in the world. So, the EU has a special program that provides for the distribution of financial assistance for small business lending through the European Bank for Reconstruction and Development, other European financial institutions.

In Europe, the European Charter for Small Enterprises adopted in 2000 is in force. The countries that joined this document consider small and medium-sized businesses as a key element of innovation and job creation. Countries are also committed to focusing on the following areas:

- education and training; creation of concessional terms for a quick start of business;
- ensuring access of small and medium-sized businesses to up-to-date information and technologies;
- creation of an adequate legal and tax base that promotes the development of small and medium-sized businesses (Pidtrymka rozrobky ta vprovadzhennia Yevropeiskoi khartii dlia malykh pidpriemstv v Ukraini).

The financing problem can be solved with the help of external sources, including through lending. However, there are also problems that hinder the development of lending to small and medium businesses in Ukraine. To such problems include:

- high risk of non-repayment of loans by entrepreneurs;
- "shadow" activity of subjects of entrepreneurship;
- the high cost of loans;
- tight conditions for obtaining loans;
- insufficient economic and legal literacy of entrepreneurs;
- the short term of use of a loan;

- the possibility of increasing interest in using a loan in unstable economic conditions, etc.;
- lack of start-up capital from entrepreneurs;
- lack of quality business plans;
- lack of credit history for start-up entrepreneurs (startups);
- the inconsistency of the financial statements of the entrepreneurs who worked under the simplified tax system, requirements of banks (in this case, it is possible to provide a loan as an individual, on bail);
- insolvency of some entrepreneurs;
- legal uncertainty in the microfinance market (Lomachynska, 2012).

One of the organizations that provide centralized financial support for small businesses in the United States is the Small Business Administration, which provides loans for the purchase of land, buildings, equipment, working capital, refinancing of existing debts and guarantees most of all long-term loans provided to small businesses programs in industry, wholesale and retail trade, services, construction, agriculture. In particular, it guarantees up to 90% of loans issued in excess of 155 thousand dollars and up to 85%, if the loan amount is not less than 750 thousand dollars. The term of a loan is usually 5-7 years if the loan is issued for working capital and up to 25 years if the loan is granted for the purchase of equipment or building. In order to create more accessible conditions, small businesses receive a loan of up to \$25,000. Small business administration is implementing microcredit programs.

The forms of financial support for small and medium-sized businesses in the United States include the following:

- measures in the field of taxation, which include the gradual reduction of tax rates and the reduction of tax progressiveness with a narrow tax base and a wide range of tax exemptions to ensure the inflow of investments;
- participation in the capital of investment companies and guaranteeing securities issued by them;
- venture financing.

Small business development is facilitated by the Innovative Development Program for Small Business, which involves allocating funds from the budget for research and development work to pay for contracts with small businesses. This program accounts for about 60% of the amount allocated by the state in the form of assistance to small businesses (Iusupova, 2001).

For small-business financial support, small business investment companies take the lead. Small business investment companies provide capital in the form of ordinary shares and continue unsecured loans to small firms that meet the investment criteria of these investment companies. Much attention is paid to the development of venture financing, as well as the development of franchising and leasing.

The instrument of financial and credit support of small enterprises is microcredit, which is used for solving such

tasks as replenishment of commodity stocks or stocks of raw materials, purchase of commercial and industrial equipment, repair of premises, purchase of real estate and vehicles.

Today, in foreign countries, small banks are involved in the financing of small businesses, which have significant advantages over large ones, because local conditions and local business are better known. Small businesses prefer to take loans directly from them, because it is much more convenient, and the personal role and the status of the owner of a small business in the local community play an important role.

The main priorities for supporting small and medium-sized businesses in the UK are helping start-up businesses, facilitating access to financial resources, improving enterprise management practices, developing the labour market, improving production processes, supporting innovative developments to create new products and services, and also the development of export opportunities for the small business sector.

The most important measures that ensure the achievement of the priority goals of small and medium-sized businesses include the following.

1. Assistance to start-up companies that provide free support at difficult stages of survival and formation in the form of joint consultations and guidelines that facilitate successful start-ups and the beginning of their activities.

2. Facilitating access to financial resources. A special place is the Innovative Financing Program, which focuses on providing financial support to small and medium enterprises that are involved in the development and commercialization of new innovative ideas that promote production growth, environmental protection, reducing carbohydrate consumption, saving energy and improving the competitiveness of the country, and also meet regional or national priorities. Assistance is provided to individual enterprises that are unable to meet the costs associated with the development of new products, services and technologies for:

- execution of research and development work, including protection of intellectual property rights, concept testing, marketing research, capital expenditures associated with the production of a prototype and a demonstration layout;
- involvement of partners, consultants, and patent attorneys who took part in research and development work;
- production of demonstration models of innovative developments with the use of new technologies;
- reduction of administrative costs when large companies implement innovative projects that bring great economic benefits and provide environmental protection.

3. Measures to improve the methods of management of small and medium-sized businesses, the search for specialists and the development of the labour market



are provided by the state program "Professional Development of Employees". Since April 2009, the system of state financial compensation for the costs of small and medium enterprises and individual entrepreneurs for training and advanced training has entered into force. This involves compensating entrepreneurs for the cost of mediation services, recruitment agencies, employers, and potential entrepreneurs who need a flow of highly skilled workers. These measures should provide the UK with a leading position in terms of skills levels in all sectors of the economy by 2020.

4. Improvement of production processes and an increase in their efficiency is one of the main tasks of the Government in order to ensure further sustainable economic development of the country. In this regard, the Government has developed a number of special programs for small and medium-sized businesses that provide grants and loans to small enterprises.

5. In order to develop and create new products and services that promote the competitiveness of small businesses and the national economy as a whole, the Government has developed a number of programs to provide financial assistance for the development of cooperation in the innovation field. Close cooperation in the implementation of research and development work between different enterprises and research institutes is the basis for the successful development of new technologies and products with their subsequent successful commercialization (Lebedeva, 2001).

The policy of supporting small business in Germany is based on the following principles:

- the state does not assume the initiative of realization of concrete economic projects, as this is the task of entrepreneurs themselves;
- the state encourages creative search, willingness to take risks and adaptability;
- protection against monopolistic pressure;
- indirect financial support for small businesses.

Financial support is provided at all stages of the development of small business, has a clear target and targeted character, which is determined by macroeconomic and social priorities, as well as combining different sources and measures of support.

Investment support of small enterprises is carried out, first of all, to meet the needs of enterprises in information and technological resources. Measures in this direction include economic and technical advice (financed from the state budget) both for start-ups and existing small enterprises, as well as measures for training and professional development of workers and managers of small enterprises.

Providing capital to enterprises and strengthening its economic power involves support of investments in the authorized capital (formation of initial capital at the creation of an enterprise), support of long-term investments in small business (in rationalization, modernization, expansion, transformation of production).

Credit support for newly created small businesses is carried out through the German Compensation Bank, which provides credit resources for investment purposes: for the creation or redemption of the enterprise (and related tasks during the first three years of the existence of a new firm), the redemption of an investment unit giving control over activity of the enterprise, formation of primary stocks, office equipment, etc. With the help of regional programs, lending to small enterprises focused on the production of goods and services of local importance is carried out.

The development of credit-co-operative support for small enterprises in Germany has been successfully developed. The financial basis of credit cooperatives is the own funds of small enterprises and savings of the population. Support for small businesses through the mechanism of credit cooperation allows mobilizing additional funds that were not involved in economic activity (Bryumer, 2001).

As we see, the foreign practice of functioning of the financial and credit mechanism of supporting small business is not based on the fact that, under preferential conditions, small enterprises provide the necessary financial and credit resources for their development and support small business at any cost, but to create a favourable economic and legal climate that allows small businesses not only to survive but also to develop successfully.

In world practice, the resources of various funds and grant funding organizations are a powerful source for the start-up and development of small and medium-sized businesses. An important condition is the fulfilment of the requirements of these institutions regarding the target direction and the use of funds received. Accordingly, small and medium-sized businesses should work on projects that are profitable funds and to share or give the results of developments.

In Italy, concessional long-term loans are practiced, for example, at 3-5% per annum at a market interest rate of about 15%. Enterprises can get an additional benefit of 20-30% of compensation for loan value when long-term loan repayment (Kuznietsova, 2012).

In the field of financial support, the example of the Czech Republic, which provides for the possibility of using for entrepreneurship several types of state subsidies, is indicative. First of all, these are direct grants and interest-free loans, as well as loans from commercial banks and tax incentives. Financial assistance in the form of tax breaks is very limited and is provided only to specialized industries, such as those using unconventional energy resources.

There are 4 small business promotion centres in Japan: central government, local authorities, big business, and independent small business associations. Small business support is provided at all stages of enterprise development: registration, formation, growth. To do this, use preferential loans and loans, various tax benefits, technical and advisory assistance, training, etc.



The peculiarity of the Japanese experience of financial support for small enterprises is the provision of irreversible financial assistance (subsidies) to scientific and technical programs (Erohin, 2008).

As the financial support of small businesses, the system of tax privileges is widely used: tax rates on small enterprises' incomes make up about 27%, and for large enterprises – at least 37.3%. As in the United States, venture funds are operating in Japan, with venture capital being directed to high-tech companies: microprocessors, software development, biotechnology, etc.

By studying the foreign experience of supporting small business, China has formed its own system. The share of small enterprises in China's GDP is about 60%. The Chinese government is actively supporting the development of small businesses in accordance with the principle of "seizing for the big, supporting the small." China's peculiarity is the provision of differentiated tax privileges depending on the category of enterprises.

In China, as in other foreign countries, there are state and commercial banks operating for financially-lending support of small enterprises with significant resources, minimizing and distributing risks through guaranteeing organizations. China also manages legal support for small businesses under the Law "On Stimulating the Development of Small and Medium Sized Enterprises in China". The main priority of the state in this area is the creation of favourable conditions for the activities of small enterprises if they meet the three criteria – meet public demand, increase employment, ensure the implementation of state sectoral policies (Arustamov, 2012).

The features of the financial and credit mechanism for supporting small and medium-sized businesses in the foreign countries considered are as follows:

- the predominance of indirect methods of support;
- providing state financial aid only on a competitive, turnaround, and paid basis;
- an effectively functioning system of a state guarantee of loans granted by commercial banks to small enterprises (guarantee from 60 to 90% of the loan);
- creation of a network of special banks serving small businesses at different levels;

- increased financial incentives for innovation of small businesses;
- incentive system of taxation and special depreciation procedure;
- creation of conditions for equal access for all entrepreneurs to information and consulting services (especially on taxation, lending, and insurance).

### 3. Conclusions

The analysis allows us to highlight the main features of the mechanism of support for small and medium enterprises. However, it should be noted that direct transfer to the domestic economy of the American, German or another foreign model of financial and credit support of small business is not entirely appropriate. The study of foreign experience allows us to identify the general features of financial and lending support mechanisms that should be taken into account in domestic practice, in particular:

1. Availability of special legal acts defining the objectives of the state policy and regulating the entire complex of support issues for small and medium-sized enterprises, including the establishment of tasks and functions of management bodies and mechanisms for their implementation, as well as a combination of legislative and economic measures aimed at creating common favourable conditions for the development of entrepreneurial activity.

2. Allocation of appropriations for the implementation of programs of support of small enterprises from the budget; use of stimulating tax instruments; creation of specialized financial, credit, insurance and investment institutes; application of various forms and methods of financing; promotion of loans and investments in the sphere of small business through state guarantees, insurance.

3. Availability of a developed system of specialized institutions that ensure coordinated implementation of the entire complex of tasks in the field of entrepreneurship support, as well as the interaction of state authorities of various levels with business associations (unions, small business associations, chambers of commerce and industry, etc.) for the purpose of accounting their positions in making decisions.

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# IMPROVING THE MECHANISM OF COLLECTING CERTAIN TAXES IN UKRAINE AS MEASURES FOR THE EUROPEAN MODERNIZATION: LEGAL ASPECT

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**Abstract.** The aim of the article is to study the methodological and theoretical principles of improving the legal regulation of the taxation system in Ukraine in the European integration context. Determination of the doctrinal basis for the implementation of the tax function of the state and its legal consolidation from the standpoint of the fundamental principles of the law allows carrying out a comparative legal analysis of taxation in the developed countries of Europe and the world (particularly indirect one). *Methodology.* The research is based on the theoretical and legal substantiation of the social content of tax activities in the state, and it is also based on the understanding of the dialectical relationship between tax processes and the functioning of social and legal systems in general. A systematic analysis of the tax activity of the state in the context of humanism, justice, freedom, equality, rule of law is carried out. On this basis, the legal nature of the regulation of the value-added tax is revealed. *Results.* The basic theoretical and legal bases of measures on improvement of the taxation system are determined as a result of the study from the position of its legitimation among citizens and stimulation of their purchasing power and development of productive forces of the Ukrainian economy. *Practical impact.* The definition of directions for perfection and humanization of tax legislation in Ukraine allows making a conclusion about the volume of the tax burden on the consumer and proposing optimal rates of value-added tax rates.

**Key words:** social nature and legal nature of taxation, equity of taxes, value added tax, tax pressure, optimization of tax rates.

**JEL Classification:** H21, H24, H26, K34

## 1. Introduction

The existence of state and law as an unalienable, most important, universal social institution is impossible without the finances and implementation of the tax function. Since the time of the emergence of state and law, society pays for its stability, and citizens pay for the security and non-conflict of their existence. With its development, the state began to accumulate funds not only for the maintenance of its apparatus and armed forces but also for social tasks. When the rationalist philosophical and legal reflection in Ancient Greek had appeared, then the question of the subordination of society and its members to the law and rules, but not to the arbitrariness of some individual rulers arose. Plato's statements about the rule of law, but not people are rather well-known, as well as Aristotle's statement regarding the subordination of citizens to laws as the main criterion of legitimacy (correctness) of the form of government (Kovalchuk, 2011). Aristotle paid a lot

of attention to the question of the equitable distribution of social resources, which main way of accumulation and increase at all times was a fiscal source. After all, it is the financial issues and the taxation problem – that is the issues, on which the citizen constantly contacts the state, judges it, perceives or does not perceive its legitimacy and justice. Problems of legal regulation of taxation and imposition of taxes were the driving force through the history of the state and the rights of developed European countries.

So, the legality of the bases of the taxation, a guarantee from any increase in fiscal pressure became one of the main goals of the English revolution and civil war of the middle of the 17th century (the establishment of taxes by representatives of the legislature in the parliament, and not the king's arbitrariness). One of the main reasons for the liberation war and the revolution of the second half of the eighteenth century in North America and the formation of the United States was an arbitrary

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increase and the imposition of taxes on the colonies by the English crown – stamp duty, the excise tax on tea and other goods. The so-called bourgeois revolutions over the next half-century, since the Great French Revolution, broke out as a result of the injustice of class feudal taxation. These revolutions had a protest against the injustice and the unlawful nature of taxation as one of the main factors.

## 2. The state of scientific research

Recognition and non-recognition of the state by citizens, its support or vice versa, protest movement, often are based on the effectiveness, social targeting of the tax policy of the state and its legal consolidation. Moreover, the civilizational peculiarities of any society are based on the understanding and perception of legal personality, particularly, in the field of taxation. Its extreme expressions are rooted in the history of the ancient Eastern society, collective, communal personality, subordination to collective, caste-ridden, and state legal personality. This tradition has gone through our time through Hinduism, Confucianism, the ideology of the Golden Horde and other eastern despots. Western tradition – is a developed individualism, individual legal personality, the value of a full personality, which is coming from the ancient world – that is full citizenship in the policies of ancient Greece and the development of private property and related property relations in ancient Rome (Kalynovskyi, 2008). Legal personality was historically formed not only in the field of state law and the existence of civil rights but also in the taxation field. Western tradition is the personality of the subject of taxation, oriental is the collectivity, community. Ukraine, after the annexation of its territory and the elimination of autonomy by the Russian Empire at the end of the eighteenth century, had differed by the prevalence of an inherited form of peasant land tenure with individual taxation. We mean that the western tradition of legal personality was more prominent. The subject of land use and, accordingly, taxation was the peasant community with its circular guarantee on the ethnic Russian lands. That is, there were mostly manifestations of the Eastern tradition (Holovko, (2006). However, in the eastern part of the Ukrainian lands in the Russian Empire, the land community as a land tenure subject also took place. The collapse of collective legal personality in the field of land management and taxation was the main goal of Stolypin's agrarian reforms of 1906-1911.

## 3. Presentation of the main material

So, at the beginning of the twentieth century, Ukraine had a stable legal tradition in the field of taxation, which was really close to European ones. That is why even today, in the conditions of the decisive and

responsible movement of Ukraine towards European community, its society has historic law-conscious and mental orientations, which were formed for centuries. These orientations were directed to the western tradition of tax perception and the legal basis for their collection. At the same time, measures of integration and reformation in the fiscal sphere should take into account all the peculiarities of the transitional period (today Ukraine can reasonably be considered as a social system of transitive states and rights (Matvieieva, 2015)). It is also important to fulfil the financial sovereignty of Ukraine in the context of improving its tax system and its legal basis (Bytiak, Yakoviuka, 2010). An intellectual and methodological discussion of the jusnaturalist and juspositivistic understanding of the law, including tax law, was taken place in Western legal tradition. This discussion has reached such a level of scientific compromises for today when even a positivist understanding of the legal world admits the existence and necessity of morality (Fuller, 1999), values in the law and the corresponding legal principles.

Taking into account the fact that the main source of formation of the revenue part of the state budget in Ukraine is taxes, we can say that the issue of legal regulation of taxation is considered to be the most urgent question. That is why, at the present stage, tax reforms and transformations take a prominent place in the processes of improving market relations. The process of restructuring the tax system of Ukraine, analysis of the peculiarities of legal regulation of taxes and fees gets a great importance. Except for actually legal and technical moments and aspects, it is important to realize the most common general principles of law, which are recognized either in Romano-Germanic, or Anglo-American type legal systems. In this article, we study the system of fundamental principles of law in terms of the concept of S. Pogrebnyak (Pohrebniak, 2008).

Today, in many studies of domestic legal science, we can observe certain remnants of the doctrinal legal understanding of the Soviet era, when the principle of humanism was not so important. The volume and tasks of this article do not require a detailed analysis of this issue, but we consider it necessary to start with it. However, the traditional primacy of justice has an anthropological character in the list of principles. That is why, the implementation of the principle of humanism leads to the fairness of the system of tax deductions, benefits and tax exemptions – the fact that, in the case of abuse and non-compliance, leads to a decrease in the legitimate rationale of the state and its legal system. And in practice, it leads to a variety of corruption violations. Traditionally, the principle of equity in tax law is expressed in proportional progressively proportional taxation and the establishment of taxes on luxury, and so on.

Equality is the principle and condition of taxation, which is enshrined in law. It is also connected with the fairness of taxes. The consistent implementation of



this principle makes the payer morally disciplined and confident that law-making and law-enforcement practice do not make unlawful exceptions to this principle and they do not allow that among subjects, particularly, in economic management or business, equal to each other, there is someone “more equal” (using the famous phrase of G. Orwell from *Animal Farm*). In our opinion, the principle of freedom is realized in tax law more indirectly. After all, paying a tax is a duty and not a right, and, at the same time, it is an important feature and characteristic of a free person, it is a manifestation of his freedom. However, on the one hand, it is the realization of freedom of social activity, primarily economic, that is, it is the implementation of social and economic rights and freedoms of man and citizen. Besides, if the right is legalized and provides freedom, and the state is an instrument and mechanism for its achievement (at least when we are talking about the rule of law with a developed civil society), then collecting of taxes is a material factor in ensuring this freedom of man and citizen.

A special attention is paid to the principle of the rule of law. A few of the general principles of law have received such varied, high-quality, and various scientific legal literature in recent decades. The ineffectiveness of determining its content in the formal-dogmatic field leads to a phenomenological characteristic, showing through manifestations and signs “an integral approach”, according to P. Rabinovich (Tatsii, Sviatotskyi, Maksymov, 2013). Among the eight main features of the principle of the rule of law, which were formulated by M. Kozyubrov, the establishment of a democratic, humane, fair system of taxation in any state that positions itself as a legal (in our case it concerns primarily Ukraine) can be applied to all eight (Tsvik, Petryshyna, 2008). They have either a general theoretical or a special applied value. As for the last aspect, we will list a number of separate positions.

First, this is a limitation of the discretionary powers of the authorized tax authorities. It should be one of the main directions of reforming the organizational and legal basis of taxation in Ukraine. Second, it is the application of the principle of certainty. Since in most cases the taxation issues concern specific citizens or their associations, tax legislation should be as clear as possible in determining the grounds, objectives, and content of tax regulations. It should be also noted that as well as in other social spheres, judicial authorities should play a special role in the implementation of the principle of certainty in tax law. So, judicial reform and increasing the efficiency of the judiciary in Ukraine have big importance for improving the tax system in the state. It is logical that the independence of the court and judges is also connected with it. The principle of proportionality is also connected with the previous ones, and it is extremely important for the fairness of taxation and its stable efficiency. This applies both to the definition of tax rates and the provision of mandatory

taxes and levies, which are limited by law. Directing of sanctions tendencies for tax offenses from the sphere of personal punishment (first of all imprisonment) to financial and property, reimbursement of losses to the budget, etc. correspond to the previous principle also. And do not forget such a component of the rule of law as a principle of legal security and protection of trust. The taxpayer must be confident in the stability of his legal position and in the fact that it will not deteriorate. Essentially, it is also close to the principle of irreversibility of laws and other normative legal acts (Article 58 of the Constitution of Ukraine).

The mentioned principles are not only the general theoretical basis for the formation of the foundations of tax legislation and the development of the field of financial law in independent Ukraine. Their implementation in specific legal orders and acts of application of the law has direct practical value and is the only possible way of European integration in the field of taxation.

Taxes are not only the main source of budget revenues but also the regulator of public proportions; it is a guarantor of social protection of citizens and the creation of a modern material basis of state sovereignty (as well as the development and efficiency of local government).

The world experience in the development of tax systems shows that its doctrinal substantiation has a real importance. The Age of Enlightenment gave the impetus for these research processes, as well as in other areas of knowledge. So, A. Smith in his scientific work “An Inquiry into the Nature and Causes of the Wealth of Nations” formulated the principles of taxation for the first time (one of them is the principle of justice). He also defined tax payments, their place in the financial system of the state, and also emphasized the fact that taxes for the payer were an indicator of freedom, but not slavery (Smith, 2018). In the nineteenth century in Europe, there was the establishment of scientific and theoretical views on the nature, problems and methods of taxation, and compliance with the legal form of implementation and enforcement. That is, the general, public interest in the necessity of collecting taxes was realized by the layers of the population. And the awareness of the state’s interests regarding the fiscal coverage of the revenue side of the budgets had led, in turn, to the conclusion that the legal regulation of relations in the field of taxation had become necessary. It is important to note that legal consciousness and legal culture are internal, intellectual settings that mainly affect the effectiveness of legal regulation, we mean achievement of the goals, which are pursued by the legislator by the publication of relevant norms.

Like other branches of law, a financial law is an embodiment in the form of regulatory regulations of the economy, particularly, the financial policy of the state. As P. Gaudemet thinks, this process has two main

aspects. On the one hand, the relationship between political forces and the political structure of a country largely determines the financial policy of this country. On the other hand, political events, especially if they take the form of a crisis, also affect public finances and result in a financial mechanism (Gaudemet, 1978). The relationship between tax policy and tax law is expressed in two ways: a) through tax policy, the main objectives of taxation are implemented, that is why its research allows us to get a better idea of the subject of regulation of tax law; b) tax policy provides tax reforms, which are registered by the corresponding financial laws (Kozyrin, 1993). The effectiveness of tax policy largely depends on what special (tax or tax law) principles the state puts in its bases, particularly: the ratio of direct and indirect taxes, the breadth of tax privileges, their nature and purpose, discreteness or continuity of taxation, etc. In its turn, the main concepts of tax policy are an effective tax burden, tax capitalization, optimal taxation, and tax pressure.

For nowadays, according to the norms of the Tax Code of Ukraine, the tax legislation of Ukraine is based on the following special principles: the universality of taxation, social justice, fiscal sufficiency, stability, efficiency, and neutrality of taxation, etc. So, under the principle of social justice (as the embodiment of the fundamental principle of justice), the legislator understands the principle of setting taxes and fees in accordance with the paying capacity of taxpayers (Podatkovi kodeks Ukrainy).

As reasonably R. Tsippelius states, the right has to regulate human behaviour in such a way that all benefits (values) and burdens (costs, liabilities) should be distributed fairly, and conflicting interests should be satisfied in accordance with their weight and significance; those who commit a punishable act should receive a proper remuneration for them. So, R. Tsippelius insists that justice should prevail in resolving the conflicts, which may arise in society (Tsyppeilius, 2004).

However, an estimate to a certain extent, sometimes subjective nature of understanding and perception of justice, the need to take into account a large number of individual circumstances that are difficult to take into account in the legislation (considering dynamism of constantly growing social processes) complicate its full achievement in various social spheres. This can also be applied to tax law (Sotov, 1998).

Tax pressure is one of the main characteristics of tax policy. This concept characterizes the role of taxes in the life of society at the macroeconomic level. It can be defined as the ratio of the total amount of tax collections to the aggregate national product. If we are talking about a particular taxpayer, then tax pressure reflects the proportion of its total income deducted from the budget. In the tax doctrines of the West, an additional and sufficiently pronounced indicator of the effective tax rate is used to calculate the tax pressure. This is a fraction of the tax in the total taxable income of the payer. It should be

mentioned that the tax pressure, which can be measured by the indicator of the full rate of taxation, is very high in Ukraine compared to European countries. So, recently, legal regulation of the permanent increase of excise taxes, taxes on transport, property – are in the prerogatives of tax policy. The tax burden, taking into account social charges in Ukraine for the poor, belongs to the highest in the world, with the simultaneous existence of a favourable tax regime for the rich part of the population. At the same time, obviously, the tactical fiscal task prevails over the strategy of stimulation of production and circulation, the growth of taxable income.

Thus, the Law of Ukraine as of December 7, 2017, “On the State Budget of Ukraine for 2018” establishes the minimum wage: in monthly amount from January 1 – 3723 UAH; in hourly terms from January 1 is 22.41 UAH, living wage for able-bodied persons: from January 1, 2018 – 1762 UAH, from July 1 – 1841 UAH, and from December 1 – 1921 UAH (Pro Derzhavnyi biudzheth Ukrainy na 2018 rik: Zakon Ukrainy). The tax social benefit is 881 UAH for any payer in 2018. The maximum salary, to which the tax social benefit can be applied, is equal to 2470 UAH in 2018. Starting in 2016, the contribution from the salary of an employee is not carried out. For example, the employee was charged 3723 UAH for the full working month – it is a minimum wage. The tax social privilege cannot be applied to it, as it exceeds the maximum amount of income that gives the right to a tax social benefit – it is 2470 UAH. The tax on personal income will be 18% (670.14 UAH), the military fee will be 1.5% (55.85 UAH), the single contribution is 22% (819.06 UAH). The maintenance will be equal to 725.99 UAH, that is, the employee will receive only 2997.01 UAH. Taking into account the taxation of consumption with a value-added tax, the net income of the payer in Ukraine is actually 2500 UAH. And this is without taking into account the payment of excise taxes on fuel, alcohol, tobacco, taxation of land, real estate, etc. As a result, an average citizen pays at least 40% of the income received, and the wealthier strata – about 30% or even less. That means that taxes in Ukraine are much higher than in Europe for the poor and lower segment of the people than for the wealthy. In this case, in the developed social European states, socially unprotected citizens (whose annual income is less than 9000 euros) have a negative tax rate. That means that they have a net subsidy, which is received from the state in a larger amount than the taxes paid. Ukraine has no such tax practice.

Thus, the concept of progressive scales of taxation as humane and just exists mainly on the doctrinal level of economic and legal research in Ukraine. And the fiscal practice shows the opposite. At the beginning of the 2000s, the progressive scale of personal income tax (personal income tax) already existed in Ukraine. Its rate varied from 10 to 50%, depending on the level of income. However, in order to unshadow the economy in 2004,

the legislator changed the basis of taxation of individuals' incomes by introducing a flat scale. This measure did not give a proper financial effect. And since 2007 the volumes of withdrawal of capital abroad and, consequently, the concealment from taxation are increasing.

Keynesian approach lies at the heart of the progressive rate of income tax. In this approach, the main stimulus of economic activity is considered the expansion of solvent demand and stimulation of production. This approach operates in a number of highly developed countries, such as: the United States, Great Britain, France, Denmark, as well as China. In the United Kingdom, the income tax on individuals does not come from aggregate income, but from parts (schedules) depending on the source of income. Each schedule is taxed in a special order. The personal discount today is 4615 pounds sterling. There are three rates of income tax (after taking into account all benefits): up to 1960 pounds – 10%, 1961-30500 – 22%, and higher – 40%. In China, there is a nine-level progressive tax rate from 5 to 45% (Popova, Drozhzhina, Maslov, 2011). In the United States, taxes are also proportional to income with little progressiveness (approximately 25 to 50%) (Popova, Drozhzhina, Maslov, 2011). At the same time, most of the tax pressure falls on the richest citizens. Implementation of approaches by D. Keynes in practice allows with the help of tax regulation to redistribute resources in the state (Majburov, 2011).

One of the main issues in the economic theory of taxation and the doctrine of tax law is the ratio of direct and indirect taxes. At the present stage of development of the tax system of Ukraine, there is a sufficiently developed group of indirect taxes. They are taxes on consumption and they are implemented in goods prices. The terms of their realization and payment practically coincide. Administration of direct taxes is more complex and more adequately reflects the development of productive forces. Direct taxation is more in line with the principles of justice, humanity, and equality and has a higher ability to influence the economy and stimulate it. The legislation on direct taxes has to correspond to the conditions of social and economic development (Zhvaliuk, 2001).

The modern indirect taxation is based on the experience of the functioning of the previous forms, first of all, duties and excises. The emergence of a value-added tax is due to the corresponding stage of economic development. The countries of Europe switched to this tax mainly in the period from 1967 to 1973, after prolonged existence of other (reversible) taxation. In Western European states, it began to appear as a mechanism, which was aimed to slow down consumption, especially at a stage of significant growth in production. The French economist M. Lauré (see in detail: 20) was first, who described the scheme of the value-added tax in 1954. This tax even now brings up to 45% of all tax revenues in France. The attitude towards

value-added tax in different economically developed countries differs. In Italy, it replaced the turnover tax (1973) and more than 20 excises and provides about two-thirds of tax revenues to the budget. However, the attitude towards this indirect tax is more moderate in leading European countries. In the UK, it was legally secured in 1973, instead of the wholesale tax. However, its implementation in this state has a rather complicated mechanism. In Sweden, the value added tax is levied on the commercial sale of goods and services. In 1969, the tax on artificial sales was replaced by it. It accumulates up to 14% of tax revenues in Sweden. At the present stage, the value-added tax is one of the most important components of the tax systems of 42 states (17 European ones). The share of this tax accounted for about 13.8% of tax revenues and 5.5% of GDP. Along with this, there are countries, which are rather well developed in social and economic spheres, where the value-added tax has not taken a significant place in the tax system. Direct taxes are dominant there. These are, in particular, the United States and Japan.

Value Added Tax is one of the few in the tax system of Ukraine, which fully goes to the State Budget. It is important to determine its bid. In European countries, there are lower, higher, and standard rates. The first one is usually applied to food products and medical services, the latter to luxury items. There are also some cases when can be the complete exemption of certain goods and services from taxation by setting a zero rate or its absence. Such methods eliminate the taxation at the sale of goods or service to the end user. In the EU countries, the zero rates are also set for export goods. EU unification implies the use of the standard value-added tax rate of 18.6% and the reduced value of 5.5%. In Ukraine, by the Decree of the Cabinet of Ministers of Ukraine "On Value Added Tax" as of December 26, 1992, the rate was set at 20% (Pro podatok na dobavleni vartist, 1993). In 1993, the Law of Ukraine "On the State Budget of Ukraine for 1993" increased the tax rate to 28% (Pro Derzhavnyi biudzheth Ukrainy na 1993 rik, 1993). In 1997, the Law of Ukraine "On Value Added Tax" restored the rate of 20%, which was the main and was distributed by turnover, which was calculated at prices excluding value-added tax. If the prices and tariffs that included this tax were used, then the rate of 16.67% (Pro podatok na dodanu vartist, 1997) was applied. Today, the value-added tax rate in Ukraine has three levels: the basic rate is 20%, preferential is 0% (as a rule, for goods oriented to export) and 7% (delivery in the customs territory of Ukraine and import to the customs territory of Ukraine of medicines, which are allowed for production and use in Ukraine, and which are included in the State Register of Medicinal Products. Besides, delivery of medical products, which are included in the State Register of Medical Equipment and Medical Devices or correspond to the requirements of the relevant technical regulations, which can be confirmed



by the compliance document, and which are allowed for placing on the market or putting into operation and use in Ukraine, etc.).

A large number of scientists believe that the value-added tax is regressive in its legal nature and very costly in management, it requires a large tax unit, significant overheads of business entities. It should be noted that in most countries 60-70% of revenues from this tax, they receive from 10-15% of payers – entrepreneurs. The worldwide experience of charging value added tax suggests that due to its administrative complexity and high fixed costs its optimal rate should be 15 or even 10%. The rate should be, if not the only, and then expediently (minimum) differentiated. This will simplify administration and reduce tax delinquency (avoidance of payment). Such amount of tax is also due to the fact that the rate at the level of 20-28% has a negative effect on high-tech enterprises, as well as it stimulates inflationary processes in general. This is due to the fact that the value added tax is a tax on the final consumer and at its high rate, there is an increase in prices. The purchasing power of the population is decreasing. A high rate of value-added tax results in high spending on the end user – we mean broad segments of the low-income or unsecured population.

Besides, we need to mention that today Ukraine has formed the proper organizational and legal preconditions for optimization and socialization of the value-added tax. The technical level of the taxpayer information database has increased; the material and technical base and personnel qualifications have improved, as well as the legal and regulatory framework of the State Fiscal Service, the State Treasury Service, and the Financial Monitoring Service was also improved.

#### 4. Conclusions

That is why, in our opinion, preconditions for harmonization of the legislation of Ukraine, which

regulates the tax system, have already emerged. The observance of the fundamental principles of law, as well as the basic principles of special tax law, will ensure the achievement of the following results:

- ensuring the unalienable rights, freedoms, and legitimate interests of the person;
- achievement of a fair distribution of the tax burden by determining its progressive-proportional size in the sphere of both direct and indirect taxation, its transfer from less socially well-founded on richer members of society;
- harmonization of direct and indirect, centralized and local taxation; using the experience of the most developed European countries in the field of legal regulation of taxation;
- the increase of legitimacy of the state in the eyes of its citizens – taxpayers, the consciousness of payment of taxes, understanding of the targeted direction of accumulation as a result of taxation of state resources;
- stimulation of the economic activity of business entities in Ukraine, development of GDP, an increase in the index of the standard of living of a person, and consequently, an increase in absolute volumes of tax revenues with a decrease in their relative size, that is, tax rates.

We propose to establish a unified two-tier approach to the determination of the rate by applying similar approaches to one of the most important components of the taxation system – the value-added tax: we mean, the general (base) rate in the amount of 15-17% and the preferential 5-7% (sale of medicines, baby food products, etc.). In case of harmonization of other types of tax revenues, ensuring an appropriate and necessary balance between the funds of the State and local budgets, a high legal technique for the implementation of relevant legislative and other regulatory legal acts – such an approach will positively affect the economic growth in Ukraine, the standards of living of citizens and ensuring the social purpose of the state.

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## SPECIAL APPROACHES TO ALLOCATION OF TYPES OF SERVITUDES FROM THE ACCOUNTING POSITIONS

Iryna Hrytsai<sup>1</sup>, Oleksandr Yunin<sup>2</sup>, Antonina Matsola<sup>3</sup>

**Abstract.** *Articulation of issues.* A number of bases, positions, which previously were recognized as the only correct and irrefutable, served as the foundation of legal regulation of civil relations. But now they do not fully correspond to modern tendencies in the development of civil law science. That is why, today, it should be mentioned about the formation of a new doctrine, which can meet the requirements of the formation and development of the rule-of-law state. In such conditions, it is obvious that the scientific and theoretical study of individual approaches to the allocation of types of servitudes from the standpoint of accounting will contribute to the improvement of civil-law relations, to the formation of a clear and coherent system. At the same time, the variety of scientific views about types of way-leaves constantly encourages the implementation and improvement of scientific research in the field of property rights for someone else's property. In this context, the issue of the implementation of contractual, inheritance, and land relations for servitudes becomes very important and necessary. Also, another important question is: Are specific legislative approaches to allocation of servitudes on the basis of specific features fixed in legislation or not? Has the legislator stopped only on land and personal servitude? *The aim of the article* is to study the theoretical and legal possibilities and approaches to the allocation of way-leaves on the basis of specific features from the standpoint of accounting and jurisprudence. Also, another aim is to attract the attention of legal scholars to possible further scientific researches on the introduction of this phenomenon in modern civil legislation of Ukraine. *The subject of the study* is the individual approaches to the allocation of types of servitudes from the standpoint of accounting. *Methodology.* The research is based on the analysis of legal acts, which are connected with legal regulation of way-leave relations in Ukraine. On the basis of the comparative legal method of investigation of certain provisions of Ukrainian legislation, the possibilities and limits of the use of types of servitudes in contractual hereditary and land relations are determined. *Results* of this study have shown that special approaches to the allocation of way-leaves on the basis of specific features in Ukraine are in a real legal vacuum. Such a conclusion is based on the lack of legislative clarification and consolidation of other types of servitudes, which are not connected with the material component. Thus, property rights under the Tax Code of Ukraine are intangible assets, and the provisions of the Civil Code of Ukraine consolidate the material constituent of real rights to someone else's property. From the standpoint of accounting, we can talk about the presence of intangible servitudes that are associated with the recognition and accounting of intangible assets. If this gap will be solved, then we can talk about the revision of the characteristics of way-leaves, relying on the positions of other branches of law. *Practical impact.* The idea that certain positions of intangible servitude are contained in national law is rather necessary and expedient. So, we can talk about corporate rights as a person's rights, the share of which is determined in the statutory fund (property) of a business organization. These rights include the competence to participate in the management of a business entity, obtaining a certain percentage of profits (dividends) of this organization and assets in case of liquidation of it in accordance with the law, as well as other powers provided by law and statutory documents and, for example, the rights to use websites, or aspects of commercial secrecy. *Correlation/originality.* An analysis of the possible use of other types of way-leaves than those, which are enshrined in civil law in contractual, inheritance, land relations can become the basis for developing the most promising directions for the development of domestic civil law in this area and improving the civil law doctrine.

**Key words:** way-leave (servitude), accounting, civil law, real rights to someone else's property, licensing, contractual relations, inheritance, land relations.

**JEL Classification:** M41, J41, K12

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## 1. Introduction

A number of the principles and positions which were recognized only as correct and incontestable earlier served as the base of legal regulation of the civil relations. But now these principles don't correspond to current tendencies of development of the science of civil law in a full way. Therefore, today, it should be stated about the formation of a new doctrine, which, as objectively as possible, can meet the requirements of the formation and development of a law-governed state. In such conditions, it is obvious that the scientific and theoretical study of separate approaches to the allocation of types of way-leaves from the standpoint of accounting will contribute to the improvement of civil-law relations, the formation of a clear and coherent system.

At the same time, the variety of scientific views on the types of servitude constantly encourages the implementation and improvement of scientific research in the field of property rights for someone else's property. In this context, the issue of the implementation of contractual, inheritance, land relations for way-leaves becomes really important. Also, another important question is: Are specific legislative approaches to allocation of way-leaves on the basis of specific features fixed in legislation or not? Has the legislator stopped only on land and personal servitude?

Such famous scientists studied these issues as: Yu. O. Zaika, O. O. Loviak, Ye. A. Sukhanov, H. V. Sosnina, A. A. Biriukov, O. V. Bilotskyi, M. B. Honcharenko, I. E. Kosariiev, T. V. Predchuk, O. V. Rozghon, I. F. Sevriukov, O. O. Tomyi, V. V. Tsiura, O. Yu. Tsybul'ska, O. O. Shchypanova and many others.

## 2. Statement of the basic material

Proceeding from the provisions of clause 4 of Article 403 of the Civil Code of Ukraine (Tsyvilnyi kodeks Ukrainy, 2003), which states that servitude is not a subject to alienation, we can state that the application of certain contractual constructions (purchase and sale, donation) cannot be applied to servitude legal relations. Accordingly, can we argue that there are no other means of transferring the rights and obligations of way-leaves to another person? Probably no. A huge attention in this context should be paid to the inherited legal relationships, as well as ambiguous positions of regulation of servitude legal relationships with other branches of law, particularly, land. So, according to Part 1 of Art. 101 of the Land Code (Zemelnyi kodeks Ukrainy, 2002), the effect of land way-leaves is remained in case of transferring rights to a land plot, concerning which it was established, to the other person. That is why the Land Code of Ukraine establishes the right to inherit the servitude as a substantive right. In turn, the Civil Code of Ukraine confirms the position that the inheritance includes all rights and obligations

belonging to the ancestor at the time of the opening of the inheritance and did not cease as a result of his death (Art. 1218). Also, according to Art. 1219 of the Civil Code of Ukraine, such rights and obligations are not part of inheritance, which are inextricably connected with the person of the ancestor, particularly: 1) personal non-property rights; 2) the right to participate in associations and the right to join associations, unless otherwise provided by law or their constituent documents; 3) the right to compensation for damage caused by injury or other damage to health; 4) the right to alimony, pensions, benefits or other payments established by law; 5) the rights and obligations of a person as a creditor or a debtor, which are provided in Article 608 of the Civil Code of Ukraine (Tsyvilnyi kodeks Ukrainy, 2003). There is no way-leave in this list, and accordingly, it can be the object and basis of hereditary legal relationships.

But the diversity of way-leaves by specific features does not allow us to say that in each case, the established way-leave will pass to the heirs, and also whether it will be the subject of contractual relations or not. Let's consider the theoretical and practical grounds for the specific characteristics of servitudes of the modern legal field of Ukraine with the determination of the possibility of further implementation of the inheritance rights and duties of heritors in servitude. If we analyse the provisions of the Civil Code of Ukraine and the Criminal Code of Ukraine, we can distinguish two types of way-leaves at the level of law – they are land way-leave and personal way-leave.

First of all, it should be noted that the servitude, enshrined in the Land Code, by its nature differs from that one, which is contained in civil law. In the science of civil law, according to the Roman legal tradition, servitudes are subdivided into the land (praedial) and personal (personal). The differences between them are determined not by the object of servitude law, but solely by the way of establishing the subject of the latter, that is, that authorized person, who owns the right to restrict the use of another's thing. As it was already mentioned, servitudes are established in the interests of certain persons. This right belongs to a particular person and it is confirmed by its name, or it is associated with the existence of any other right (including property rights). Therefore, servitude belongs to a person (personal servitude) or it belongs to a person as the owner (possessor) of a particular real estate (praedial servitude) (Pravo zemelnoho servitutu). At the level of the law, we can also speak of forest servitude. The concept of forest way-leave reveals Art. 23 of the Forest Code of Ukraine. It is stated there that the forest servitude is a right to a limited paid or free use of another's land plot (Lisovyi kodeks Ukrainy).

As the result of the analysis of law enforcement practice, we can see that the user of the objects of the animal world and the forest user, the owner of the territory, water areas, on which the creatures of the

animal world live, they are usually different persons. In this case, the person who owns or uses the necessary territory, water area, may create obstacles to the implementation of the right of users of hunting areas for the use of objects of the animal world (Tomyn, 2013). The legislator in Art. 24 of the Law of Ukraine "On Hunting Sector and Hunting", in order to prevent abuse of the law, he provided a guarantee for users of hunting areas in the form of a contract with the owner or permanent user of land plots, on which these hunting areas are located. The size and procedure of payment for the use of hunting areas are determined in this law (Pro myslivske hospodarstvo ta poliuvannia). In such conditions, we can talk about the presence of faunal servitude (Tomyn, 2013). Some scholars use such term as "floristic servitude" (Sokolova, 2005). Again, based on the enforcement practice of implementation of the provisions of the Water Code of Ukraine (Vodnyi kodeks Ukrainy, 1995), the Code of Ukraine on Subsoil (Kodeks Ukrainy pro nadra, 1994), we can talk about the presence of water and subsoil servitudes. So, Art. 23 of the Code of Ukraine on subsoil gives to landowners and land users within the boundaries of the land parcels, which are granted to them, the right without special permits and mining claim to extract locally produced minerals. Besides, they can extract peat with a total depth of development of up to two meters, as well as underground water (other than mineral) for all needs, except for the production of packaged drinking water, in case that the volume of underground water extraction from each of the water intakes does not exceed 300 cubic meters per day (Kodeks Ukrainy pro nadra, 1994). Accordingly, the prohibition of servitude on such a law code does not establish. Therefore, the code does not establish the prohibition of servitude on this right. In this way, the national legislation somewhat relates the types of servitudes with the peculiarities of the legal nature of natural objects. N. G. Yurchichin states exactly about it (Yurchishin, 2015). It is possible to allocate urgent, termless, and single servitude according to the validity period. If we talk about one-time servitudes, they are servitudes set by the territorial authorities, for example, in order to celebrate certain events (the feast of wine, honey, etc.) (Polozhennia «Pro servitutne vykorystannia zemel komunalnoi vlasnosti terytorialnoi hromady m. Mukachevo»). Servitudes can be divided into those, which are established by the contract, law, will or a court decision according to the grounds of the establishment (Article 402 of the Civil Code of Ukraine) (Tsyvilnyi kodeks Ukrainy, 2003). If we talk about the possibility of charging – there are paid and free servitudes. In our opinion, the distinction of the specific features of way-leaves is not possible without the analysis of the regulatory framework of other branches of law, particularly, the economic and legal direction. M. P. Gorodysky proposed some positions regarding types of servitudes (Horodyskyi, 2012).

He distinguishes material and non-material servitudes. Regarding the availability of material servitudes, the positions of the Civil Code of Ukraine indicate that the servitude is established in relation to the objects of the material world (land, building, construction, etc.). From the accounting standpoint, we can speak of the presence of non-material servitudes that are associated with the recognition and accounting of intangible assets.

Intangible asset – is a non-monetary asset, it is non-material and can be identified. Acquired or received intangible asset is defined, if there is a possibility of receiving future economic benefits by the subject, which are connected with its use, and its cost can be reliably determined (Polozhennia (standart) bukhhalterskoho obliku). An asset is identified if it: a) can be separated. That means that it can be separated from the enterprise and it can be sold, it can be transferred, licensed, rent or exchanged individually or together with a contract, which is connected with it, with identified asset or liability, regardless of whether the entity intends to do so, or b) arises from contractual or other legal rights, regardless of whether they can be transmitted or separated from the entity or from other rights and obligations (Polozhennia (standart) bukhhalterskoho obliku).

Assets are not recognized as intangible assets but they should be reflected as a part of the expense of the reporting period, in which there are expenses for: research, training and retraining of personnel, advertising and promotion of products on the market, creation, reorganization and relocation of the enterprise or its part, increase of business reputation of the enterprise, the cost of publications and the cost of creating trademarks (commercial label). Acquired (created) intangible assets are counted to the balance of the enterprise at their initial cost. The initial cost of the acquired intangible asset consists of the price (cost) of the acquisition, duties, indirect taxes which aren't subject to compensation and other expenses, which are directly related to its acquisition and bringing it to a condition, which is suitable for use.

The initial cost of intangible assets is increased by the amount of costs, which is connected with the improvement of these intangible assets and the enhancement of their capabilities and terms of use. All these will contribute to an increase in the initially expected future economic benefits (Polozhennia (standart) bukhhalterskoho obliku).

According to the standards, the accounting of intangible assets is conducted for each object in the following groups:

1. Rights to use natural resources (the right to use subsoil or other resources of the natural environment, geological, and other information on the natural environment, etc.).
2. Rights to use property (the right to use the land plot in accordance with the land legislation, the right to use the building, the right to lease premises, etc.).



3. Rights to commercial designations (rights to trademarks (marks for goods and services), commercial (firm) name, etc.), except for those whose acquisition costs are recognized as royalties.

4. Rights to industrial property objects (right to inventions, utility models, industrial designs, plant varieties, breeds of animals, layout (topography) of integrated circuits, commercial secrets, including know-how, protection against unfair competition, etc.), except for those, whose acquisition costs are recognized as royalties.

5. Copyright and its related rights (right to literary, artistic, musical works, computer programs, programs for electronic computers, compilation of data (databases), performances, phonograms, videograms, broadcasts (programs) of broadcasting organizations, etc.), except for those, whose acquisition costs are recognized as royalties.

6. Other intangible assets (the right to conduct activities, use of economic and other privileges, etc.) (Polozhennia (standart) bukhhalterskoho obliku).

Paragraph 14.1.120 of the Tax Code establishes the provision that intangible assets can be ownership of the results of intellectual activity, including industrial property, as well as other similar rights recognized as the object of property rights (intellectual property), the right to use the property and property rights of the taxpayer in accordance with the procedure established by law, including the rights of use of natural resources, property and property rights, which are acquired in the order established by the legislation (Podatkovi kodeks Ukrainy, 2011). The order of the Ministry of Finance No. 242 of 18.10.99 "On Approval of the Regulation (Standard) of Accounting", paragraph 6 fixes the position that the acquired or received intangible asset is reflected in the balance sheet, if there is a probability of obtaining future economic benefits, which are connected with its use, and its cost can be authentically determined (Nakaz Ministerstva finansiv). That means that property rights are intangible assets according to the Tax Code of Ukraine. In this case, the Civil Code fixes real confusion. Property law is an independent category and it cannot be defined through other concepts. Property rights cannot be identified with the thing. That is why their determination through the non-consumable thing, as it is stated in Art. 190 of the Civil Code of Ukraine, is incorrect. The Civil Code repeatedly differentiates things as a type of property and property rights. As an example, we can use the norms of Art. 656 of the Civil Code of Ukraine, which state that the subject of a contract of sale may be a product in the sense of materially existing thing (Part 1 of Article 656) and property rights (Part 2 of this article). A similar approach is reflected in Art. 718 of the Civil Code of Ukraine. This article defines the subject of a gift contract. Bringing together property rights with the material rights, as it is shown in the norms of Art. 190 of the Civil Code of Ukraine, is incorrect (Iavorska, 2011).

Also, the existence of non-property rights in the legislation and their use may indicate the presence of intangible servitude. So, in Art. 21 of the Law of Ukraine "On Copyright and Related Rights" it is possible freely use of quotations, even without the consent of the author. The quote is a relatively short excerpt from a literary, scientific or any other published work, which can be used only with the obligatory reference to its author and sources of quotation, by another person in his work in order to make his statements more understandable. The quotes are also used for reference to the views of another author in an authentic formulation (Pro avtorske pravo i sumizhni prava, 1994). For example, under the law of France and Switzerland, objects of property rights can be both material and intangible things, particularly, rights (Mozolyna, Kulahyna, 1980). According to Art. 529 of the Civil Code of France, movable are obligations and lawsuits (by definition of the law), whose subject of the requirement are sums of money or personal estate, actions or shares in the financial, trade or industrial organizations (Frantsuzskiy hrazhdanskiy kodeks: ucheb.-praktych. Kommentariy, 2008). We think national legislation contains certain positions of the immaterial servitude. Again, here we can talk about corporate rights as the rights of a person, whose share is determined in the statutory fund (property) of a business organization. These corporate rights include the power to participate in the management of a business organization, a right to receive a certain share of profit (dividends) of the organization and assets in case of liquidation of the latter in accordance with the law, as well as other powers provided by law and statutory documents (Podatkovi kodeks Ukrainy, 2011) and, for example, the rights to use websites or aspects of commercial secrecy. It is important that the object of intangible assets, which was received for use, is considered by the public sector entity (the licensee) on the off-balance sheet account in the valuation, which is determined on the basis of the amount of remuneration established in the contract. In this case, payments for the given right of use of intellectual property objects are included in the expenses of the reporting period by the licensee. These payments are in the form of periodic payments and they are calculated in order and terms established by the agreement.

Also, some of the positions of well-known, civilized scientists suggest the presence of servitudes for movable things. For example, O. A. Podoprigora notes that the object of servitude may be movable property: animals, vehicles, equipment, household goods, etc. (Tsyvilnyi kodeks Ukrainy, 2004). Ch. Azimov emphasizes that the subject of servitude can be either immovable (land, buildings, apartments, houses, etc.), or movable property (raw materials, goods, etc.) (Azimov). Although these theoretical approaches were not clearly fixed in the legislation, were only mentioned during the drafting of the Civil Code of Ukraine. Therefore, servitude on the

movable property can exist, for example, for a thing, which is defined by individual characteristics (perhaps the loan features some peculiarities of servitude on a movable thing). In this context, in our opinion, T. V. Predchuk has a successful scientific position about the types of way-leaves according to the classification criteria, which are in some way enshrined in national legislation.

Firstly, by the way of establishing: servitude can be according to the property of things – servitude on a stationary and moving thing.

Secondly, according to the need of satisfaction of desires of other persons which can't be satisfied in a different way – there are land, natural resources, personal.

Thirdly, according to the peculiarities of the legal nature of natural objects – there are forest, faunistic, floral, aquatic, inferior.

Fourthly, according to the terms, we can allocate the term, termless, and one-time servitudes.

Fifthly, by the possibility of charging, we can allocate paid and free of charge servitude.

Sixthly, according to the accounting standards – there are tangible and intangible servitudes.

Seventhly, according to the property of things – servitude can be on a stationary and movable thing (Predchuk, 2016).

Of course, we do not reject other criteria for the classification of servitudes, but their full definition is impossible within one article. Finally, we want to note that, in accordance with the Civil Code of Ukraine, the testator has the right to make a will with the establishment of servitude. As well as the testamentary refusal, establishments of the servitude are burdening of a hereditary part of the successor under the will. The testator has the right to establish a way-leave on the land plot in the will, other natural resources or another real estate to satisfy people's needs. The servitude determines the volume of the rights concerning the use of someone else's property by a person. The servitude is not subject to alienation: it cannot be sold, given or exchanged. Land servitudes, which are established in the will, the heir accepts the inheritance, in the future may also be passed on to inheritance. They can be alienated only with the land plot. Personal servitude is established in the interests of a particular heir, and only this person has the right to use it. Personal servitude is not subject

to alienation and it cannot be inherited. It is terminated in case of the death of the heir, in whose favour it was established (Posvidchennia zapovitiv). So, the current Civil Code of Ukraine on species characteristics allows the inheritance of land and personal servitudes with certain peculiarities. There is no one single answer regarding the non-traditional types of servitudes outlined in our article, which of them can be passed on to inheritance or which may be the subject of the contract on the establishment of servitude.

### 3. Conclusion

So, there are so many scientific views on the types of servitude constantly encourages the implementation and improvement of scientific research in the field of property rights for someone else's property. Servitude is not an exception. Our research leads us to believe that from the standpoint of accounting, we can speak of the presence of intangible servitudes, which are connected with the recognition and accounting of intangible assets. The law on accounting determines the economic benefits that are the criterion for recognizing any asset as a potential opportunity for an enterprise to obtain funds from the use of assets. However, the receipt of funds does not necessarily have to be direct, that is, from the use of the asset as a commodity, or as a tool for obtaining cash income. Some objects are used to receive income indirectly, that is, in the economic system, which is the enterprise. This may not only be an input financial stream (revenue) but also a reduction in outflows (savings). Consequently, if the use of an object at the enterprise can potentially positively affect the overall performance of this system (lead to income generation) and if an object can be alienated with the receipt of certain funds – these both cases can prove about the existence of an asset recognition criterion. And hence we can talk about the possibility of using contractual constructions to establish servitude as a regulatory component that combines economic and civil-law components.

That is why; taking into account the specific features of servitude, our future scientific questions may be the clarification of the issues about which type of servitude may be subject to contractual or inheritance legal relationships and what encumbrances it contains, concerning the object in private-law or economic legal relations.

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# TRANSFORMATIONAL DIMENSIONS OF SCIENCE UNDER GLOBALIZATION CHALLENGES

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**Abstract.** The precise and correct understanding of the transformational changes in the field of science, which are constantly kept under public review, is vitally important for civilizational development of the Ukrainian State. *Problem statement.* Although some specific and significant aspects of science are highlighted and respective innovations are suggested, very often there is a lack of methodological reasoning and non-systemic of recommendations. The abovementioned stipulates the need to formulate a complete and perfect vision of the science transformation at the present stage of the Ukrainian society's development. The *purpose* of this paper is to formulate the author's conception of the necessity of science transformation in Ukraine by analysing global challenges and critical study of modern scientists' works. The achievement of the formulated aim is carried out by the means of the complex and consistent application of the corresponding scientific tool presented by such *methods* of scientific knowledge as: logical-semantic, systematic, structural-logical, methods of grouping, deduction, induction, analysis and synthesis etc. *Results.* In the article, the author establishes and explains the reasons for the transformational changes in the field of science, which are reduced to the following: global character of human development; an advanced approach to the interaction of theory and practice in the context of the implementation of scientific activities; development of modern information technologies; insufficient support by the state and society of science and scholars; absence of an integrated approach, focused on the fundamental integrity and complexity of the system "science – education – production"; aggravation of social and economic problems; integration of the innovative type of civilization. To sum up, the author *concludes* that civilizational society has dramatically influenced the development of science, significantly accelerating the processes of its development. Modern science, as well as scientists' activity, is impossible without the use of the latest technologies. This activity, in turn, promotes the development of newer technologies. The speed of these processes is constantly increasing and the transformation of science in one sphere instantly causes transformation in another. Such changes lead to the emergence of an incredibly large number of scientific knowledge that needs to be perceived and embodied in practice.

**Key words:** science, transformation, globalization, conceptual approaches, foundations, civilization, development, efficiency, intensity.

**JEL Classification:** A11, E00, I25

## 1. Introduction

To date, Ukraine is at the beginning of the great path to civilized integration into the global and European scientific area. Our state will remain the country, which provides the intellectual potential for scientifically advanced countries until it acquires the recognized status of a subject enjoying equal rights in the sphere of foreign scientific cooperation.

Further success of economic transformations, continuous economic growth will depend on the reform of the national scientific system, which should be based on the principles of innovation through

the use of modern information and communication technologies.

Research works by famous researchers, such as Yu. Anisimov, B. Arutiunov, A. Berdashevich, D. Bernal, V. Vernadskyi, F. Brokgauz, P. Haidenko, V. Danylevskyi, H. Dobrov, Ye. Zolotukhin, I. Yefron, O. Krasovska, J. Condorcet, V. Kokhanovskyi, L. Kosarieva, Th. Kuhn, B. Kuznietsov, O. Lietov, B. Malitskyi, L. Markova, O. Popovych, K. Popper, M. Rozov, B. Starostin, V. Stopin, and others, contain different substantiations and conditions for reorientation of science.

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Nowadays the issue of transformation of changes in the field of science is constantly in the power of public opinion. Some important aspects of science are highlighted, relevant innovations are offered, but methodological weakness, unsystematic suggestions are often perceived.

Therefore, the purpose of this paper is to highlight the general vision of the transformation of science under the intensification of globalization processes.

## **2. Grounds for the need for transformational changes in the field of science for the Ukrainian state**

The transformation of science at the present stage of the development both of the world community and Ukrainian society is justified and obvious. Herewith the logical question dealing with the need for transformational changes in the field of science for the Ukrainian state arises. Let's try to answer it by defining the grounds for these changes.

Firstly, the development of mankind has become global, which makes competitive only the person and the state capable of living and acting in such a space.

The issue of globalization relates to global conflict because it raises the most important question of mankind dealing with the prospect of the world system. It is difficult to form effective mechanisms for the interaction of societies in the global civilization progress without an equal dialogue of cultures, without taking into account the scientific potential and prospects for the development of each civilization.

Therefore, it is no coincidence that the main emphases relating to the comprehension of the possible globalization consequences are put on the need to refer to science, culture, where spirituality as an expression of moral principles of social life and moral rules of human behaviour in society prevails.

It is obvious that the scientific potential of the nation in the 21st century will be almost the main productive force while choosing geo-economic and geo-political models of the future and forming a new paradigm of civilization development. Consequently, preservation of the national essence, national identity, cultural and scientific uniqueness is an essential part of the state policy as a whole and the policy of the scientific and humanitarian development of society in particular.

Secondly, modern civilization has substantially expanded the approach to the interaction of theory and practice in the context of performing research activity. That is, today the relationship between knowledge and practice is not limited to the division into fundamental and applied one when fundamental knowledge is understood as theoretical one but applied knowledge as the one that can be used in practice of production or as the one that can arise from it. Modern knowledge results from more complex relationships between such

research ideas that can be determined as theoretical and practical ones. It's about researching as practising, getting fundamental knowledge while practising. For instance, in the field of modern biotechnology research, the concept of practice is used quite organically and innovative biotechnological practices are being studied as emerging in the field of fundamental research (Nikolaienko, 2009).

Therefore, modern science shall take into account situations where diverse and rather complicated research practices begin to precede theories. As sociologist L. Bevenko notes, the theory as a scientific, philosophical, and practical reality becomes only a practical guide to certain, rather narrow spheres of human life. In this case, more powerful semantic type of constellation helps to perceive different kinds of practices as its individual manifestations, and scientific, philosophical, and practical ones turn out to be only similar to a number of other similar manifestations (Bevenko, 2008). Knowledge as practising foresees the moment of design, projection, and technological capability.

Thirdly, the modern world has set the science other tasks and has created new opportunities for it. First and foremost, these are up-to-date information technologies, nanotechnologies, robotics, which provide at least two functions, namely computer literacy, as well as individualization and intensification of the research process.

While stating this ground, it is necessary to focus on the fact that at the present stage of the development of the world community, a person exists in a world where human factors are almost absorbed by technological ones. Thus, the issue of human freedom arises as one of the principal metaphysical issues of the 21st century. The book "Polysubstantial Homo: Philosophic and Artistic Thought in Search of non-Euclidean Reflectivity" by V. Tabachkovskiy emphasizes that, unlike modernity based on the unlimited concept of freedom, first of all, postmodernity is based on the idea of freedom as a personal choice, the decision is related to the subjective world of personalities existing between the universality of human nature and the peculiarity of individuality (Tabachkovskiy, 2005). It previously seemed that the most favourable situation for a person was widening of the possibilities of simultaneous choice but nowadays it became clear that the connection of such a choice with the perception of personal identity is more important. Therefore, it is better for mankind and strictly for a personality, so that such an identity could be found also in a special, individually unique area, and not just in an identical one.

Fourthly, insufficient support of science and scholars by the state and society, which does not allow carrying out ripe transformations opportunely and to a due extent. Fundamental and applied researches were separated from real economic needs, and the research system in general and individual research groups in particular lost the ability to

objective self-assessment. This resulted in a decrease in the competitive level of products and undoubtedly influenced the level of competitiveness of Ukrainian output.

Fifthly, experience confirms that issues of scientific advancement, implementation of inventions, organization and stimulation of technical progress in enterprises, training of research personnel cannot be isolated from each other. One cannot expect a significant success by solving each of them separately.

An integrated approach focused on the fundamental integrity and complexity of the system "science – education – production" is essential here. A narrow, simplified approach to implementation of inventions is incompatible with the current scale and pace of scientific and technological progress.

The scientific and industrial cycle is a national economic cycle of new knowledge covering fundamental research, applied products and material output. The emergence of the scientific and production cycle reflects the integration processes that have arisen in the field of science and production in the first quarter of the 20th century and intensified after the Second World War. Now they are crucial for implementing an innovation development model.

Nowadays both in Ukraine and in other post-Soviet Republics, one can observe violation of the conditions for the organization and functioning of the cyclical paradigm: "science – education – production" and its centric stages (fundamental research, scientific and applied products, research and design work, projection, technological preparation for manufacture, implementation of innovations, extensive prevalence of innovations to full market saturation). This, in particular, discourages foreign investors from investing capital in our economy.

Due to partial closing of research institutes, a significant deterioration of the conditions for sectoral and intersectoral applied products also provokes concerns. This problem is mostly related to the incomprehension of the fact that science can be efficient only when it organically joins the sphere of the research and production cycle thorough educated experts.

Sixthly, aggravation of socio-economic problems caused by objective difficulties of the transition period, as well as by serious errors in the definition of the model of transformation processes, gradually eliminated science from a number of state priorities, which resulted both in multiple reductions in investment in scientific and technological development and in loss of innovation activity of the economy.

And, seventhly, nowadays Ukraine has entered the new type of civilization, namely innovation one. Its feature is constant changeability, the dynamism of change. Changes in knowledge, technology, information, circumstances of life etc. occur, and these changes are much faster than the change of generation of people. The knowledge gained becomes outdated, a need for new knowledge arises.

In our opinion, the last factor in the transformation of science is fundamental and requires detailed concretization in light of globalization processes taking place in the world community.

### **3. Efficient use of science-based potential, its restructuring and the formation of a national innovation system**

The nature of economic growth, the competitiveness of the country in the world market, its national security are determined not by the volume of physical resources, but they depend on how society can create and effectively use the scientific factor, develop innovative activities and innovation processes at all levels of government. In modern Ukraine, the solution of key socio-economic problems is also impossible without efficient use of science-based potential, its restructuring, and the formation of a national innovation system. The practice of reforming the national economy has shown that the market is not able to solve all the problems of overcoming the degradation of the technological base of production and the formation of new technological regimes to the extent necessary to ensure sustainable economic growth in our country and its regions. The problem determines the need to strengthen the role of the state in the scientific support of innovation processes and in the regulation of the innovation sphere in general. The importance of the early formation of an effective state policy in the field of science and, in particular, its component such as an innovative policy is growing.

Today the need for innovative development of Ukraine is the need to keep pace with time in accordance with current realities, to be up to standards of the developed countries of the world. A political prerequisite for the innovative development of Ukraine is the need to win a worthy place in the international community of civilized peoples. The latter respect the states that offer innovative ideas and models of development, show examples of success in one or another sphere of public life. Therefore, an accelerated entry into the civilization process on the basis of innovative strategies is one of the basic political tasks of Ukrainian state building and strengthening of Ukraine's competitiveness in Europe and in the world.

Science is considered as the most important source, rather, as the sphere of birth of innovations, because this area of activity concentrates the main resources and the most favourable conditions for a special intellectual work, which generates innovations.

In the scientific sphere, knowledge is mostly transformed into basic, systemic innovations that have the greatest updating capabilities. But these innovations, as a rule, are always capital-intensive and do not always have the opportunity of commercialization. Therefore, their creation requires powerful state support.

In turn, innovation technology offers the scientific community the radical innovations that, being a part of

the research, lead to profound changes – and not only positive – in the organization of research activity and to the transformation of science in general.

At the present stage of the development of the international community, the system of scientific knowledge is international, which, at first sight, makes science more prone to international integration. However, in fact, here there are problems relating to the fact that science is not only a cognitive institution, but it is also a social one. The most serious difficulties arise at the junction of new technological opportunities and old political purposes. Innovations have created a global opportunity for genuine scientific cooperation limited neither by distances nor by state borders and easily carried out in real time. But in reality, if one does not consider science as a system of knowledge, but as a sphere of activity, global science does not exist because it is organized under the national principle and in the national framework, it is also divided by departmental barriers. Of course, science must be open, that is, scientific knowledge must be accessible to all. But the one who spends his/her money on it naturally wants to have some benefits. The democratic idea of open science, that is, the international use of fundamental

scientific knowledge, encounters the reality of the national costs of obtaining new knowledge and its keeping. International scientific projects must overcome the differences, sometimes very substantial, of the national interests of their participants. However, since these antinomies exist in light of the apparent tendency of the globalization of the world economy, it is obvious that the transformation of science in the same direction is also inevitable in the future.

#### 4. Conclusions

Civilization society has fundamentally influenced the development of science, greatly accelerating the processes of its development. It is impossible to imagine modern science and activity of researches without the use of innovative technologies. This activity favours the development of newer technologies. The speed of these processes is constantly increasing and the transformation of science in one sphere instantly causes the transformation in another one. Such changes result in the emergence of an incredibly large number of scientific knowledge that needs to be perceived and put into practice.

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## CONCERNING THE NEED FOR IMPROVEMENT OF THE METHODOLOGY OF INVESTIGATING FRAUDS AND DEVELOPMENT OF METHODS OF INVESTIGATION OF ITS INDIVIDUAL TYPES

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**Abstract.** Nowadays in a difficult economic situation, frauds have become widespread in Ukraine in various spheres of human life. Increase in the number and quality of such crimes leads to significant losses of financial resources not only of citizens but of the state as a whole. Therefore, an important issue for our nowadays is the study of the mechanism of rapid, complete, and effective investigation and prevention of such crimes. In Ukraine, there is an active awareness of the population about the ways of committing such crimes and creating measures to protect confidential information. However, official statistics show a significant amount of fraud and an insufficient level of their disclosure. One of the reasons is the obsolete methods of investigating fraud and the lack of methods for investigating certain types of it. *The aim* of the article is to analyse scientific research in order to establish a level of methodological support for law enforcement agencies in investigating fraud. Due to the fact that methodological provision of practical divisions plays the leading role in the fast, full, and effective investigation of frauds, therefore, the studied question deserves a special attention. *Methodology.* The author substantiates the need to improve the existing methodological recommendations because since over time they lose their content. Besides, there is the necessity to create new techniques that are not reflected in the writings of scientists in investigating various types of fraud. Based on the analysis of forensic literature, we can make a conclusion that most of the scientific works are devoted to the investigation of fraud with financial resources. Therefore, the author proposes to pay attention to other types of fraud and to formulate methodological recommendations for practical units to young and experienced scientists on the basis of their own research. *Results.* The concepts and types of fraud are defined in the article. Besides, the works of criminologists, which are devoted to the peculiarities of investigating such types of crimes, are analysed. The official statistics, which impresses with data on undisclosed fraud, are presented here. This once again confirms the necessity for scientific development of the mentioned problem. A particular attention is paid to the lack of proper methodological support for practical units during the investigation of such types of crimes. In this regard, the author provides corresponding suggestions that will help to improve the investigation. *Practical impact.* Since the fraud investigation technique helps to the most successful achievement of the objectives of criminal justice, then in order to reduce the number of undisclosed crimes, it is necessary to develop and provide practical guidance to the methodical recommendations in a timely manner. *Correlation/originality.* The urgent issue of nowadays is a complete, effective investigation of criminal offenses, and fraud is no exception. The improvement of the methodology for fraud investigations and the development of methods for investigating certain types of fraud is a necessary step for it.

**Key words:** fraud, deception, abuse of trust, fraud investigation technique, thesis researches, methodology for investigating certain types of fraud.

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## 1. Introduction

Recently, fraud in Ukraine has become widespread and can be characterized by a change in forms, types, and methods. The penetration of fraud in the sphere of entrepreneurial activity, particularly, investment, trust, insurance, banking is connected with economic transformations in the country, and the development of market relations (Shepitko, 1998; Piaskovskyi, Chornous, Ishchenko, Aliksiev, 2015). Thus, according to statistics of the Prosecutor General's Office of Ukraine for 2016, 45,764 fraud cases were registered – of which only 7844 persons were notified of suspicion and 783 with a statement of indictment; for 2017, there were 36,650 such crimes – of which only 10147 persons were notified of suspicion and 8567 with a criminal record. And during 9 months of 2018, there were 28,194 fraud cases – of which only 6964 were notified of suspicion and 5558 were with a criminal record (Statystychni dani Heneralnoi prokuratury). The effectiveness of the investigation of such types of crimes is affected by many factors of subjective and objective nature; and one of which is the degree of development of criminalistics techniques. The purpose of the last one is assistance to the most successful achievement of problems of criminal proceedings. In order to talk about the state of scientific development of this issue, we should analyse all existing techniques and scientific developments of criminologists.

## 2. Statement of the basic material

According to Art. 190 of the Criminal Code of Ukraine, fraud is the taking possession of someone else's property or the acquisition of the right to property by deception or breach of confidence. The existence of deception or breach of confidence is the main point here. And information, which was published by participating firms of the PwC network, which conducted the ninth Global Economic Crime and Fraud Survey, is rather interesting. Such information is based on responses received from more than 7,000 respondents from 123 countries of the world. Thus, according to a 2018 survey, 48% of Ukrainian organizations suffered from economic crime and fraud over the past two years, compared with 43% in 2016. Corruption remains one of the main types of economic crimes, the negative impact of which is experienced by Ukrainian organizations. It is interesting that 73% of respondents answered that their organizations have been victims of corruption over the past two years. The most common five forms of economic crime and fraud also include: misappropriation of property, fraud in the field of procurement, fraud in the field of personnel management and cybercrime (Vsesvitnie doslidzhennia ekonomichnykh zlochyniv ta shakhraistva 2018 roku).

In general, in the science of criminal law, a fairly significant number of methods of fraud are identified. Analysis of criminal science literature (Shepitko, 1998;

Shulha, Plakhotina, Balaniuk, 2013) made it possible to distinguish the following types:

- 1) depending on the direction of the fraudulent encroachment: in order to seize state or collective property (by obtaining this property with the help of fake documents at the bases, warehouses, and other objects using the omissions of the corresponding officials; by illegal receiving the state pensions or other payments from social security authorities by means of counterfeit documents on work experience, or salary or any other data, which are necessary for receiving pensions; by purchasing certain goods in credit for counterfeit documents and avoiding payment of the remaining amount; assignment of the property which is mistakenly released in a large number or the best quality; receiving an advance on a promise to perform certain work or for the supply of goods with subsequent evasion from the fulfilment of obligations under the contract; supply of goods in a smaller quantity and of lower quality than stipulated by the contract); supply of goods in a smaller quantity and of lower quality than stipulated by the contract); in order to seize the individual property of citizens (substitution of items of sale, exchange and money, which should be in order to pass to the counterparty, the sale of products that are of lower quality than it is written in the agreement, carrying out lotteries, divination or empiricism as a form of lending, borrowing money without the intention to return a debt, marital fraud, collection of "donations", sale of inalienable property, fraud with payment cards, etc.);
- 2) depending on the sphere of social and economic activity: social assistance, domestic services, insurance, tourism, removal of workforce abroad, etc.;
- 3) depending on the nature of "relationships" that arise between enterprises or economic partnerships: fictitious representation, fictitious mediation, borrowing under fictitious projects.

The mentioned number of methods of fraud is simply impressive and they are not exhaustive. Any sphere of human life connected with the circulation of finance can serve as a field for fraudulent actions. Despite a variety of ways of fraud, investigation of such crimes has its peculiarities. For example, the algorithm of actions at an initial stage of investigation of fictitious business will differ from the algorithm of actions at the investigation of marriage fraud and so on. Therefore, the development of separate investigative techniques is required.

As S. S. Cherniavskyi states, for the investigation of financial fraud, it is necessary to develop a complex methodology that will have two components: general provisions (foundations) that will reveal criminalistics characteristics of various fraud and special (separate) investigative techniques, which will be distributed according to different criminological significant features (for example, in the field of financial activity, depending on the specifics of individual operations, etc.).

The reason for developing a comprehensive methodology for investigating financial fraud is the need for law enforcement practice since the individual features of these crimes are closely connected with the process of proof, which determines the specifics of nomination and verification of versions, planning of the investigation, conducting investigatory (search) operations, operational search activities, their complexes, etc. (Cherniavskiy, 2009).

Considering all the mentioned above, it is necessary to study and analyse the state of scientific development of techniques for investigating various types of fraud. Also, it is necessary to evaluate the possibility and effectiveness of providing them with practical units for the prompt, complete, comprehensive disclosure and investigation of such crimes.

The conducted monitoring made it possible to form a candidate's dissertation research in chronological order, which was conducted and passed its Ph.D. defence in Ukraine and devoted to the problems of investigation of fraud. Particularly, we are talking about such theses as: Kurman O. V. Methods of investigation of fraud with financial resources (Kharkiv, 2002); Musienko O. L. Theoretical principles of investigation of fraud in modern conditions (Kharkiv, 2007); Pazinich T. A. Forensic characteristics of fraud and main provisions of their investigation (Kharkiv, 2007); Golovkin S. V. Forensic characteristic of fraud against the property of the person and its use at the initial stage of the investigation (Odesa, 2008); Anapolska A. I. Investigation of fraud and related crimes committed in the field of electronic payments (Kharkiv, 2010); Ishchuk I. V. Initial stage of investigation of fraud in motor vehicle insurance (Kyiv, 2010); Dekhtiarov Ye. V. Peculiarities of investigation of fraud committed in the field of performance of economic and contractual obligations (Kyiv, 2011); Okhrimchuk T. V. Forensic characteristics of fraud with financial resources and main directions of investigation (Kyiv, 2011); Popova I. M. Investigation of fraud involving the attraction of citizens' funds for housing construction (Kyiv, 2011); Teriokhin D. G. The initial stage of the investigation of fraud committed through the illicit obtainment of a targeted consumer loan (Kyiv, 2011); Knyazev S. M. Investigation of fraud committed by a financial pyramid (Kyiv, 2012); Kruzhevskiy A. V. Forensic characteristics of fraud in the field of mobile communications (Kyiv, 2012); Andriiv D. M. Investigation of crimes aimed at taking possession of housing (Kyiv, 2012); Kurulenko N. Yu. Methods of investigation of fraud in the sphere of household relations (Odesa, 2013); Mudriak T. O. The criminal investigation of fraud with financial resources (Irpin, 2013). Along with this, we should also mention the thesis for a Doctor's degree – Theoretical and practical principles of the methodology for investigating financial fraud (Kyiv, 2010) by Cherniavskui S. C.

As can be seen from the mentioned above, many types of frauds were not at all a subject of scientific research, and this greatly affects the process of their investigation. We can state that most of these studies are devoted to the investigation of fraud with financial resources but, unfortunately, other types of committing frauds remain rather unexplored.

As a positive moment, we can highlight that along with the dissertation research, there are also monographs devoted to the investigation of fraud. Particularly, we should mention the monograph of N. V. Pavlova. Investigation of fraud during signing civil-law agreements on alienation of housing, 2007. In this research, a forensic description of fraud in the housing sector and the algorithms of investigator's actions in typical investigative situations for the investigation of such crimes are given. Besides, the features and tactical methods of conducting separate investigative actions during the investigation of the mentioned frauds (Pavlova, 2007) are described.

In 2009, S. S. Chernyavskiy in his monograph conducted a comprehensive analysis of the phenomenon of financial fraud and its manifestations in Ukraine. The author examines the basics of the methodology for investigating such frauds: in the sphere of distribution and use of budgetary funds, in the credit and banking sphere, in the field of insurance, in the sphere of activity of non-bank financial and credit institutions, in the sphere of securities circulation and in the stock market, in the sphere of using computer networks. The scientific and practical principles of forming a complex method of investigation are defined there as well (Cherniavskiy, 2009).

In the same year, under the editorship of Professor V. Yu. Shepitka, O. L. Musienko also publishes a monograph "Theoretical principles of investigation of fraud in modern conditions". In this work, he describes either the theoretical basis of fraud (the concept, the psychological mechanism for the implementation of a criminal act (activities), types and forms of fraud) or the content of forensic characteristics of fraud and the actual issues of the investigation. Particularly, the types and methods of commissioning were determined, the investigation situations and the main directions of the investigation were typified, the investigative versions were proposed, features of the tactics of conducting investigative actions and operational-search measures were considered (Musienko, 2009) in this monograph.

For the practice of investigating such crimes, it is necessary to provide methodological support. These recommendations contain a clear algorithm for an investigator regarding the initial and subsequent stages of the investigation of various types of fraud. But for today we have found only a small number of them.

So, in 2010, the methodical recommendations "Features of the investigation of fraud committed in the field of electronic payments" were published. They are devoted to the issues of disclosure and investigation of

such a fraud. Particularly, typical investigative situations of the initial stage of investigation of such types of fraud, planning and organizing the interaction of participants in the investigation and the peculiarities of the preparation and conduction of separate investigative actions (interrogation, review of the scene, search, examination) (Anapolska, Kovalenko, Koriakin, Sumtsov, 2010) are given there.

In 2011 O. V. Pchelina and V. V. Kornienko published methodological recommendations "Peculiarities of investigation of crimes caused by credit and financial operations". There you can find a forensic description of crimes committed through credit and financial transactions, practical advice on their effective disclosure and investigation. Especially, the features of the initial stage of the investigation, typical investigative situations and their respective tactical tasks of investigation, especially the conduct of individual investigative actions and tactical operations, the features of the investigating and operational group operations in the premises of the commercial bank, as well as the interaction of the investigator with state supervisors and supervisors are defined in this research (Pchelina, Kornienko, 2011).

### 3. Conclusion

As can be seen from the information above, today there is a significant number of scientific works devoted to the investigation of certain types of fraud, which are obsolete and need to be improved over time. It is positive that they are still able to fulfil the methodical recommendations on investigating such crimes in a certain way and with necessary information. At the same time, most types of fraud still remain methodically not developed and require some scientific attention, and the practice of investigating such types of crime nevertheless requires methodological support based on scientific developments. Unfortunately, the quantity of the last mentioned is small, and this is one of the reasons for the amount of undisclosed fraud at the beginning of the article. Therefore, there is a need for the creation of new techniques that have not been reflected in the writings of scientists regarding the investigation of various types of fraud. It is offered young and experienced scientists to pay attention to other types of fraud and to formulate on the basis of their own research methodical recommendations for practical units.

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## STRUCTURAL AND LEGAL ANALYSIS OF BANKING SAFETY IN UKRAINE

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**Abstract.** The article is devoted to the scientific analysis of Ukraine's economic activity under the conditions of European integration processes. It is stressed that the value of the current economic activity is primarily determined by the processes of globalization, the formation of market relations, need for creation of guarantees in these conditions that will ensure a decent life for all members of society because of the need for ensuring the economic and overall national security of Ukraine. However, it is necessary to consider that the access to world markets and formation of an open economy also mean an internal stability of the economy and financial system of the state. *The purpose* of the article is to clarify the concept of banking security, its main components and levels of development. The report data of the Deposit Guarantee Fund (DGF) and the Prosecutor General's Office of Ukraine for the last years have been analysed. It also testifies about the lack of control and superficial attitude of the controlling bodies towards the processes of the banking sphere criminalization. It is determined that the DGF indicators do not correspond to those of the Prosecutor General's Office of Ukraine reports regarding the crimes committed in the sphere of banking. The government of Ukraine should focus on domestic reforms, the creation of living standards, economics and politics in Ukraine, which are as close as possible to European. Only then it is possible to implement effective mechanisms aimed at neutralizing, minimizing the impact and eliminating the phenomena and factors leading to the creation of external and internal threats to the state's financial security.

**Key words:** banking activity, banking security, state, economy, economic activities, world-economy, economic legislation, economic transformation, integration, globalization.

**JEL Classification:** D63, G21

### 1. Introduction

Ukraine has made a European choice as the main direction of its state policy, both internal and external, whose ultimate goal should be the full membership in the European Union. For Ukraine, European integration, on the one hand, this is the way of modernization of the economy, attracting foreign investment and technologies, increasing the competitiveness of domestic manufacturers, access to world markets, including the market for financial services. On the other hand, access to world markets, the formation of an open economy also means that the economy and financial system of the state must be internally stable, able to withstand the risks that accompany the processes of globalization and European integration.

The processes of integration of the Ukrainian banking sector into Europe provide for the taking concrete measures aimed at ensuring the stability and enhancing the banking sector competitiveness.

Crime in the banking sphere was the focus of many researches in Ukraine; however, they do not have a comprehensive scientific analysis of banking criminal legal protection. To solve the criminalization problem in banking, as well as to protect customers' rights and improve their financial health taking into account the interests of creditors, the appropriate mechanisms are introduced. And this, in turn, requires regulatory and legislative framework improvement. Effective functioning of the Ukrainian banking system, as well as individual banking institutions, requires the conditions under which the impact of external and internal adverse factors will not result in negative effects. They can be provoked by any transformations that arise under the instability against reforming the banking system and military events in eastern Ukraine.

Particularly relevant in the context of strengthening the European integration processes of Ukraine is the determining the legal framework for ensuring bank

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security, which must comply with the international standards established. Strengthening the country's banking security and adapting domestic legislation to the provisions of the Directives of the European Parliament and of the Council are complicated by significant criminalization of the Ukrainian banking sector.

Modern EU regulatory requirements and mechanisms aimed at reducing credit risks and ensuring the financial sector stability in foreign countries can be ratified and properly implemented in domestic legislation, in particular, in the Ukrainian banking sector, only if the level of shadow economy of Ukraine and the criminalization of economic processes are reduced, in particular in banking.

The European integration intentions of Ukraine have made changes to the development of its economy and, in particular, to the financial sphere. Substantially, these changes affected the banking system development, which is a systemic element of the financial and credit market. The essence of these changes manifests itself in the increase of foreign banks presence, the need to implement the EU banking legislation norms and methods of banking business in the domestic practice. All this determines the urgency of the effective development of economic and legal aspects of Ukraine's banking security in the European integration context. In the economic system of Ukraine, banks often play a crucial role, and hence the issue of banking security has been widely covered in the economic literature. Baranovskyi (2014) reveals that such a decisive role of banks is primarily due to the simultaneous functionality of a bank as a monetary institution, financial intermediary, and securities market intermediary.

M. Kurylo, A. Klochko, D. Zhuravlov, H. Javadov (2018) reveal that permanent or sudden negative effects that arise in any field of activity may affect the final result of the bank's activities. They may be of different origin and can cause damage both to the banking institution itself and to all entities with which it is associated. Therefore, it is necessary to ensure conditions, under which the action of external and internal factors will not lead to negative processes.

Such conditions form a complex concept of banking security, which leads to a significant number of approaches to its definition. Vasylychak (2009) finds out that the security of a bank is a state of sustainable life, which ensures the implementation of the main interests and priorities of the bank, and protection from external and internal destabilizing factors. Prokopenko (2014) considers banking security as a qualitative attribute and characterizes it as a state, in which there are no dangers.

Vovchenko (2015) appeals to the complex and multidimensional notion of banking security. He interprets it as a certain state; possibility of further development; function of the state; regulation of the obligatory economic standards and requirements; the activities of the central banks, state bodies, as well as

commercial banks for management functions while conducting banking transactions and making the deals; a set of technical regulations and requirements.

According to Deloitte International Company, 93% of respondents claim the level of fraud in the banking sector has increased significantly over the past two years. Considering significant losses, banking institutions should develop appropriate measures to improve banks' reputation (Jayaprakash, 2016). A similar issue is the focus of the international study by Migiro (2016), who studies the optimizing the bank's loan portfolio and credit rating as the ways to improve bank efficiency and financial stabilization of the banking system. In their study, Swanepoel and Smit (2016) have proven that the banking industry sustainability plays a significant role in overall economic development. Shcherbatykh (2016) links the security of a single bank with the security of the banking system as a whole. In his opinion, they affect one another. Problems that arose in one bank can cause a "domino effect" and lead to a systemic banking crisis.

According to Weigand (2016), "U.S. banks continue to exhibit a more robust post-crisis recovery, while Japanese and European banks continue to experience crisis-level conditions." Similar dynamics are also observed in the banking segment of the United Kingdom since the total amount of fraud loss in 2016 amounted to 200.1 billion pounds sterling. Fraud losses are distributed according to the type of services provided: payment cards, checks or remote services. In the UK, for example, about 80% of fraud occurs with payment cards, 18% – in the remote customer support, and only 2% of violations are related to checking transactions (Steele, 2017). Konig (2017) notes that recent financial crises have highlighted the need to create an effective structure for large EU banks at the international level in order to enhance financial stability. Improving the banking system stability, for example, assessing credit risk and improving bank decision-making processes are discussed by Al-Shawabkeh and Kanungo (2017). Weigand researched efficiency, growth, combination of assets, risk, operational efficiency, profitability, and capital reserves of the 20 largest banks in Japan, the United States, and Europe for 2003-2015 and made a conclusion that all banks hold more capital of the first level, than it is provided by the Basel III agreement, which led to a deep decrease in their net profit and returns on equity. Nowadays, Ukraine needs solving the issue that arose in the new political and economic conditions (Klochko et al., 2017). Moreover, the active course of Ukraine at European integration involves bringing banking legislation in line with the EU requirements (in particular, with regard to the implementation of the provisions of the Basel Committee on Banking Supervision directives). As a part of the implementation of the EU-Ukraine Association Agreement and the Comprehensive Program for the Development of the Financial Sector of Ukraine by 2020, the NBU continues

to implement the EU directives in the Ukrainian banking activities. However, these processes are accompanied both by positive and negative shifts, in particular, by raising the level of social relations criminalization in the banking sector. This is to some extent due to the fact that the domestic banking system is not yet sufficiently adapted to the crisis in the economy and the dynamic changes in legislation, as well as to the spread of various abuses and corruption in this area. Therefore, any changes are stressful and are accompanied, as a rule, by unpredictable processes, which lead to socially dangerous consequences. The purpose of the article is to analyse the legal principles of banking security and its correlation with the criminological security of banking institutions in the context of European integration of Ukraine. The authors' research focuses on developing economic and legal measures directed at strengthening the country's banking security.

As another example, the Fund for the Guaranteeing of Individuals' Deposits (2016) has recently filed 234 applications against the owners and managers of insolvent banks totalling 88.7 billion UAH, of which claims for making the bank insolvent amount to 36.9 billion UAH. In total, the Fund filed 1,291 applications for crimes totalling 115.9 billion UAH. Khvorostina and Yanitskiy (2017) reveal that according to the Fund's executives, more than 117 939 enforcement proceedings on their claims are executed in the State Enforcement Service bodies as of February 23, 2017. But it is very difficult to find examples of criminal cases initiated, and even more so with regard to cases brought to trial. The purpose of the article is due to the fact that banks in the economic system of Ukraine play a decisive role. In previous studies, authors have repeatedly emphasized that the Ukrainian banking is a valuable object of criminal law protection (Klochko & Nezhevelo, 2017), which requires legislative changes aimed at the formulation of appropriate security provisions.

The article explores the concepts of banking security, criminological security of banking institutions, their content, relationships, and values for accelerating the bringing of Ukraine's legislation in line with the international law, in particular with the provisions of the EU Directives on Banking Supervision. The methodological basis of the article is a set of methods and techniques of scientific cognition.

As a general scientific method, a systematic approach is used, which allowed us to determine the problematic issues of adaptation of the Ukrainian legislation to the international legislation provisions. The use of this method determined the study of internal causation, structural-functional, hierarchical, direct, and inverse relations, which allowed identifying the complex processes of banking development in Ukraine, the nature of certain economic processes and phenomena.

The documentary analysis made it possible to develop proposals and recommendations for further

development of the criminal statistics in order to find out the actual state of criminalization of the banking activity in Ukraine. Transformation processes in Ukrainian banking sector demonstrated that the National Bank of Ukraine (hereinafter – NBU) does not perform sufficient functions to ensure the hryvnia's stability (three significant devaluations: 1998-1999, 2008-2009, and 2014-2017), and also to hold price stability. There are instability and widespread bankruptcy of banks. Special attention should be paid to some discrepancy, namely: the share of crime in the economic, financial, banking, and budgetary spheres has not exceeded 3% in recent years. The comparison method allowed to compare the existing categories of banking security and the criminological security of banking institutions and to conclude that the existing economic and legal categories are, to a certain extent, interrelated and interdependent. This is due to the fact that their content reflects in general the state of its security of banking institutions from external and internal destabilizing factors. The authors also addressed the relevant legal journalism, on pages of which separate questions are being discussed concerning the issues of the research. Methods of legal statistics were used to determine the quantitative indicators of certain types of criminal offences in banking.

The study objective is to analyse the current Ukrainian legislation (the Criminal Code of Ukraine) aimed at preventing violations of banking legislation and making suggestions for their improvement.

## **2. Criminal offenses in banking or the 2013-2018 period according to annual reports' data of the Prosecutor General's Office of Ukraine**

Reported data of the Prosecutor General's Office of Ukraine also contain contradictory and ambiguous criteria for determining the indicators of committing crimes in the banking sector. In particular, in the annual reports of the Prosecutor General's Office of Ukraine from 2011 to 2017, there are concepts that indirectly characterize the number of criminal offenses committed in the banking sector. In particular, we are talking about the following categories: crimes in the sphere of economic relations on credit and financial activity; crimes in the banking system; crimes in the field of economic activity; crimes in financial and insurance activities; crimes in the field of monetary intermediation; crimes related to the central bank activities; crimes in other types of monetary intermediation; crimes in other types of lending; crimes with regard to other financial services except for insurance and pension provision.

Thus, according to the report on the Prosecutor's work for 12 months of 2013, 527 criminal cases were filed in the field of economic relations on credit and financial activity; in the banking system – 260.

According to the report of the Prosecutor's work for 11 months of 2014, 141 criminal proceedings were instituted in the field of economic relations on credit and financial activity; in the banking system – 89.

During 12 months of 2015, according to the report on the Prosecutor's work, 175 criminal proceedings in the sphere of economic relations on credit and financial activity were instituted. Note that in the 2013 report, there is no criterion of crimes committed in the banking system, as indicated in the previous reports on the Prosecutor's work for 2013-2014.

According to the unified report on criminal offenses for 2013, taking into account the classification of offenses in banking specified above, we have registered: under Article 200 of the Criminal Code of Ukraine – 260 criminal offenses; under Art. 222 of the Criminal Code of Ukraine – 327; under Art. 231 of the Criminal Code of Ukraine – 17; and under Art. 222 of the Criminal Code of Ukraine – 12 criminal offenses were registered.

According to the report on the Prosecutor's work for 12 months of 2014, 7 criminal proceedings were initiated in the area of economic activity to prevent and counteract the legalization of proceeds from crime, 1 of which was sent to the court. It should be noted that in the 2014 report, there is no criterion such as "credit and financial activity", which is indicated in the previous reports for 2011-2012. According to the unified 2014 report on criminal offences, the following is recorded: according to Art. 200 of the Criminal Code of Ukraine – 285 criminal offenses; under Art. 222 of the Criminal Code of Ukraine – 345; under Art. 231 of the Criminal Code of Ukraine – 26; and under Art. 232 of the Criminal Code of Ukraine – 8 criminal offenses.

In the report on the Prosecutor's work for the 12 months of 2015, the quantitative criteria by the activity areas have disappeared. Thus, according to the unified report on the criminal offenses for 2015, it is recorded: under Art. 200 of the Criminal Code of Ukraine – 238; under Art. 222 of the Criminal Code of Ukraine – 129; under Art. 231 – 14; and under Art. 222 of the Criminal Code of Ukraine – 5 criminal offenses.

According to the unified report data on the criminal offenses for 2016, the following is recorded: under Art. 200 of the Criminal Code of Ukraine – 167 criminal offenses; under Art. 2181 of the Criminal Code of Ukraine – 6; under Art. 2201 of the Criminal Code of Ukraine – 1; under Art. 2202 of the Criminal Code of Ukraine – 1; under Art. 222 of the Criminal Code of

Ukraine – 62; under Art. 231 of the Criminal Code of Ukraine – 19; and under Art. 232 of the Criminal Code of Ukraine 7 criminal offenses were recorded.

The data of the report on the criminal offenses committed at the enterprises, in institutions and organizations by type of economic activity in 2015 show: with regard to financial and insurance activities there were 4,983 registered criminal offenses, out of which 1,104 were in the field of monetary intermediation (among which with regard to the central bank's activity 462 criminal offenses were registered, other types of monetary intermediation – 642). In the sphere of financial leasing, 76 criminal offenses were registered; other types of lending – 1,112; in the field of providing other financial services except for insurance and pensions 3,420 criminal offenses were registered.

In 2017, according to a unified report on the criminal offenses, pre-trial investigations for which were carried out by the National Police, the following was recorded: under Art. 200 of the Criminal Code of Ukraine, 383 criminal offenses were registered; under Art. 2181 of the Criminal Code of Ukraine – 4; under Art. 2201 of the Criminal Code of Ukraine – 0; and under Art. 2202 of the Criminal Code of Ukraine – 1 criminal offense (Ter-Akopov, 2003). Specified information on criminal offenses in banking for the period of 2011–2016 according to data of annual reports of the Prosecutor General's Office of Ukraine is presented in Table 1.

Taking into account the classification of offenses in banking proposed by the authors, their dynamics are seen in accordance with the available data of the Prosecutor General's Office of Ukraine (Table 3).

The problem is the lack of the courts' practice of using criminal liability legislation for offenses committed in the banking sector. Directly related to these categories of criminal offenses is the Resolution of the Plenum of the Supreme Court of Ukraine No. 3 dated April 25, 2003: "On the Practice of Using by the Courts the Legislation Regarding Liability for Certain Crimes in the Economic Activity". The provisions of the Resolution of the Plenum of the Supreme Court of Ukraine No. 5 dated April 15, 2005, are also useful in considering certain types of crimes in banking: "On the practice of applying by courts the regulations of criminal liability for legalization (laundering) of proceeds from crime". However, the lack of a concretized practice in criminal cases concerning offenses committed in the banking sector complicates their effective judicial review and fair decisions adoption.

Year	Art. 200 of the CC of Ukraine	Art. 209 of the CC of Ukraine	Art. 218 <sup>1</sup> of the CC of Ukraine	Art. 219 of the CC of Ukraine	Art. 220 <sup>1</sup> of the CC of Ukraine	Art. 220 <sup>2</sup> of the CC of Ukraine	Art. 222 of the CC of Ukraine	Art. 231 of the CC of Ukraine	Art. 232 of the CC of Ukraine
2015	238	58	-	-	-	-	129	14	5
2016	167	140	6	-	1	1	62	19	7
2017	383	160	7	-	3	2	67	24	17
2018	392	n/a	6	-	1	1	55	36	17



### 3. Economic and legal aspects of banking security under European integration intensification in Ukraine

The National Bank of Ukraine (hereinafter – the NBU) is carrying out work on the implementation of the four fundamental acts for the banking sector: EU Directive 2013/36 and EU Regulation No. 575/2013 (the so-called CRD/CRR IV package), which establishes the rules for access to credit institutions' activities, defines supervisory powers and instruments of prudential supervision; Directive 2002/87/EU on supplementary supervision of banking groups; Directive 2009/110/EU, which defines the rules for the establishment, implementation and prudential supervision of the activities of institutions working with electronic money. In addition, the NBU continues to adapt its own regulatory framework, taking into account the recommendation of the FATF Anti-Money Laundering Group and the provisions of the EU acts, in particular, Directive 2015/849/EU and Regulation 2015/847/EU.

They relate to enhancing the efficiency of prevention and counteraction to money laundering and terrorism financing. Banks often don't share much about their security techniques since they don't want to tip off criminals on how best to attack them. Whether they talk about it or not, financial firms should be encrypting data, segregating credit card information from other types of data, and making web applications as secure as possible (Palmer, 2011).

The superficial attitude of banking institutions to their own security leads in some cases to negative consequences, the most unfavourable of which are criminal offenses. In the context of the banking activity criminalization in Ukraine, the adaptation of domestic legislation to the EU requirements must be secured appropriately at the criminal law level. The criminological security of a banking institution is defined as its protection against criminal threats by means of factors that will enable them to anticipate, avoid or counteract them, taking into account certain environmental conditions specially created. As practice shows, banking institutions suffer the greatest losses from criminal offenses, which in criminological terms can be divided into the following groups: mercenary and violent crimes; financial and economic crimes; computer thefts.

Consequently, criminal threats to the banking institutions security by their sources are divided into two different types in terms of the nature and degree of danger: external – the output of certain factors of the banking institutions environment; and internal – the output of the banking system itself. Criminological security in this aspect is defined as a state of protection of banking institutions, property and individuals from external and internal threats by criminal law (Ter-Akopov, 2003).

In the current Criminal Code of Ukraine (hereinafter – the CC of Ukraine) among the criminal law prohibitions imposed by the legislator, which establish liability for illegal acts in banking, we distinguish a group of criminal law standards in accordance with their specific object. This group includes the following crimes: illegal actions with transfer documents, payment cards and other means of access to bank accounts, electronic money, equipment for their production (Article 200 of the Criminal Code of Ukraine); legalization (laundering) of proceeds from crime (Art. 209 of the CC of Ukraine); bringing the bank to insolvency (Art. 2181 of the Criminal Code of Ukraine); making the bank bankrupt (Art. 219 of the Criminal Code of Ukraine); violation of the rules of conducting a database of depositors or the rules of reporting (Art. 2201 of the Criminal Code of Ukraine); falsification of financial documents and financial institution reporting, concealment of a financial institution insolvency or grounds for revoking (cancelling) a license of a financial institution (Art. 2202 of the Criminal Code of Ukraine); fraud with financial resources (Art. 222 of the Criminal Code of Ukraine); illegal collection for the purpose of using or making use of information constituting commercial or banking secrets (Art. 231 of the Criminal Code of Ukraine); and disclosure of commercial or banking secrets (Art. 232 of the Criminal Code of Ukraine). All these crimes are intentional and unlawfully motivated.

IT supports nearly all processes or makes such processes possible in the first place (Kokert & Held, 2013). Direct banks are subject to the same laws and regulations as traditional banks. Sophisticated encryption software is designed to protect your account information, but no system is perfect. Accounts may be subject to phishing, hacker attacks, malware and other unauthorized activity (Michael, 2018). The importance of information and communications technology (IT) for credit institutions has grown substantially over the past two decades.

Taking into account the active course of Ukraine for European integration and related economic reforms, we can confidently state that the dynamic development of social relations in Ukraine outstrips the development of its legislation. The complication of social relations in the process of their development in Ukraine, inconsistent administrative decisions, which lead to more negative than positive changes, ignoring positive foreign experience in the field of ensuring the banking sector security in Ukraine, and simultaneously “superficial” perception by the legislator of the course of humanizing criminal legislation without taking into account the peculiarities of functioning the country's economic system and its key components during the period of instability and military conflicts lead to an increase in the public relations criminalization in Ukrainian banking.

Thus, public relations, not sufficiently regulated at the legislative level, are not good for strengthening the



national economy; what is more, they complicate its development and make the support through foreign investments impossible. This is due to the fact that the current legislation of Ukraine is not capable of providing adequate banking security with its norms, including criminal law ones. In particular, the analysed statistical indicators of recent years show a significant level of banking criminalization in Ukraine. Note that due to the lack of their unified accounting and systematization, these data cannot be considered absolutely accurate, although they are as close as possible to the actual state of criminal offenses committed in the investigated sphere, as they are determined based on the information reflected in the annual reports of the Deposit Guarantee Fund (hereinafter – DGF) and the annual reporting statistics of the Prosecutor General's Office of Ukraine on the crime rate.

It should be noted that the issue of latent crime in the banking sector, which is believed to be the usual documentary or financial mistakes, is being unduly neglected by analysts of law-enforcement bodies and criminologists.

The DGF was formed in accordance with the Decree of the President of Ukraine: "On Measures to Protect the Rights of Individuals – Contributors of Commercial Banks of Ukraine" No. 996/98 dated September 10, 1998. However, the available DGF data on the number of offenses committed are from 2010 in the open press. Note that these data are not sufficiently specified, therefore, we consider them to be somewhat superficial.

In particular, according to the DGF, information on criminal offenses committed in the field of banking is available from 2014. And from 2010 to 2013, reporting data on audits carried out by the DGF as a controlling body is presented in the framework of ensuring the functioning of the deposit guarantee system, protecting the rights and interests of depositors who are participants or temporary participants of the DGF. That is, the open press gave no completely accurate information on the crimes committed in this period in DGF banking activity. Thus, according to the DGF report, in 2010, 101 violations were detected among 50 DGF participants (temporary participants).

In total, in 2011, 97 violations were detected among 58 participants. The total number of banks in which database management deficiencies were found out based on the Instruction on the creation procedure of individual depositors' database from the DGF participants, approved by the DGF Administrative Council decision as from November 14, 2002 No. 13, was 46 banks, which is 22.44% of the total number of established violations by banks in 2012. In 2013, 524 violations were detected among 87 DGF participants.

Available data is on criminal offenses in banking for the period of 2013-2016 according to the DGF annual reports. In 2014, the DGF began active work to bring to

justice the perpetrators of offenses in insolvent banks. The DGF developed Guidelines for the DGF authorized persons to initiate criminal prosecution of perpetrators. As of December 31, 2015, 2 494 applications on criminal offenses were filed by the DGF authorized persons to the Ministry of Internal Affairs, the Prosecutor's Office, the Security Service of Ukraine, and the State Fiscal Service (hereinafter – the SFS). In the same year, upon 10 applications, the suspected persons were notified on suspected malfeasance (crimes amounting to 26,090 bln UAH); 105 applications closed the proceedings; materials for 6 applications were sent to the court; in one case, the court issued a verdict of not guilty (the case concerns the funds of PJSC "Tavrika Bank" in Meinbank) (Richnyi zvit, 2016).

According to the 2016 results of the DGF Department of Investigation of Offenses and the DGF authorized persons, 1 113 references on criminal offenses were sent to law enforcement agencies, according to the results of which, 492 criminal proceedings were instituted, 9 of which were indictments to the court.

Also, in 2016, within the investigating criminal proceedings, in order to provide compensation for damage caused by criminal offenses, the DGF filed 103 civil lawsuits. Improving criminal records of crimes committed in the banking sector and analysing the consequences of these criminal offenses will allow to conduct a deep analysis and to focus the efforts of both theorists and practitioners on identifying and eliminating the causes and conditions that create a favourable environment for committing these abuses. It is difficult to understand at the present time which criteria are used to compile the DGF reports and those of the Prosecutor General's Office of Ukraine regarding the abuses committed in the area investigated. The ambiguity of terminological definitions in these reports also does not allow for objective information about their objective indicators. So, among the terms, DGF experts apply when presenting statistical data on offenses in the banking business, the following are used: bank breach, the violation in insolvent banks, and criminal offenses.

#### 4. Conclusion

The necessity of criminal law protection of banking activities is due to the increased public danger of these acts at the present stage of the society's functioning, the crisis in the financial and banking spheres, the urgent needs to eliminate the gaps in the current legislation of Ukraine on security issues in the banking sphere. In addition, directly within the banking sector, the introduction of a regulatory framework for warning against possible crimes, the attraction of qualified and highly moral personnel, the introduction of effective systems for the banking information protection, etc., should be priority areas of management. The provisions of the Basel Committee on Banking Supervision reflect the high and uniform

standards in banking regulation and supervision. Dealing with long-term systemic security problems in banking is a crucial task in the area of adaptation of the Ukrainian banking legislation to the EU requirements.

Adaptation of Ukraine's legal standards to the EU Directives' requirements should be made by amending certain legislative acts of Ukraine in order to increase the trust between banks and their clients; criminalization of actions in banking that contain a sign of social danger; liberalization of currency transactions to promote investments and exports; improvement in protecting the rights of financial service consumers; ensuring the NBU activities transparency and increasing its liability to society, improving the deposit guarantee system. It is necessary to form the proper jurisprudence for dealing with offenses in banking in order to properly assess them and bring the perpetrators to justice. At the same time, it is necessary to introduce a unified terminology that would indicate offenses (administrative and criminal) in the banking sector. At the present time, the procedure for preparing statistical reports (accounting) for criminal offenses is regulated by departmental orders.

Therefore, at least, it is necessary to have a general unified procedure for such reporting or adoption of a separate Law of Ukraine "On Criminal Records". Such legislative changes would have an effective impact on reducing the level of the banking sector criminalization

in Ukraine, which would have a positive effect on accelerating adaptation processes of domestic legislation to international standards. Under unfavourable market conditions and outflow of capital, the problems of the banking sphere criminalization in Ukraine cause crisis phenomena, which complicate the adaptation of the domestic legislation to the EU Directives' requirements.

The actual state of things in the area of adaptation of Ukrainian legislation on banking security to European standards cannot be defined as satisfactory. Ukraine needs a thorough analysis of comments, recommendations, and proposals of European institutions on these issues. We believe that strengthening efforts and their effectiveness in this direction are also possible in the context of systematic public reporting of responsible authorities on taking these adaptation measures.

Lack of response of regulatory authorities to adverse conditions arising in the process of functioning of public relations in banking without the use of a specific strategy leads to socially dangerous consequences. However, the state has determined public and legal regulation and protection of social relations as its priority in banking. Therefore, it is necessary to create an appropriate adaptation strategy that would take into account and deal with a holistic range of problematic issues that complicate and slow down the NBU's tasks with regard to the integration processes of banking legislation.

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# CRYPTOCURRENCY IN THE SYSTEM OF MONEY LAUNDERING

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**Abstract.** *The target of the article* is to study the place of the cryptocurrency in the process of money laundering. *The subject of the article* is to investigate the ways and means of usage cryptocurrency for money laundering, the possibilities, and limits. *Problem's setting.* The authors of the paper have emphasized that despite the broad usage of cryptocurrency all over the world for different kinds of purchasing and transactions, there is no unified position regarding the definition of cryptocurrency, as well as its legal status. Moreover, the aforementioned circumstances trigger the difficulties during the criminal investigation of money laundering by using cryptocurrency. Thus, law informant agencies are facing challenges with the identification of criminals' personality and the fact of crime commitment. In addition, in the article, the authors articulate the main concept of cryptocurrency: anonymity and decentralization, which engender the main aggro while crime investigation. *Methodology.* The research is based on an analysis of historical stages of cryptocurrency creation: from Friedrich August von Hayek's idea of "currency independent from banking and governmental" to the establishment of decentralized currency. Moreover, there were analysed the cases of money laundering where criminals who used cryptocurrency have been identified and press charged. In addition, the comparative methods were used to collate different positions regarding cryptocurrency all over the world and inside Ukraine. The position of the main authorities and organizations regarding the legal status of cryptocurrency was investigated as well. *The results of the study revealed* that a cryptocurrency is a convenient tool for money laundering because it gives relative anonymity for the owner of the currency, as far as it does not require any personal information about the user and his location. Aforementioned feature minimizes the opportunity for law enforcement agencies to track back the criminal activity and to identify the criminal personality. Furthermore, cryptocurrency transactions are out of the government control because for conducting any transactions by using cryptocurrency, there is no need for their verification by third parties like a bank, governmental authority or nongovernmental organizations. In addition, the user can have more than one account and conduct transactions from different places at the same time.

**Key words:** cryptocurrency, money laundering, criminal investigation.

**JEL Classification:** K14, K24, L86, O17, O33

## 1. Introduction

XXI century became the era of skyrocket and rapid development of science and technology, which is unthinkable without the World Wide Web. However, the creation of the aforementioned indispensable tool counts less than 50 years.

In 1969, Charley Kline made first but an unsuccessful attempt of remote login the computer of Stanford Research Institute. This date can be considered as a day of creation of a new way of interaction between people all over the world. Then in 1989, Tim Berners-Lee offered CERN the concept of the new distributed information system, which he named the World Wide Web. Since that time all spheres of life step by step have shifted their main activities into the augmented reality of the World Wide Web. The same fate befell the

economy, which during the last 15 years has digitalized almost all main processes. The latest breakthrough in the digital economy was done by the creation of new means of payment – cryptocurrencies, which emission and accounting are based on asymmetric encryption by utilizing cryptographic methods of protection.

Currently, the attitude to the cryptocurrency has different avenues, from complete abnegation of its potential and benefits to all-consuming adoration as a future way for liberation out of financial government control. We do not support any of the radical viewpoints regarding cryptocurrencies considering it as a tool, which has advantages and disadvantages.

However, law enforcement agencies all over the world identify the use of cryptocurrencies for commitment to different types of crime, mostly correlated with

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economic and financial spheres, in particular, money laundering. Aforementioned anxiety triggers the necessity for deep research of ways and means of using cryptocurrencies in the process of money laundering, which determines the relevance of this article.

## 2. Literature review

The study of using cryptocurrency for illegal activities is under the consideration of such scientists as Bezverbnyi K., Kasatkin A., Kornev I., Krylov G., Robbek A., and others. However, despite the significant contribution of the aforementioned scientists into considering the topic, the current situation with usage of cryptocurrency for the commitment of economic crimes demands the deeper contemplation of it, especially regarding money laundering.

## 3. Brief characteristic of the virtual currency

The determination of money's origin was always the issue of discussions. Paul Anthony Samuelson wrote that "money is an artificial social convention" (Samuelson, 1993). Consequently, if the social convention was created it must have a purpose. Aristotle suggested that exchange requires the emergence of the equivalent payment instrument (Bechler, 1995). Inasmuch as exchange can be considered as a social agreement, thus the establishment of the money can be seen as a social treaty.

However, there are a lot of supporters of another theory of money's emergence. For instance, K. Marx laid the foundation of evolutionary theory, which later was finalized by Ludwig Heinrich Edler von Mises. He articulated that arise the inevitable tendency when means of exchange which were used became less exchangeable and were rejected one by one, until was lived that single goods which became universally applied as a means of exchange, in other words, as money (Mises, 2005). We support the viewpoint of David Rolfe Graeber who admitted that problem is that there is no evidence which proves the aforementioned theory, and however there are a lot of facts which refute it (Graeber, 2011).

Nevertheless, despite different opinion about roots of money, nowadays they have important role all over the world and can be considered as a bunch of socially recognized information, which has their own value, information about the amount of cost, which is recognized by business entities in the transactions correlate with goods and services, and sometimes with money themselves as a commodity of a special kind (Surikov, 2015).

Currently because of the Fourth Industrial Revolution (Schwab, 2016) and rapid development of IT technologies, the framework of economy was changed and caused the emergence of new phenomena – digital economy, which can be considered as a series of economic, social, and cultural activities that are performed online and are

related to the use of information and communication technology (Zupan, 2016). Thus, the digitalization of the economy has set up the boundless environment with renewed trading rules. Furthermore, it triggers the creation of the virtualization of the world bank system – a transformation of banking on the base of informational technology implementation into bank sector; according to the form, it is a transition of bank sector into electronic flatness of utilization, which can be seen in following forms: electronic banking, electronic payment systems (domestic and international) (Pelo, 2015).

Consequently, the high-speed rise of digital trade market and virtualization of the world bank system demanded the creation of the certain financial tool, which can be used via the Internet and ensured the high speed of transactions. Such kind of instrument has become virtual currency.

It should be noticed that comply with FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies "In contrast to real currency, 'virtual' currency is a medium of exchange that operates like a currency in some environments, but does not have all the attributes of real currency" (FCEN, 2013).

Virtual currency is different than electronic money, which is a digital means of fiat currency and is utilized for electronic transfer of reflecting fiat currency cost and is considered as a legal means of payment (Karcheva and Nikitchuk, 2015). Furthermore, the distinction between virtual currency and other means of payment is the method of the emission of payment units and the organization of their storage and transfers system.

In addition, "unlike gold or silver virtual currencies have no non-monetary use or value – they are just bits of data" (WSBI, 2014). Furthermore, the value of virtual currencies is based on the convention among system's users, which are working via the Internet (Dziuba and Orzeszko, 2015).

According to the European Central Bank position which was expressed in "Virtual currency schemes – a further analysis" "virtual currency is a digital representation of value, not issued by a central bank, credit institution or e-money institution, which, in some circumstances, can be used as an alternative to money" (ECB, 2015). Moreover, in report of the Financial Action Task Force, virtual currency is considered as a "digital representation of value that can be digitally traded and functions as (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction. It is not issued or guaranteed by any jurisdiction and fulfils the above functions only by agreement within the community of users of the virtual currency" (FATF, 2014).

Thus, "virtual currencies represent both the emergence of a new form of currency and new payment technology to purchase goods and services" (Bolt and Oordt, 2016).

There are three types of virtual currency: closed, virtual currencies with the unidirectional flow, and virtual currencies with the bidirectional flow.

In fact, closed virtual currency does not link to the real economic sector. It is intended for payment for virtual goods or services, for instance, virtual games, and cannot be utilized out of the virtual community. As an example, World of Warcraft (WoW) Gold can be taken, which is used in the computer game with a similar name (Karcheva and Nikitchuk, 2015). All unconvertible virtual currencies are centralized: according to the definition, they are emitted by the central administrator, which controls system, sets the rules for using the virtual currency, maintains a centralized payment register, and has right to withdraw currency from circulation (Karcheva and Nikitchuk, 2015).

*The virtual currency with unidirectional flow.* Such currency can be purchased according to a specially set course by using “real” currency; however, it is impossible to comply with the same course to exchange it backward. Such currency can be purchased according to a specially set course by using “real” currency; however, it is impossible to exchange it backward in conformity with the same course. Its main purpose is the payment of virtual goods and services, nevertheless, some of them allow paying for real goods and services. As an example can be taken Facebook Credit, Amazon Coins, Nintendo Points, bonuses for passengers, who often enjoy the services of the particular airline (Badzym and Drevush, 2014).

*Virtual currencies with the bidirectional flow.* Such currency can be purchased and bought according to a certain exchange course, in other words, to convert it (Badzym and Drevush, 2014). The term “converted currency” does not mean its official convertibility (for instance in a case of the gold standard) but only indicates its “de facto” convertibility (for instance, due to the existence of the relevant market). Thus, virtual currency is “convertible” only until that time, while individuals and legal entities carry out transactions with it, and another except it as far as “convertibility” of virtual currency does not insure by the legislation (Karcheva and Nikitchuk, 2015).

The main propose of it is payment for real and virtual goods and services (Badzym and Drevush, 2014). As an example of “converted currency,” cryptocurrency can be taken.

#### 4. The stages of cryptocurrency creation

Despite the significant popularity of cryptocurrency in Ukraine and other European countries, its particular definition still has not been articulated. We support the viewpoint that “cryptocurrency is a digital decentralized currency, a unit of which is a coin cryptographically protected against tampering since it is an encrypted information that cannot be copied, while all information about transactions is stored in the blockchain system” (Inshyn, Mohilevskyi, Drozd, 2018).

Very often the creation of cryptocurrency correlates with the replication to the social demand for a currency independent from banking and governmental institutions, after economic crises in 2008 when they lost their reliability.

However, the idea of private money is not new; it was articulated in the book of Austrian economist Friedrich August von Hayek “The Denationalization of Money.” His main idea was that government should be deprived of the money’s emission monopoly with a target to prevent the inflation process (Hayek, 1976). Furthermore, Milton Friedman in 1999 during the interview admitted that “...the Internet is going to be one of the major forces for reducing the role of government. The one thing that’s missing, but that will soon be developed, is a reliable e-cash, a method whereby on the Internet you can transfer funds from A to B without A knowing B or B knowing A, the way I can take a USD 20 bill and hand it over to you and then there is no record of where it came from” (WSBI, 2014). His prediction was precision because progressive instruments and systems are establishing neoteric paradigms for transactions and new channels of capital (Hileman and Rauchs, 2017).

It should be noticed that the roots of cryptocurrency go to the end of the previous century, in particular, in 1983 David Chaum offered the idea of combining transparency and anonymity of transaction for all users by utilizing “Blind signature” (Chaum, 1982).

Then in 1990th, the movement of crypto-anarchists was formed – cypherpunk whose idea was the usage of cryptography and other similar tools for changing the social order. In 1993, one of the founders of the cypherpunk Eric Hughes announced the confidentiality of transactions by using multi-step encryption and published.

In 1994, Timothy C. May published the work “The Cyphernomicon: Cypherpunks FAQ and More, Version 0.666” where he described safe untraceable encrypted transactions, which would use the P2P system which does not need verification by third parties and would cause the independent from the government (May, 1994).

In 1998, Wei Dai offered cryptocurrency “b-money”. He wrote “I am fascinated by Tim May’s crypto-anarchy. Unlike the communities traditionally associated with the word ‘anarchy’, in a crypto-anarchy, the government is not temporarily destroyed but permanently forbidden and permanently unnecessary. It’s a community where the threat of violence is impotent because violence is impossible, and violence is impossible because its participants cannot be linked to their true names or physical locations” (Dai, 1998).

In 2005, Nick Szabo created “Bitgold”. As a libertarian wing of cypherpunk inspired by the novel of Ayn Rand “Atlas Shrugged” he wanted to create “Galt’s Gorge” in the cyberspace – free trade zone. Firstly he came to the idea of creation smart-contracts, which was based on blockchain system in 1990th, and later on invented cryptocurrency.

## 5. The analyses of Bitcoin as a cryptocurrency

Currently, the most popular cryptocurrency which is used by bidirectional flow is Bitcoin. Bitcoin is decentralized P2P (Person to Person) payment network, which serves its users without central bodies and agents. From the users' point of view, Bitcoin is analogue of cash but only for the Internet (In Bitcoin information site). The maximum amount of Bitcoin in the world is restricted and cannot be more than 21 million.

The creation of Bitcoin is correlated with the name of Satoshi Nakamoto, who on September 3, 2009, via the Internet published an article "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2009), in which he described the main principals of new cryptocurrency. The main characteristics, which distinguish Bitcoin from traditional electronic money and cashless settlements, that Bitcoin is not debt obligations of the issuer.

Any person, who has access to the Internet and enough amount of computer memory, can be a user of Bitcoin. For this purpose, utilizer has on the official website to choose "wallet" and to install it. The wallet can be installed on the personal computer, mobile phone, or can be available via the Internet. It should be noticed that wallet has the specific address and it contains information about closed keys "seed" for all Bitcoin, which belongs to the particular user. By utilizing the aforementioned wallet user can do any transactions.

Essentially, all owners of Bitcoin's accounts, wallet, as well as participants of transactions, are holders of individual accidentally generated numbers, which become key or "password" for that element or activity. Any key or "password" is absolutely unique and anonymous because does not need user's personal data and owner of that key becomes the owner of the account, wallet or transaction. Peer-to-peer system which is utilized by Bitcoin allows users to do transactions between themselves without interruption of the third party. Operations are checked by network nodes and records to a distributed ledger database – blockchain.

Blockchain automatically gives information to one party that another party of the treaty legally has paid for goods or services. In the aforementioned transaction, there isn't a third party. The system literally is controlled by all participants. Any person who participates in cryptocurrency commerce has the same capability to control the movements of cryptocurrency. All verified transactions are included into blockchain.

The transaction is a transfer of value between Bitcoin's wallets which are included into blockchain. Bitcoin's wallet applies the key to sign a transaction. Key provides mathematical proof that Bitcoin comes from the owner of the "Wallet". All transactions are transmitted between users and commonly begin to be confirmed by the network during the next 10 minutes through the certain process – "mining".

"Mining" is a process of producing electronic money with aid of solving by the computer, certain the cryptographic algorithms (Lyubshina and Zolotaryuk, 2016).

Bitcoin is mined by blocks, the initial size of one block is 50 Bitcoin, however, after every 250000 blocks, and their amount is declining twice. On the average, each block is mined in 10 minutes. To save the aforementioned parameter after any 2016 mined blocks, the complexity of their mining is adjusted. Since the amount of equipment, which is used for mining constantly increase, thus the share of mined blocks for each of them constantly decrease. By simple calculation can be determined the amount of Bitcoin which is generated per day:  $25 \times 24 \times 6 = 3600$ . Thereby, the amount of emission is known in advance (Robbek, 2014).

It should be noticed that governments of different states of the world have a different opinion about the legalization of Bitcoin inside their countries. For instance, the new law, which has come into a force in Japan, allows utilizing Bitcoin as a legitimate means of payment.

As for Ukraine, according to the explanation of National Bank of Ukraine regarding the legality of "virtual currency/cryptocurrency" Bitcoin usage in Ukraine – Bitcoin is a monetary surrogate, which does not have provision by the real cost and cannot be used by individuals and legal entities on the territory of Ukraine as a means of payment, as far as it contradicts norms of Ukrainian legislation (Natsionalnyi Bank Ukrainy, 2014). It should be noticed that the explanation of the National Bank of Ukraine cannot be considered as a norm as far as it does not provide any responsibility; therefore, it can be utilized as a kind of notification or warning (Drozd, Lazur and Serbin, 2017). It should be noticed that "an ambiguous approach to cryptocurrency in different countries of the world creates additional problems for determining the legal status of cryptocurrency" (Drozd, Basai, Churpita, 2017).

The aforementioned position of National Bank of Ukraine was formed because transactions with Bitcoin does not allow to identify persons who realized them and it opens significant opportunities for crimes commitment, which correlate, in particular, with money laundering. For instance, FBI reported that if Bitcoin becomes more widely accepted among vendors and users, the FBI anticipates seeing increased Bitcoin money laundering activities (FBI, 2012).

## 6. The place of Bitcoin in the money laundering process

Money laundering can be defined as a financial transaction and other activities, which are committed for a particular target of concealment the real origin of the revenue. It should be noticed that "money laundering begins with the fruits of a crime – the underlying or "predicate" offense – and ends with funds that can be used safely or at least with minimal risk, for any purpose" (Levi and Reuter, 1997).



In the world practice, the biggest case in the history of online money laundering is Liberty Reserve. In May 2013, the U.S. Department of Justice has pressed charges against the company "Liberty Reserve" (which was the system of electronic transactions and located in Costa Rica) and seven its managers and employees. They were accused of commitment unregistered commercial activity with the provision of money transfer services and money laundering by the assistance of transactions of illegal income more than 6 billion US dollars. This system was functioning in colossal dimensions, counted millions of users all over the world, including 200000 users in the USA. In its framework, approximately 55 million transactions were carried out; almost all of them were illegal. Inside the system, their own virtual currency "Liberty Dollars" or LD was used, however, in the initial and end point of transaction money were converted and stored in fiat currency (USD). As a result of conducted well-coordinated actions, the Ministry of Finance of the USA determined "Liberty Reserve" as the financial agency, which triggered concern in terms of money laundering comply with Chapter 311 US Anti-Terrorism Act (Patriot Act) and completely deprived its access into the financial system of the USA (FATF, 2015).

As an example of the utilizing Bitcoin cryptocurrency for criminal activity, successful functioning of hiding website "Silk Road" can be taken. It was the biggest virtual market of drugs trading. All transactions via that website were conducted with aid of Bitcoin and anonymity for users was given through the functioning in Darknet, which viability was carried out by using the TOR software.

"Silk Road" was functioning as a peculiar Bitcoin's bank, where any user had to have account for conducting transaction via the website, if it was possible not less than one (or even thousands) Bitcoin address "Silk Road", which were attached to user's account on the website and were stored on the server, which was controlled by "Silk Road". For purchasing, a user sent mined Bitcoin to the Bitcoin address of "Silk Road" which was attached to his account on the website. After the realization of purchasing, the user's currency transferred in the system of escrow account until the complete end of the transaction, then Bitcoin of user/customer transmitted from escrow account to Bitcoin address of the Silk Road's seller. Furthermore, "toggle-switch" was used for any buyer which directed all payments with aid of complicated series quasi-random

fake transactions ... almost excluding the opportunity to binding payment to any Bitcoin, which was sent from the website (Mergenovna, Krylov, Bezverbnyi, Kasatkin and Kornev, 2016).

Currently, the aforementioned website "Silk Road" has shut down, and persons who governed it were brought to criminal responsibility.

## 7. Conclusions

To sum up, it should be emphasized that modern technologies facilitate using cryptocurrency, in particular, Bitcoin for money laundering. This process has become more complicated and intelligent, as far as elaboration allows:

*firstly*, to eliminate bonds between real person and account of virtual currency because Bitcoin address and protocols do not require the client's identification;

*secondly*, to conduct conversation by utilizing simplified system, which does not need a person. Whereas, virtual currencies' exchange does not have strict regulation, as those, which work with fiat currencies and according to the law have to store particular documentation about clients;

*thirdly*, to create unlimited amount of account, which objectively makes it impossible to control all transactions;

*fourthly*, to utilize tools which block the opportunity to track back particular activity (anonymizers etc.). For instance, Dark Wallet, which mixes together several transactions and complicates the opportunity to track back the particular address of Bitcoin wallet, which sends Bitcoin. In addition, transactions can be done through the TOR network, which directs particular web-traffic through several relays, in that way hiding the real user's IP-address.

Thus, Bitcoin allows conducting different schemes of money laundering, which almost block the possibility of the criminals' identification. This feature triggers new challenges for law enforcement agencies to seek out new forms and methods of money laundering investigation. Moreover, the aforementioned characteristics of cryptocurrency are pushing lawmakers all over the world to unify the legislative system regarding utilizing cryptocurrency as a means of payment. Without its recognition by government, it is almost impossible to combat and prevent the commitment of money laundering.

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# SPECIFICITY OF REMUNERATION FOR PUBLIC SERVANTS

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**Abstract.** *The aim of the article* is to determine the specificities of the remuneration for public servants in Ukraine. *The subject of the study* is the remuneration for public servants in Ukraine. *Methodology.* The study is based on the use of general scientific and special-scientific methods and techniques of scientific knowledge. The dialectical method enabled to interrogate the development of the institution of remuneration for public servants in Ukraine. The comparative legal method enabled to compare doctrinal approaches to this issue. The system-structural method enabled to determine the elements of the remuneration for public servants. Methods of analysis and synthesis helped study separate parts of this institute to formulate further conclusions about its most optimal functioning. The logic-semantic method was used to determine the content of the concept of "remuneration for public servants". The normative-dogmatic method enabled to analyse the content of legal regulations of the domestic legislation on the issue. *Practical implications.* The determination of the specificities of the remuneration for public servants in Ukraine enabled to make recommendations for improving the remuneration system of this category of workers, as well as identify problematic issues that require further consideration and research. *Relevance/originality.* The author's definition of the concept of "remuneration for public servants" is proposed and the specific features of this institute, insufficiently studied before, are analysed. The article analyses the specificities of the remuneration for public servants. Their list is determined and the content of each of them is disclosed. The specificities of the remuneration for public servants are substantiated in comparison with other categories of employees.

**Key words:** remuneration, public servants, public service, labour, working conditions.

**JEL Classification:** M54, F66, J08

## 1. Introduction

The performance of a workforce depends on many factors, such as organizational (for example, the level of organization of labour in an enterprise, institution or organization), socio-economic (working conditions, material and social security), material and technical (the novelty of the technologies used in the work process), etc. Along with the listed elements, primarily, ensuring the performance depends on the perfection of the system of remuneration, because remuneration is the main motivation of a person to work. In this context, public servants are no exception.

Public servants are a special category of employees because the effectiveness of the adoption of state management decisions and the state bodies' responsibility and function execution depends directly on their official activity. For such persons to implement their official competence in a proper manner, material incentives for good and high-quality work are necessary. The system of remuneration for public servants, in contrast to other categories of citizens, is regulated by the rules of a special legal act, the Law of Ukraine

"On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu, 2016), as well as decrees of the President of Ukraine, resolutions of the Cabinet of Ministers of Ukraine, etc. The specific nature of the remuneration for public servants, in addition to the specificities of the labour functions of such persons, is also predetermined by the need to increase the motivation of public servants and the interest of highly qualified specialists in entering the public service.

The relevance of the study of the specifics of the remuneration for public servants is also predetermined by the fact that the public service is the corruption-related sphere. Corruption is one of the most threatening phenomena of the present day, which negatively affects public administration and reduces the efficiency of state authorities and local self-government. One of the main incentives for the development of public service personnel, as well as refraining from corruption, is the remuneration of labour at the appropriate rate enough to satisfy most needs of public servants. Therefore, the issue of the specificity of the remuneration for public servants remains relevant for research.

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## 2. Literature review

In the scientific literature, many works are devoted to this issue. However, considering the recent adoption of the Law of Ukraine "On Public Service" as of December 10, 2015 (Pro derzhavnu sluzhbu, 2016), as well as the fact that mostly, the remuneration for public servants is considered in certain aspects (for example, as a prevention of corruption as motivation, as an encouragement, or according to its constituents), the specificity of the remuneration for public servants have not been properly investigated nowadays. This theoretical institute is formed due to the contribution of the experts of the legal and economic sciences, such as M. O. Bahmet, V. D. Bondar, V. M. Vehera, A. O. Holovachova, M. S. Ivanov, M. I. Inshyn, M. R. Kapinus, O. V. Kuzmenko, I. H. Pakhonova, O. A. Sokolova, V. B. Tyshchenko, V. S. Furtatov, V. M. Shchegortsov, and others. However, given the recent reform of the legislation on public service, an analysis of the current specificity of the remuneration for public servants is topical.

## 3. Main material

In their works, domestic scholars prefer to consider the remuneration as rewards, which the owner or an authorized body pays to an employee for the work performed, and which is simultaneously a means to motivate the worker to improve the performance and a way to meet his/her needs (Holovachova, 2016). Such a definition reveals that nowadays labour remuneration is a major incentive for workers to improve performance, as well as for professional development. In addition, the remuneration enables a person to maintain his/her standard of living that satisfy basic needs or higher. Therefore, in the context of the institution under consideration, analysis of this definition leads to the conclusion that the state remuneration system of public servants is a guarantee of the effective public service because in this way public servants are motivated to realize their own potential while performing their professional duties.

In economic science, remuneration is considered as a complex multidimensional economic phenomenon, which reflects the interaction of many economic processes, as an important element of social reproduction and development of the market relations system, as well as a category, designed to ensure a decent standard of living (Dorohan-Pysarenko, 2014). In this study, the abovementioned concept is not suitable, because it contains a vaguely worded essence of the category under the study, such as "interaction of many economic processes." Therefore, the nature of remuneration remains unclear, as well as its preconditions or application. Therefore, in our opinion, the interpretation of the essence and specificity of the remuneration for public servants due to such a definition is not appropriate.

Formulating the definition of the "remuneration for public servants," the role of such persons in the functioning of state institutions should be considered, the state is obliged to provide a decent remuneration, both at the entry into office and throughout the official career. V. M. Vehera argues that the rate of the pay depends on socio-economic capacities of the state, but such payments must ensure the constitutional right of everyone to an adequate standard of living for themselves and their families. The state creates for a person the conditions, under which he/she has the opportunity by the work to really provide vital functions for themselves and their families (Vehera, 2015). Therefore, in its essence, the remuneration for public servants must meet the following conditions: 1) the state must create all conditions for a person to exercise his/her right to work in the public service; 2) the total remuneration for public servants depends on the socio-economic capabilities of the state; 3) the state is obliged to ensure a decent remuneration for public servants, both at the time of entry into office and throughout the official career; 4) the rate of the remuneration for public servants should correspond to the specificity of their official competence and the importance of the functions performed; 5) the total remuneration for public servants must ensure the livings of the public servant and his family members.

M. R. Kapinus distinguishes the following specificities of the remuneration for public servants contrasting to other types of remuneration: 1) the salary of public servants must ensure an adequate standard of living for an employee and his family; 2) the salary of public servants should ensure attraction and retaining competent and highly-skilled staffs; 3) the salary of public servants should ensure the avoidance of corruption and increase the efficiency of the public service functioning (Kapinus, 2005). Each of these features is appropriate. First, as repeatedly noted, the main purpose of remuneration for any person is to ensure livings for him/her and members of his/her family. Second, its rate must be competitive in the labour market because the public service needs qualified personnel. In addition, the attraction of high-quality personnel does not guarantee that such an employee will remain in service for a long period. Third, the rate of the salary of a public servant should be sufficient to avoid corruption risks.

The analysis of the provisions of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu, 2016) confirms the absence of the definition of "remuneration for public servants" in it. However, the analysis of the content of this legal act reveals that part 1 of Article 50 states that the state provides an adequate remuneration for public servants for the professional performance of official duties, encourages them to perform in productive, effective, faithful and initiative manner. Therefore, considering only specificity of the sphere, the following



essential features of the remuneration for public servants can be distinguished: 1) the level of the pay should be adequate for the professional performance of official duties; 2) the remuneration for public servants should encourage them to work in a productive, effective, faithful and initiative manner.

Therefore, the remuneration for public servants is a remuneration, paid in conditions created by the state in accordance with its socio-economic capabilities, which is decent both at the time of entry into office and throughout the official career for the professional performance of official duties, corresponding to the specificity of the official competence and the importance of the functions performed by a public servant, designed to provide livelihoods of the public servant and his/her family members, as well as the remuneration for public servants should encourage him/her to work in a productive, effective, faithful, and initiative manner and to avoid corruption.

The review of the scientific literature reveals that the specificity criteria for the remuneration for public servants are not considered by domestic scientists. In A. A. Sokolova's work, the specificity of the remuneration for public servants is conveyed, according to the following criteria: 1) the subject of receiving, that is, a public servant; 2) the subject of implementation, that is, the state represented by its body; 3) the source of funds, that is, the state budget; 4) implemented in the order, at the rate and on the terms established by the legislation; 5) provided for the official activities of public servants; 6) made in the form of regular monetary payments (Sokolova, 2016). In our opinion, most of these categories certify the specificity of the remuneration for public servants, however, according to the regulations of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu, 2016), in the remuneration for public servants, a number of really specific features remain unaddressed. Firstly, according to part 2 of Article 50 of the Law, remuneration has a special structure, which is a salary, various allowances, recompenses and premiums. Secondly, Article 51 of the Law provides for remuneration groups and a public servant salary scheme, which is also worthwhile disclosing as a specific feature of the remuneration for public servants. Some of the features listed are inappropriate. For example, the feature "provided for the official activities of public servants" does not disclose the specificity of the remuneration for public servants, since the remuneration of all categories of workers is provided for labour (official) activities. The feature "made in the form of regular monetary payments" is also not suitable for the following reasons. Firstly, Article 94 of the Labour Code of Ukraine (Kodeks zakoniv pro pratsiu Ukrainy) provides for that a salary is a remuneration, calculated in monetary terms as a rule. That is, the form of monetary payment is not a solely specific feature for the remuneration

for public servants but extends to almost all types of employment relationships. Secondly, in this context, it is more appropriate to distinguish the structure of the remuneration for public servants as a specific feature.

Therefore, **the specificity of the remuneration for public servants is:**

- 1) the subject of receiving remuneration is a public servant;
- 2) the subject of implementation of remuneration is the state represented by its body;
- 3) the source of funds is the State Budget of Ukraine;
- 4) in a special structure, containing the salary, various allowances, recompenses and bonuses;
- 5) in special remuneration groups and salary schemes of public servants.

**1. The subject of receiving remuneration is a public servant.** According to part 2 of Article 1 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu, 2016), a public servant is a citizen of Ukraine who holds public service position in a state authority, another state body, its staff (secretariat), receives salaries at the expense of the state budget and implements official powers established for this position, and directly related to the execution of the responsibilities and functions of this public body, and also adheres to the principles of public service. It should be noted that even the legislative definition emphasizes that public servants receive a salary for the performance of official duties. Such persons are citizens who work in state authorities and local self-government and play an important role in solving the tasks of the Ukrainian state. Ensuring the fulfilment of these tasks also depends on the remuneration for public servants. Consequently, the specificity of this feature is that remuneration can be made only in relation to one group of citizens, clearly defined in the Law, that is, public servants.

**2. The subject of implementation of remuneration is the state represented by its body.** In part 2 of Article 5 of the Law of Ukraine "On Remuneration" No. 108/95-VR as of March 24, 1995 (Pro oplatu pratsi), the subjects of remuneration organization include state authorities and local self-government bodies. In this context, "remuneration organization" means that total remuneration for public servants is determined at the state level. A specific public authority or local government, in which a public servant works, does not accumulate salary funds and does not affect its employees' salaries by its decisions. The state body is obliged to remunerate an employee but carries out only its organizational part. The specificity of this feature is that the subject of implementation of the remuneration for public servants is actually two-levelled: at the first level, the state that forms the salary fund of public servants and determines the amount of the remuneration for public servants; at the second level, state authorities and local self-government bodies are responsible for paying such funds.

**3. The source of funds is the State Budget of Ukraine.** This is evidenced, first, by the analysis of part 2 of Article 1 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu 2016), which states that a public servant receives salaries at the expense of the state budget. Second, Part 4 of Article 150 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu 2016) stipulates that the source of the payment fund for the remuneration for public servants is the state budget. Namely, the remuneration fund for public servants is formed at the expense of the state budget, as well as funds from the state budget within the framework of assistance programs of the European Union, foreign governments, international organizations, donor institutions. Therefore, the procedure for the use of such funds coming to the state budget shall be approved by the Cabinet of Ministers of Ukraine, and not directly by state authorities and local self-government bodies. Furthermore, the regulation of Article 4 of the Law of Ukraine "On Remuneration" No. 108/95-VR as of March 24, 1995 (Pro oplatu pratsi) provides for that for institutions and organizations financed from the budget (i.e., state bodies), the source of funds for remuneration are funds allocated from the corresponding budgets, grants. Thus, since the state authorities and local self-government are non-profitable, the indicated feature is that their full maintenance, including personnel remuneration, is carried out at the expense of the state.

**4. A special structure, containing the salary, various allowances, recompenses, and bonuses.** Part 2 of Article 150 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu 2016) stipulates that public servant remuneration shall form the following components: 1) salary; 2) allowances for seniority; 3) public service allowance; 4) recompense for an additional workload due to the performance of duties of a temporarily absent public servant in the amount of 50 percent of the official salary of a temporarily absent public servant; 5) recompense for additional workload in connection with the performance of vacant position duties of public service at the expense of saving the salary fund for the corresponding position; 6) bonuses (in case of assigning). An analysis of Article 52 of this legal regulation demonstrates that the allowances may be established for each calendar year of public service experience or for rank, and recompense may be established for an additional workload due to the performance of duties of a temporarily absent public servant or for the vacant position of public service. In turn, the main criterion for a bonus is the personal contribution of a public servant to the overall performance of the state body, or a bonus may be paid monthly, quarterly or annually in accordance with the decision of the head of the public service.

The specificity of this feature is in the specified structure of remuneration inherent exclusively in the public service.

**5. Special remuneration groups and salary schemes of public servants.** The last specific feature of the remuneration for public servants is linked to special remuneration groups and public servants salary schemes. Part 1 of Article 51 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu 2016) provides for that public service positions are divided into nine groups: 1) heads of state bodies; 2) first deputies of heads of state bodies; 3) deputy heads of state bodies; 4) heads of independent structural units of state bodies; 5) deputy heads of independent structural units of state bodies; 6) heads of departments of independent structural units of state bodies and their deputies; 7) chief specialists of state bodies; 8) leading specialists of state bodies; 9) specialists of state bodies. In fixing the salary for each group of public servants, their jurisdiction over the state or local government body is considered, for example, whether it applies to the entire territory of Ukraine or to the territory of one or more regions, or to the territory of one or several regions, cities of regional significance. Consideration of the groups of public servants and the jurisdictions of the state bodies in which they are serving enables to set up the amount of their remuneration. For example, part 3 of Article 51 of the Law of Ukraine "On Public Service" No. 889-VIII as of December 10, 2015 (Pro derzhavnu sluzhbu 2016) provides for that the minimum salary of the first group in state bodies, which jurisdiction extends over the entire territory of Ukraine, is not more than seven minimum salaries of the ninth group of state bodies, which jurisdiction extends to the territory of one or several regions and cities of regional significance. This enables to conclude: first, the public servants of the first group claim, above all, the maximum possible remuneration; second, public servants of bodies which jurisdiction extends over the entire territory of Ukraine also have advantages in remunerating employees of other government agencies. The lowest level on this list is the employees of state and local self-government bodies, which jurisdiction is valid on the territory of one or several regions or cities of regional significance. In addition, the total remuneration for public servants may not be less than two minimum subsistence incomes for able-bodied persons, the rate of which is set for January 1 of the calendar year, and which is 1762 hryvnias as of January 1, 2018. Therefore, the specificity of the remuneration for public servants is specifics of its rate fixing, since it takes into account the following criteria: 1) the particularity of the public service position; 2) the jurisdiction of the body in which he/she works; 3) the minimum subsistence income for able-bodied persons as of January 1.

#### 4. Conclusions

Therefore, the remuneration for public servants significantly differs from the remuneration of any other categories of employees. Above all, the provisions of a special legal act regulate it, with no less importance of decrees of the President of Ukraine and resolutions of the Cabinet of Ministers of Ukraine, etc. The subjects of receiving such payments are only persons who occupy

a position in the public service in a state body or local government. Meanwhile, the state body carries out exclusively an organizational role, and the state carries out the formation of salary funds, as well as fixes the amount of remuneration. In addition, salaries of public servants are characterized by a special structure and payroll. This is determined by the specificity of the labour function of a public servant to fulfil the responsibilities of the state.

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# EVOLUTION OF PROFESSIONAL COMPETENCIES OF ACCOUNTANTS OF SMALL ENTERPRISES IN THE DIGITAL ECONOMY OF UKRAINE

Alla Zhyvets<sup>1</sup>

**Abstract.** At present, the accountant's workplace is the most "digitized" at enterprises. It is equipped, on average, with five units of computer, office and communication equipment, and also, on average, seven software products for automation of accounting work are applied. However, university graduates state that their knowledge and skills correspond only to 45% of the requirements of the modern automated workplace of the accountant. Higher education institutions have lagged far behind in the applied "digital" competence of accountants. *The purpose of the article* is to identify key directions for improving the professional "digital" training of accountants. *Research methods.* The author carried out a questionnaire survey of 120 small and micro enterprises with coverage of the majority of operating sectors of the economy; carried out a questionnaire survey of IT companies managers dealing with automation of managerial work at the enterprises; training plans for accountants auditors for availability and quality of digital technologies training were studied, foreign experience in training of accountants following the publications of research organizations: Hitachi Data Systems, Global Education Future, Fujitsu, McKinsey Global Institute, PwC was studied. *Results.* The researches of the evolution of the professional competencies of accountants carried out by the author show a lag in the content of their "digital" training from the real proficiency requirements for work at an automated workplace of the accountant of an enterprise. *Conclusions and offers.* Education of accountants and their further continuous professional training should focus on the development of digital technologies of the implementation of the entire economic block of enterprise managerial works on the basis of existing software and cloud services. The author developed proposals for improving the professional training of accountants of small enterprises.

**Key words:** evolution of qualification of accountant of small enterprise, development trends of accountant's competencies, cognitive competencies, digital economy technologies in management.

**JEL Classification:** A22, M41

## 1. Introduction

The main trend in the development of industry and national economies in the early 21st century is the introduction of digital technologies. These same technologies make it possible to increase labour productivity, significantly reduce the time for designing and developing new products, reduce the technological and financial cycles of products manufacture and realization, as well to enter global markets.

At the present time, the economic bloc of work at enterprises is 2/3 based on the use of digital technologies. But with the current rapid development of IT technologies at enterprises, the following problem arose: the digital competence of the staff is significantly behind the increased capabilities of IT technologies in enterprise management. There are several reasons but the main one lies in the fact that educational institutions "lag behind" in teaching "digital" technologies. And this

lag is typical not only for the taught vocational subjects but also for the applied teaching methods.

The author's research showed that 55% of accounting graduates are not ready to work for the AWS of a chief accountant of the small and micro enterprises (SE and ME); 38% of the accounting graduates at the beginning of the working career were additionally trained in the courses "1C: Accounting for Ukraine"; 69% of the accounting graduates noted the inadequacy of applied digital training for specific work at the enterprise (Zhyvets, 2017).

The importance of the "digital" training of accountants is indicated by the recommendations of the International Federation of Accountants (IFAC). So, in the standard (IES) 2 "Content of the Professional Accounting Education Program" in the third block of education disciplines "Information technology and authority" the following subjects (knowledge areas, competencies) are indicated:

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- general knowledge of information technology;
- knowledge of control capabilities of information technology;
- the range of information technology opportunities;
- the ability to use information technology in work;
- the presence of one or more qualifications: a manager, an expert or an information systems developer.

It is noted that modern enterprises using “Big Data” technologies significantly increase the work quality level of accountants in terms of implementation of deeper economic analytics and high speed of providing managerial information.

The author pays a particular attention to the introduction of digital technologies in the SE and ME, as they currently constitute 95% of the total number of enterprises in the Ukrainian economy (State Statistics Service of Ukraine, 2017).

Analysis of recent researches and publications. The problem of improving the training of accountants in universities is devoted to many works of both Ukrainian and foreign scientists. Particularly in detail this problem is studied by such scientists as T. P. Alaverdova (2012), V. G. Hetman (2010), S. Ya. Zubilevich (2015), O. V. Kuklin (2011), V. A. Lukin (2013) and many others.

Basically, in domestic and foreign scientific publications, the approach to the problem of improving the training of accountants is considered from the standpoint of the development of accounting science, which, according to the author, is only partially true, as the functions of the modern accountant have significantly expanded and evolved, especially in the SE and ME.

The content of the work of the accountant of the SE and ME is constantly changing, some of his functions are integrated into various subsystems of enterprise management, as a result of which the accountant becomes a “co-manager” of the enterprise and his role in this process is constantly increasing. This is noted by all the researchers mentioned above.

The author states that the management functions assigned to accountants can be redistributed between the officials of the management team of the enterprise and, as a result, the professions altered in content may appear. This applies especially to microenterprises numbering up to 10 people, where the division of managerial work is fundamentally different from the division of managerial work in large enterprises.

Therefore, in our “Ukrainian economy”, where the SE and ME constitute 95%, and microenterprises – 85%, there is a situation with the division of labour of engineering staff workers that the integration of managerial functions is dominant in job creation, as well as in the formation of job descriptions and requirements to a set of competencies for hired workers. At present, multifunctionality is a worldwide trend in the evolution of managerial work within the conditions of the digital economy.

The purpose of the article is to identify key directions for improving the professional “digital” training of accountants in higher education institutions on the basis of studying the world’s experience of introducing digital technologies into management practices.

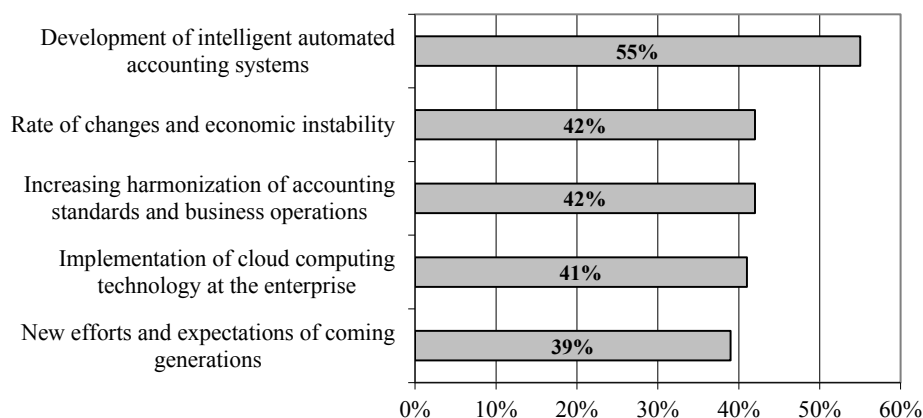
## 2. Results of the study of accountants competence

To solve the set task, the author carried out the following research activities:

- 1) a questionnaire survey of accountants of 120 small and micro enterprises in the regions of southern Ukraine was carried out covering the majority of the operating sectors of the economy;
- 2) a questionnaire survey of the heads of IT companies involved in the automation of managerial works at enterprises in the regions of southern Ukraine was carried out;
- 3) training plans for accountants auditors in universities of the regions of southern Ukraine for the availability and quality of teaching digital technologies were studied;
- 4) foreign experience in training of accountants following the publications was studied:
  - international research organizations: Hitachi Data Systems (2016), Global Education Future (2016), Fujitsu (2017), McKinsey Global Institute (2017), PwC (2016);
  - domestic research organizations: the National Institute for Strategic Studies, State Statistics Service of Ukraine.

The first results of the questionnaire survey of the accountants of SE and ME show the following situation in the professional training of accountants (Zhyvets, 2017):

- 1) in the majority of small and micro enterprises (88% of the enterprises surveyed), the accountant performs, in addition to exclusively accounting functions, also the functions of an economist, financier, business lawyer, human resources manager, an expert in company automated control system, etc.;
- 2) a graduate with a degree in Accounting and Audit comes to the enterprise with a store of theoretical knowledge only in accounting and auditing. Therefore, graduates, now practicing accountants of small and micro enterprises, estimate the degree of their readiness to perform the work of the accountant of a small enterprise, in view of today’s requirements, only by 45% (according to the questionnaire of accountants of SE and ME in 2016-2017);
- 3) all interviewed accountants of the SE and ME note that their workplaces are equipped with PCs and other electronic office equipment and that their work is based on digital technologies; 59% of accountants note the critical importance of digital competence for working in a modern workplace of the accountant.



**Figure 1. External factors that have the most significant impact on the content of the work of an accountant**

Source: the author's survey on the basis of (ACCA, 2016)

According to foreign researchers, the change in the work of the accountant and auditor is fundamentally influenced by the introduction of digital technologies. ACCA research identifies the factors most influencing the methods of work of accountants (Figure 1). The main conclusions made by the ACCA experts are as follows:

- the greatest impact on the reengineering of accounting at enterprises in the next 10 years will be made by the development of intelligent automated accounting systems;
- in a modern enterprise, the accountant is, first and foremost, a strategist, a professional capable of generating and implementing business development ideas and activities.

### 3. Assessment of the “digital” competence of accountants

It appears that the most objective assessment of the “digital” competence of accountants is the evaluation given by IT specialists of companies implementing IT-products at enterprises. Such IT-specialist not only installs the necessary software for automation of accounting and other office works but also provides training for customer-users to efficient use of the acquired software product. Therefore, joint work with accountants allows you to objectively assess their willingness to work with digital technologies.

The survey of leading specialists of IT companies implementing IT-technologies made it possible to

determine the evaluation of the “digital” competence of accountants of the SE and ME (Table 1).

In the same survey, experts gave a verbal assessment of the “digital” competence of accountants:

- 1) young accountants (a group of up to 22 years old) easily perceive the automation of accounting work but do not have sufficient practical experience in organizing accounting and analysis at the enterprise and a clear understanding of the business mechanism of the enterprise, so the process of implementing intelligent automated accounting systems is associated with additional training of the accountant;
- 2) accountants in the age group of 22-40 years are the most prepared for the development of new accounting programs. They have experience with various simple office programs;
- 3) in the older age group of accountants there is conservatism and some “non-perception” of IT technologies, which, according to experts, is a consequence of the insufficiency of IT education (20-30 years ago);
- 4) accountants of the age group of 22-40 years absorb and apply analytical applications to the accounting automation programs at enterprises easier than other;
- 5) basically “digital” training of accounting graduates is assessed by experts as “below average”.

Interesting material for describing the digital content of the work of accountants of the SE and ME gives their answers to the question: “What programs for the PC do you use in your work?” Here the answers of the respondents (working accountants) were distributed as follows (Table 2).

Table 1

**Evaluation of the “digital” competence of accountants of the SE and ME**

Index name	Overall assessment of the digital competence of accountants by age group					
	20-22 years	22-30 years	30-35 years	35-40 years	40-50 years	50 years
“Digital” competence of accountants (on a scale from one to ten)	5	7	8	6	5	3

Sources: compiled by the author

Table 2

**List of software tools used in the work of the accountant of SE and ME**

Ser. No.	Name of programs, software packages, information systems used in the work of accountants	Number of respondents applying these programs, %
1	1C: Accounting for Ukraine	95
2	M.E.Doc	81
3	Sonata	2
4	Payer Account	5
5	MS Word	100
6	Online Banking	14
7	Email	100
8	Sail	2
9	Excel	100
10	BI-systems	5

Source: compiled by the author

The results of the questionnaire make it possible to conclude that a graduate of the university with a degree in “Accounting and Audit” must have, a priori, professional skills to work with the following accounting and office work applications (1C: Accounting for Ukraine, MS Word, M.E.Doc, Excel), as well as skills in working with modern office equipment. Such modern management tools as BI-systems, which effectively advance the promptness and quality of business operations, are not yet implemented in accounting departments in sufficient quantities. Currently, these services and programs are still expensive for most ME and a part of the SE. A small list of programs used by respondents required additional study of the software market for the activities of the SE and ME in Ukraine.

The author’s research showed that in the market of software and information technologies in Ukraine, the following groups of systems, programs and services are available (there are from 10 to 20 programs and services in each group):

- accounting software and services for delivery of reports via the Internet;
- business management systems and programs for business intelligence;
- systems BPM, ERP, CRM;
- corporate program management systems;
- online HRM systems for human resource management;
- software for recruiting;
- Internet portals for collaboration and access to information;
- postal services;
- EDM systems for workflow automation;
- ECM systems for managing of corporate content;
- electronic workflow operators for the exchange of electronic documents;
- services for online seminars, conferences, online meetings;
- virtual PBX – cloud services for communications and managing of incoming calls;

- instant messengers for instant messaging;
- WIKI services and engines for organizing workspace for team-work and for file storage.

These data show that there are a sufficiently large number of programs in the IT-market of Ukraine for solving a wide range of tasks for the management of SE and ME. All this complex of programs and services allows currently to support such modern trends in the development of management of SE and ME as: virtual enterprises, remote working, e-business, “lean production”, “virtual staff”, effective use of global information systems etc.

It also should be noted that currently in SE and ME environment distance employment is gaining wide development in Ukraine: according to the research of the companies Bitrix24 and GfK Ukraine, 21% of the SE and the ME use distance employment to optimize their loading (2016). Among them, 17% of accountants work in remote workplaces (usually at home). In the future, in 2020, 36% of accountants will work with partial and distance employment. All necessary software for the remote working of accountants in Ukraine is already available.

#### 4. Determination of trends in the development of accountants’ competencies

In the further study of the current day competencies of accountants, we suggested respondents cover the issue of their professional competence from different points of view. So, to the question, “What current basic professional knowledge and competencies should a graduate – the future accountant of SE – have?” the following answers were received (Table 3).

The data of Table 3 show that 67% of the currently required knowledge and skills of modern accountants are connected with digital competence.

That is, a modern accountant can’t exist at all without “digital» competence. Now the accountant is the most “digitized” specialist at the enterprise.

Further analysis of respondents’ answers showed that nowadays the accountant of the SE and the ME performs by himself from 69% to 88% of all the works included in the “economic block” of enterprise management.

The author draws a special attention to the fact that the list of areas of activity, as well as the required skills of the accountant of the SE and ME (Table 3), is also a list of areas for improving the training of future accountants in the current conditions of the evolution of the national economy.

The above results of the research of the “digital” competency of accountants objectively characterize the current state of their preparation. But for adjustment of the university training programs for the specialists of the 21st century, it is necessary to see and to understand the evolution and trends in the development of the competences of the engineering staff worker in the digital economy and the knowledge economy.

Table 3

**The list of knowledge and competencies of accountants demanded at the enterprises**

Ser. No.	Name of demanded knowledge and competences	The number of respondents who noted the importance of this position, %
1	National accounting standards (regulations)	57
2	International accounting standards	10
3	The content, structure and main regulations of the Tax Code of Ukraine	67
4	Practical skills of work with accounting programs: 1C: Enterprise, 1C: Accounting for Ukraine	59
5	Ability to work with programs: M.E.Doc, Excel	59
6	Ability to work with reference and information systems: League: Law, Lawyer +, sites of GFS of Ukraine, the Ministry of Finance of Ukraine etc.	43
7	Knowledge of the basics of economic law, an organization of contractual and claim work	60
8	Knowledge of labour law, Labour Code of Ukraine, staff records management	52
9	Organization of workflow at the enterprise	33
10	Fundamentals of enterprise budgeting	5
11	Organization of management accounting	19
12	Fast typing skills	29
13	Skills of work with all office equipment	14
14	Skills of documents' capture for creating enterprise data banks	14
15	Knowledge of foreign languages	10

Source: compiled by the author

Such an international study was carried out by the IT company "Fujitsu" in 2017. Having researched the trends and peculiarities of the development of the digital economy in a number of industrialized countries (1600 business leaders were interviewed), the experts of Fujitsu not only identified the problems of the development of digital technologies but also presented their vision of the development of employees' competencies in the 21st century (Table 4).

The data of Table 4 show that with the growth of the level of industrial development of countries, as well as with the growth of the level of development of information and communication technologies, the "image" of a competent young specialist is evolving.

For example, in Spain (the level of development – Industry 3.0), this "image" is characterized by the following set of four main competencies:

- on the first place – high professional knowledge of business organization (i.e. emphasis on organization and finance);

- on the second – use of digital technologies;
- on the third – use of creative abilities and development of imagination;
- on the fourth – ability to logical thinking and analysis.

In Germany (the level of development – Industry 4.0), this "image" is characterized by the same set of four main competencies, but with a different priority:

- on the first place – use of creative abilities and development of imagination;
- on the second – use of digital technologies;
- on the third – the ability to logical thinking and analysis;
- on the fourth – professional knowledge of the specifics of the business organization.

In Japan (the level of development – Industry 5.0, Society 5.0), this "image" is characterized by a different set of four main competencies and with their other priorities:

- on the first place – use of high creative abilities and development of imagination (human activity becomes more intellectual);

Table 4

**The most important competencies of employees in the digital age**

Ser. No.	Name of competences, knowledge	Specific value of competences, knowledge		
		Spain	Germany	Japan
1	Professional knowledge of digital technologies	<b>18,4</b>	<b>14,6</b>	10,0
2	Creative abilities and development of imagination	<b>15,5</b>	<b>15,5</b>	<b>26,5</b>
3	Professional knowledge in a particular industry	7,8	9,7	<b>10,4</b>
4	Professional knowledge of the specifics of the business organization	<b>18,4</b>	<b>11,7</b>	8,1
5	Ability to logical thinking and analysis	<b>11,7</b>	<b>12,6</b>	7,8
6	Knowledge in the field of special and human sciences	7,8	8,7	3,6
7	Ability to decision-making	8,7	8,7	<b>11,7</b>
8	Leadership qualities	6,8	9,7	6,5
9	Sociability and empathy	2,9	5,8	<b>11,0</b>
10	Professional excellence	1,0	1,0	2,3

Source: the author's review on the basis of (Fujitsu, 2017)



- on the second – ability to make independent decisions;
- on the third – use of communication and empathy (in the conditions of collective creative activity);
- on the fourth – use of professional knowledge in a specific field of production (this is an important trend for the development of education).

We note that “digital” competence in highly developed countries is already perceived as a necessary basic level of education of a young specialist, as well as a certificate of employers’ confidence in the level of “digital” training in universities.

Generalization of the results of research of the company “Fujitsu” on the evolution of the employees’ competencies in the group of developed countries shows that in the future digital society (the next 5 years) the following competencies will be particularly in demand:

- creative abilities and development of imagination;
- professional knowledge of digital technologies;
- ability to logical thinking and analysis;
- professional knowledge of the specifics of the business organization.

When preparing accountants for small and micro-enterprises in our Ukrainian reality, it is necessary to take into account all the 10 competencies listed in Table 4.

## 5. Conclusions

Our studies of the evolution of professional competencies of accountants in the conditions of the development of the digital economy of Ukraine made it possible to draw the following conclusions:

1. The general trend of the development of the professional competences of accountants of the SE and ME is the learning of digital technologies for the implementation of the entire economic block of the

company’s operations on the basis of existing software and cloud services.

2. The range of functional duties and tasks solved by the accountants of the SE and ME at their workplaces requires adjustment of the plans of study for their training in educational institutions. In the plans of study, the following blocks of disciplines should be strengthened:

- management accounting; rationing, planning, accounting, and analysis of the use of material and energy resources;
- organization of labour and wages, methods of stimulation of the labour of the staff;
- staff records management, the Labour Code;
- management of the enterprise economy;
- business planning, organization and analysis of economic activities;
- management of finances and other assets of the enterprise;
- economic law, an organization of contractual and claim work.

3. It is necessary to introduce in the practice of the teaching of all special disciplines practical training with the use of progressive software of AWS of the accountant. Tasks and examples for all disciplines should be taken from the real economic practice of enterprises and deliberately oriented towards the application of specific software.

A graduate should be 100% prepared for work at the AWS of the company’s accountant.

4. To introduce in the universities the practice of attracting specialized training firms to automate accounting for internships and attestation of graduate accountants for mastering basic accounting and analytical programs (1C: Accounting for Ukraine, Sail etc.).

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## PROBLEMS OF BANKING LEGAL RELATIONSHIPS

Stanislav Ivanov<sup>1</sup>, Yuliia Hromenko<sup>2</sup>, Valeriia Rodina<sup>3</sup>

**Abstract.** In modern conditions of management, the aspects of ensuring the stability of banks and the development of the banking system of Ukraine are of particular importance. During 2014-2017 in our country, 88 banks were recognized as insolvent, almost all of them – commercial. This tendency is disappointing. Most scholars assert that the turnaround of the banking system is possible only through the improvement of deposit, credit, and settlement operations. This statement is undoubtedly true, but these scholars forget about the importance of regulating the legal relationships that arise in the banking sector and establishing the interaction between the entities of such legal relationships. *The purpose* of the research is to determine the essence of banking legal relationships in Ukraine based on the existing scientific approaches, the current legislation of Ukraine and the practice of its implementation, as well as the specific and problematic aspects of harmonizing the interests of the entities of the relevant legal relations. For this purpose, the essence and structure of banking legal relationships are considered. It is determined that the main structural elements of these legal relationships are: 1) objects, 2) the content of banking legal relationships, 3) the basis of banking legal relationships – legal norms and legal facts, 4) entities (participants) – the direct participants in banking relationships, the bearers of mutual rights and obligations. *The conclusions* of the article state that Ukrainian banking legislation requires a serious revision concerning the coordination of the interests of the entities of banking legal relationships. *The key task* is to eliminate unnecessary and outdated normative and legal acts that could cause legal confusion or impose excessive burdens on entities of banking legal relationships. In developing the modern regulatory framework for the interaction of entities of banking relationships, a new rapid spread of cyber-risks, compliance risks and financial crime risks, which significantly affects the state of the banking system and is not reflected in the current banking legislation of Ukraine, should be taken into consideration. Banks as the main entities of banking relationships should assume risks and financial responsibility. It will contribute to the stabilization of the banking system of Ukraine and the economic development of the national economy.

**Key words:** bank, banking service, entity, legal relationships, banking system, interests.

**JEL Classification:** G21, K30

### 1. Introduction

Today, Ukraine faces an important task, which is to ensure the active development of the economy, to strengthen the democratic principles of our state, and to raise the living standards of the population. It is impossible to achieve this without the effective functioning of the credit and financial mechanism, the component of which is the banking system. The banking system is a connecting link between the subjects of microeconomics and macroeconomic processes and it substantially affects the success or failure of any economic reforms in our country. Unfortunately, nowadays the statistics affirm that the banking system of Ukraine is not in the best state. Thus, according to the data of the National Bank of Ukraine (NBU), since the beginning

of 2017, financial institutions have closed 26% of their subsidiary offices. A part of the branches was closed due to the insolvency of banks. For the period of 2014-2017, the NBU declared 88 banks insolvent, and 27 of them were withdrawn from the market. Other banks spare: reduce old offices in order to open offices of a new type or invest in the development of remote service channels. Deposit, credit, and settlement operations play a key role in the activities of banks. However, it is also important how each separate bank will build legal relationships with other entities of the banking system.

That is why every year the necessity of solving theoretical and practical problems concerning the enforcement of optimal relations between the interested parties of banking legal relationships is

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becoming increasingly important, but the system approach to solving these problems has not yet been formed. Intensification of globalization and integration processes in the global economy requires the banking system of Ukraine to enter the international markets. Ukraine should become a full member of the international banking system. According to the Law of Ukraine "On Banks and Banking", the banking system of Ukraine consists of the National Bank of Ukraine and other banks, as well as branches of foreign banks, which have been established and operate in the territory of Ukraine in compliance with the present Law provisions and other laws of Ukraine. A bank is a legal entity that has an exclusive right, under the NBU license, to render the banking services and is included in the State Register of Banks. Due to the existence of banks, there is a constant circulation and accumulation of capital. Banks are in a state of constant search and struggle in new and upgraded segments of the markets, as well as the entities of the real economy sector. Globalization and intensification of the competition stimulate banks to in-depth study of the banking segment of the financial market of the country; understanding and taking into account the requests of existing and potential clients, the needs of their business; development and introduction of new financial services and their promotion on the market; the use of elastic and differentiated pricing methods; formation and strengthening of the client base (Vasylieva, 2014). The banking system of Ukraine has a permanent evolutionary development, which also confirms the relevance of scientific research.

A set of interrelated and complementary general scientific and special methods aimed at obtaining objective results was used to realize a goal of the research process. Thus, the method of historical and logical analysis of literary sources was applied to study the level of problem development in the domestic and foreign scientific literature. Method of functional and structural analysis involves the study of state regulation of entities relations. The statistical method is used for the analysis of facts and phenomena, their synthesis for research. System and complex methods ensured the integrity of the study. The method of generalization was used to formulate conclusions, recommendations of ways to improve the relevant legal relationships.

## **2. Scientific approaches to the problem of banking legal relationships**

The problem of banking legal relationships is not new; a number of foreign and domestic scholars paid attention to it in their scientific works. V. Nahrebelnyi (2010), investigating the public and legal principles of regulation of the banking system, stated that the characteristic feature of the legal relationships formed in the banking system is their mediation of relations concerning the permanent or perpetual movement of foreign funds

between their members, based on a certain level of trust between them. The higher the level of trust between the participants of these relations, the more stable and dynamic the financial and economic relationships, and as a result, this will benefit the country's economic system as a whole. A. Slavko (2016), studying the peculiarities of regulation of banking relationships under the conditions of the regime of the occupied territory and the regime of the anti-terrorist operation, noted that the public and legal regulation of banking relations in the occupied territories and zone of ATO actually reduces to the prohibition of the activities of banking institutions and to the termination of the implementation of any financial operations until the possibility of restoring the NBU's ability to conduct banking supervision. Another scientist M. Kuntsevych (2016) devoted his scientific research to clarify the features of the subjective composition of banking relationships related to banking secrecy. S. Kurovskiy (2014) considered the features of banking relationships as an object of financial and legal regulation, determining the features of these legal relations and their characteristics. In addition, the author analysed the peculiarities of the objective regulation of banking law and banking legislation. D. Hetmantsev and N. Shuklina (2007) devoted their textbook "Banking Law of Ukraine" to a separate issue to clarify the essence of the concept of "banking relationships". In addition, scientists gave a rather exhaustive list of peculiarities of banking legal relationships, which many other scholars used as a basis for their studies. V. Vashchenko in the textbook "Banking Law" (2006) allocated a separate chapter, in which he considered the concept, composition, types, and features of banking legal relationships. The author emphasized that banking relationships can be administrative, financial, civil or economic by their legal nature. Taking into account the heterogeneity of banking relationships, V. Vashchenko distinguished both common and distinctive features of banking relationships. A. Kovalenko (2016), considering the public and legal regulation of banking activity in Ukraine in the context of European integration, devoted a separate unit to clarify the essence of the concept of "banking relationships". The scholar stressed the need to distinguish between public and private relations in the field of banking, based on the public functions of the bank. In addition, the author determined the entities of banking relationships and provided a detailed description of their activities. The question of subjects of law and entities of legal relations was considered in the general theory of law and the theory of administrative law in the works of S. Alekseiev (1982), R. Khalfina (1974) and Ts. Yampolskaya (1958). In the scientific article, T. Chernadchuk (2013) considered the theoretical issues of determining the entity of information and banking legal relationships. The scientist concluded that the entities of information banking legal relationships



are individualized or specific subjects of information law, which realize their legal personality in legal relationships, acting as “implementers” of information objective rights and obligations in the banking sector.

Thus, banking relationships were the subject of scientific researches, in which scholars considered this problem in different ways. However, the analysis of their works proves that almost no attention was paid to the problems of determining the legal mechanisms for the coordination of the interests of the entities of banking legal relationships, as well as the protection of their financial interests.

### 3. Banking services

Today, the Ukrainian government is actively reforming the banking activities. The principles, methods, and instruments of banking relations are changing, as well as the regulatory framework is being improved. The subject of banking law is the social relations arising in the banking activities, in particular, relations that govern the process of building, functioning, and development of both the banking system and a separate bank, the implementation of banking services by banks, the regulation of the banking system by state bodies in the interests of citizens, organizations and the state, etc. (Kostiuchenko, 2003).

Banks in Ukraine are entitled to engage in banking activities based on a banking license by means of rendering banking services. Most scholars believe that banking operations or services consist of satisfying the needs of individuals and legal entities in bank servicing. In accordance with the current legislation, only banks are entitled to render banking services. The banking services market acts as the foundation for Ukraine's economic development.

According to O. Vovchak (2008), banking services are actions of the bank aimed at increasing its profitability, or various types of banking activities that accompany and optimize banking transactions. The banking service can be regarded as the transfer of banking information. The peculiarities of banking services are:

- 1) as a rule, additional resources are not required for rendering services to banks;
- 2) banks receive the largest part of the income from rendering services in the form of a commission;
- 3) within rendering services, the activities of banks aimed at committing legal and actual actions, which are not directly related to the financial consequences.

In accordance with the Law of Ukraine No. 2121-III “On Banks and Banking” as of December 7, 2000, banking services include:

- 1) accepting deposits in currency and investment metals from an unlimited number of legal entities and individuals;
- 2) opening and maintaining customers' current (correspondent) accounts, including those in investment metals, and escrow accounts;

3) placing the currency and investment metals accepted as deposits (including the balances on the current accounts) on the bank's own behalf and for its own account.

In addition to rendering the financial services, any bank is entitled to be engaged in the activities related to: investments; issue of its own securities; lottery tickets issue and distribution, holding lottery draws; custody of valuables and leasing of individual bank safes; cash collection and cash in transit services; maintenance of registers of registered securities holders (except own shares); consulting and information services with regard to the banking and other financial services. A bank may render banking and other financial services in domestic currency and, subject to a separate license from the NBU, in a foreign currency.

### 4. The structure of banking relationships

In the process of meeting the need for banking services, economic entities enter into certain economic and legal relations with banks. Yu. Vashchenko (2006) considers banking relationships as relations regulated by the law in the field of banking, namely in the process of managing the banking system, implementing such operations as accepting deposits from legal entities and individuals, opening and maintaining current accounts of customers and correspondent banks, including the transfer of funds from these accounts using payment instruments and passing them into accounts, placing borrowed funds on their own behalf, on their own terms, and at their own risk, as well as performing other operations on the basis of a license issued by the National Bank of Ukraine or a separate permit.

The structure of banking relationships consists of the following elements:

- objects – banking activity and relations arising in the course of rendering banking services (property (money, securities and metals), non-property (bank secrecy and reputation) and organizational (corporate responsibility, internal structure, banking supervision));
- the content of banking legal relationships – implementation of subjective legal rights and fulfilment of legal obligations;
- the basis of banking legal relationships – legal norms and legal facts;
- entities (participants) of banking relationships – the state, legal entities, and natural persons.

The entities of banking relationships are the direct participants in banking relationships; they are the bearers of mutual rights and obligations. They must actively interact with each other in order to exercise their rights and obligations fully, and the state must create all the necessary conditions for the implementation of such interaction, in which the interests of any participant will not be violated. In the process of interaction between the entities of banking legal relationships (Figure 1), they are guided by the Constitution of Ukraine,

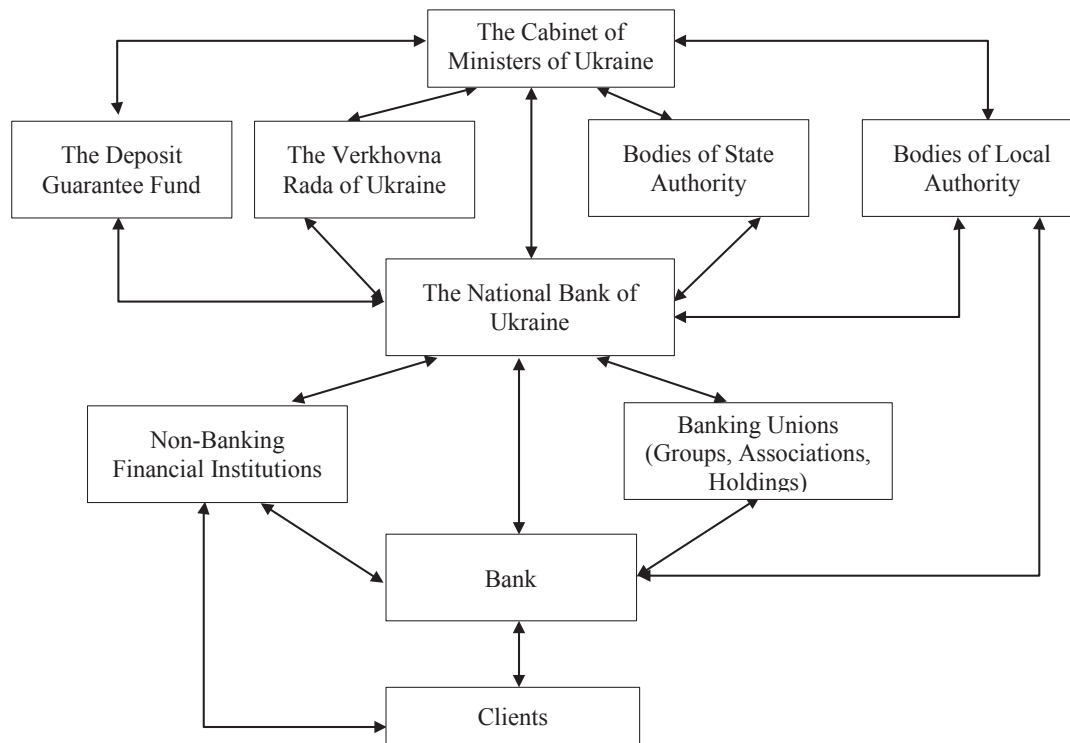


Figure 1. Interconnection of entities of banking legal relationships in Ukraine

decrees of the President of Ukraine, resolutions of the Verkhovna Rada of Ukraine, general laws; special laws; normative acts of the National Bank of Ukraine; internal organizational standards; international legal acts.

Experts point out that reforms harmonizing the interests of the entities of banking legal relationships as to de-offshorization are still being slowed down. Thus, within the framework of the rules of transfer pricing (the Law of Ukraine No. 408-VII as of July 04, 2013) the concept of “controlled operation” is introduced, as well as a list of “low tax” specializations, with which transactions are recognized as controlled. However, today there is no practice of applying these rules, and they are quite easy to avoid. The duty to disclose the ownership structure and the final beneficiary (the Law of Ukraine No. 1701-VII as of October 14, 2014) also has weaknesses. The head of a company must provide the state registrar with information about the ultimate beneficial owner (controller) of the company, including the ultimate beneficiary of its founder (if the founder is a legal entity). He is also obliged to provide information about the ownership structure of founders – legal entities, which allows identifying individuals as owners of substantial participation in these legal entities. Failure to provide such information entails imposing an administrative fine of up to 8,500 UAH on the manager. However, this is not such a large pay for business security. Moreover, the provision of inaccurate or incomplete information does not involve liability, which makes these requirements declarative (Busol, 2017).

Meanwhile, a new capital order is being created in the world. The domestic banking system should implement modern fundamental initiatives for the reform of some aspects of Basel III, which are developing into the so-called capital regime of Basel IV. The above changes are numerous and affect a wide range of capital calculations for banks. At the same time, it simplifies and complicates the banking system, as well as provides an additional level of conservative capital. Increasing the size of conservative capital will facilitate the process of reconciling the interests of the entities of banking legal relationships. New standards and proposals are aimed at ensuring that banks have capital that is appropriate for their risks.

## 5. Risks in banking activities

Many risks affect the interaction of entities of banking legal relationships and the coordination of interests between them in a negative way. Compliance risks are the risks of legal penalties, financial losses or loss of reputation due to failure to comply with legislative acts, market standards, as well as standards and internal documents of the bank, including procedures. Risks in banking activities stem from the specifics of banking services that are carried out in a market environment and mean the probability of receiving less income than expected, lowering the value of assets. Increased banking risks lead to significant losses and, as a consequence, bankruptcy of banks. Entities of banking relationships are interested in reducing the riskiness of banking activities.

Taking into account the principle of independence of entities of banking relationships for the assessment of strategic risk (Methodological guidelines for the inspection of banks "Risk Assessment System" No. 104 as of March 15, 2004), the Department of Banking Regulation and Supervision must take into consideration the following factors:

- mission, goals, corporate culture and values, risk tolerance;
- management practice to bring to the implementation and modification of strategic plans;
- the state of implementation of strategic plans, frequency and magnitude of changes in a bank attitude towards risk (risk tolerance);
- available information systems of management and supervision means for monitoring business decisions;
- impact of the bank strategic positioning on the public image and good name of the bank regarding its technologies, products, and competitors;
- plans and possibilities for the bank structural reorganization (for example, merger or accession);
- compatibility of strategic initiatives with existing or planned resources;
- bank market position, including market penetration at the geographical and product level;
- bank diversification concerning products, geography and clientele;
- results of the bank plans to introduce new products or services.

According to the Law of Ukraine "On the System of Guaranteeing Deposits of Natural Persons" and the Decree of the President of Ukraine

No. 996/98 "On Measures for Protection of Rights of Natural Persons – Depositors of Commercial Banks of Ukraine" as of September 10, 1998, the National Bank of Ukraine and the Cabinet of Ministers of Ukraine elaborated and approved "Principles of functioning of the Fund for Guaranteeing Deposits of Natural Persons, the procedure for compensating deposits to the depositors of banks" to provide the interests of clients (natural persons) as entities of banking legal relationships. The Fund was created with the purpose of protecting the interests of natural persons-depositors of commercial banks, creating financial possibilities for reimbursing them in case of impossibility of banks to fulfil the requirements of depositors for the return of funds. However, in Ukraine, the applicable legal and regulatory basis for guaranteeing the return of deposits of legal entities has not yet been formed.

## 6. Conclusions and practical recommendations

In Article 58 "Economic Ratios" of the Law of Ukraine "On the National Bank of Ukraine", we propose to establish new indicators of banking activity, that is, the standard of compliance control, indicators of clients' rights protection. In the current banking legislation (the Law of Ukraine No. 2121 "On Banks and Banking" as of December 7, 2000), we propose to introduce ratios of Basel IV on banking supervision. Banks as the main entities of banking relationships should assume risks and financial responsibility. It will contribute to the stabilization of the banking system of Ukraine and the economic development of the national economy.

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## TOPICAL ISSUES OF FINANCING ELECTRONIC LEGAL PROCEEDINGS IN UKRAINE

Nataliia Kovalenko<sup>1</sup>, Ian Bernaziuk<sup>2</sup>

**Abstract.** *The aim of the article* is to interrogate and reveal the current issues of financing electronic legal proceedings in Ukraine. *The subject* of the study is the financing of electronic legal proceedings in Ukraine. *Methodology.* The study is based on general scientific and special-scientific methods and techniques of scientific knowledge. The historical and legal method enabled to examine the current state of affairs in introducing the system of e-justice, to reveal the concept of e-Court. The comparative legal method enabled to compare the doctrinal approaches to the functioning of the ordinary system of courts and the system of e-justice. The system-structural method contributed to the consideration and identification of the most negative consequences of the delayed implementation of the e-justice system in Ukraine. The methods of grouping and classification were the basis for the author's approach to the identification of possible sources of funding for the e-justice system. The technical legal method enabled to interrogate the state of affairs in electronic legal proceedings in Ukraine and highlight the problematic issues of the practical implementation of this institute, as well as emphasize the need to increase funding for the e-justice system in Ukraine. *The results of the study* enabled to distinguish problematic issues and ways of their solution in relation to the financing of the e-justice system in Ukraine. *Practical implications.* In the study, first, the key aspects of introducing the e-justice system in Ukraine are outlined; second, the problems of the practical implementation of the system of e-Courts in Ukraine are highlighted; third, the author's perspective for possible ways of functioning of the e-Court system in Ukraine is substantiated. *Relevance/originality.* The original author's approach to the current state of affairs in electronic legal proceedings in Ukraine and the practical problems of implementing this institute is the basis for developing the most promising areas for the improvement of domestic legislation in this sphere.

**Key words:** e-justice, court, administrative court, financing, mechanism of financing electronic legal proceedings.

**JEL Classification:** D73, K23, K41

### 1. Introduction

The information and technology revolution is fundamentally changing the nature and methods of doing business. Using the opportunities of technical exchange makes it easier and faster to create and sell the necessary information, to solve the tasks of financial and operational management, and most importantly, to spend less time on these processes. Definitely, the advantages of the latest information and telecommunication technologies are efficiency, completeness, and reliability of the information necessary to make the decisions that are vital for each of us. Therefore, the study of the topicality of law issues regarding the e-Court and the relevance of its development in Ukraine has a significant role not only for employees in jurisprudence but also for ordinary citizens.

Nowadays, the issue of e-justice is given due consideration in the scientific literature. This issue is studied by A. V. Anisimov, O. R. Arsirii, H. V. Atamanchuk,

I. L. Bachylo, V. V. Bilous, O. H. Danylian, V. O. Yeltsov, O. Ye. Simson, O. O. Denysova, R. A. Kaliuzhnyi, N. V. Kushakova-Kostytska, A. I. Marushchak, M. Ya. Sehai, V. P. Kolisnyk, V. S. Tymbaliuk, V. H. Pylypchuk, M. Ya. Shvets, V. H. Chorna, M. M. Yasynok and others.

Electronic legal proceedings, in particular, were of interest to many domestic scientists, such as V. V. Bilous, M. V. Bondarenko, I. V. Bulhakova, O. V. Holovchenko, A. Yu. Kalamaiko, N. I. Lohinova, A. L. Paskar, L. R. Serdiuk, O. S. Fonova. However, it should be noted that the introduction of information technology resource is studied in its problematic aspects mainly. Therefore, the integrated approach to the introduction of electronic information technology in judicial activities is incomplete.

Therefore, consideration of the doctrinal approaches to the introduction of e-justice in Ukraine becomes relevant and constructs the aim of this article. For its successful achievement, the following tasks should

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be solved: first, to outline the key aspects of financing the system of e-justice in Ukraine; second, to analyse the perspectives available in the specialized literature in relation to the sources of financing e-Court; third, to identify problems of financing electronic judicial proceeding and to propose their potential solutions.

## 2. Main material

Electronic justice is not a phenomenon in world practice. The idea of electronic information traces its origin to the late 80s of the last century when it became popular and began to operate in countries such as Italy, Canada, the USA, Australia, Switzerland, and many others. Thus, from the very beginnings of e-justice (that is, the 80s of the last century), the UK government gradually introduced some elements of e-justice, which allowed citizens to become accustomed and to adapt to innovations that were supportive for society because of great facilitation.

Next, the UK carried out the Digital Strategy in 2016; it enables defendants and victims to participate in meetings remotely through online communication. This reformation step has allowed victims and witnesses to take part in court hearings on video communications. According to experts, such simplification helps avoid psychological trauma and allows victims better to recollect the circumstances of the events under consideration.

It is obvious that the novelty needs a legislative basis to regulate relations. Therefore, on December 12, 2003, the UN Declaration "Building the information society: A global challenge in the new millennium" was adopted. The Declaration proclaims important principles of building the Information Society such as the rule of law; transparency policy; favourable competition, based on the principle of technological neutrality, which is provided for by the political and regulatory framework; takes into account the national specificities necessary for the creation of a people-centred Information Society; information and communication technology application and interpretation that should create benefits in all aspects of life; applications, developed on the basis of information and communication technologies, that are significant for public administration bodies' activities and provision of services (Building the information society).

Indicative recommendations for the implementation of democracy in e-justice are set out in Recommendation CM/Rec(2009)1 of the Committee of Ministers to member states of 18 February 2009 (Recommendation CM/Rec, 2009).

Recommendation Rec(2001)3 of the of the Committee of Ministers to the member states on the delivery of court and other legal services to the citizens through the use of new technologies indicates the need to ensure the possibility of: initiating proceedings by electronic means; obtaining information about the state

of the proceedings by having access to a court information system; taking further action in the proceedings within an electronic work-flow environment; obtaining the results of the proceedings in electronic form (clause 3) (Recommendation Rec, 2001).

The German expert, Dory Reiling, offered an apt four-stage model for benchmarking of electronic interaction between citizens and government:

- 1) Stage one: Information online about public services;
- 2) Stage two: Communication/one-way interaction: downloading of forms;
- 3) Stage three: Communication/two-way interaction: processing of forms (procedural actions in digital form);
- 4) Stage four: Transaction: case handling, decision and delivery (payment) (Reiling).

Evidently, in the XXI century, electronic information resources have become an integral part of human life, therefore, there is a need to adapt to innovative ideas and step up with the technology.

Ukraine is not an exception, because every year hundreds, and even thousands, of cases in various spheres of justice are considered in our state. Therefore, the e-justice system is an element of e-government, considered today as a way of organizing state power through information networks (Fylonenko, Chorna). So what are the advantages of the e-justice system? First, the e-Court will increase the percentage of public trust in the justice system. Second, it will facilitate the functioning of public authorities and promote the regime of "time saving", simplifying judicial procedures, reducing the term for judicial proceedings and a significant saving of costs.

The e-Court is an online implementation of a number of functions, such as filing a lawsuit, appending it and providing feedback on lawsuits electronically, accessing legal acts, providing "electronic" evidence, reviewing cases online, circulation of information on the current case, functioning of court sites with information on a particular case to the process participants through the Internet or SMS (Kushakova-Kostytska, 2013).

In his monography studying electronic evidence, A. Yu. Kalamaiko highlights that the inadequacy of scientific research of e-justice issues impedes the development of domestic legislation in the area. Consequently, it causes the inconsistency of the current normative framework with the high demands of society, based on the current progress of information and communication technologies. The latter is far ahead of the legislation stage of development. Such a dissonance is one of the factors behind the growth of society's dissatisfaction with the quality of public administration and the quality of the judicial system functioning (Kalamaiko).

The analysis of the approaches conveyed in the scientific literature and the experience of applying the current norms of procedural law of Ukraine testify to the relevance of the study in the area of scientific development of elements of e-justice, such as:

- 1) recognition of the full spectrum of existing electronic information resources as valid and completely admissible evidence in the judicial process;
- 2) the possibility of full two-way communication between the court, the participants in the court process and all other parties concerned through modern electronic information and communication technologies;
- 3) the possibility of conducting all procedural actions in consideration of any court cases electronically (Kovtun, 2015).

Evidently, information technologies make life easier, open new opportunities. Therefore, justice reforms should not be an exception.

Despite the undeniable advantages of introducing the e-justice institute in Ukraine, the practical implementation of this institute is acutely problematic. Indeed, insufficient financial support impedes the practical implementation of the system.

The Consultative Council of European Judges recognized that the funding of courts is linked to the issue of judges' independence since it determines the conditions in which the courts perform their functions. Moreover, the funding is connected with the administration of the courts, on the one hand, and the principles of the European Convention on Human Rights, on the other hand: access to justice and the right to a fair trial are not properly provided if the case is not considered within a reasonable time by a court, which has the necessary funding and resources to carry out its duties effectively.

All general principles and standards of the Council of Europe regarding the funding and management of courts oblige the states to provide financial resources that meet the needs of various judicial systems. Funding of courts is a part of the state budget, submitted to the Parliament by the Ministry of Finance; such funding should not depend on political instability. Although the funding of the courts, which the state can afford, depends on the political decision, in a system based on the distribution of power, it is also necessary to ensure that neither the executive authorities nor the legislature can bring pressure on the judiciary in determining a budget. Decisions on the allocation of funds for courts should be taken with strict adherence to judicial independence.

In addition to the above-mentioned features of court financing, the issue of financing electronic judicial proceedings includes the costs of implementing an effective and uninterrupted electronic communications system both simple for filing an electronic administrative claim, its directing under the jurisdiction, and for maintaining relevant registries and the open access to them. However, these provisions are complicated and difficult to implement.

The implementation of a large-scale project, "E-Court," enables to solve existing problems in the judicial procedure, such as: 1) ensuring access to justice,

since participants of legal proceedings will be able to exchange electronic documents; 2) reducing the costs of issuing paper documents, as well as their mailing to the required court; 3) speeding up the exchange of judicial documents between courts and so on.

Electronic justice is key to improving the performance of courts, ensuring transparency and access to court justice and saving public funds (Lohinova).

Ukraine has already tried to introduce the e-Court system in Ukraine in accordance with the Order of the State Judicial Administration of Ukraine No. 72 as of May 31, 2013 "On Implementation of the Project on Electronic Documents Exchange Between the Court and Participants in the Trial", as amended (On the implementation of the project on the exchange of electronic documents between the court and participants in the trial) by the Order of the SJA of Ukraine No. 81 as of June 14, 2013, which determine the procedure for submitting documents to court in electronic form, as well as sending all procedural documents to the participants in the trial electronically (in parallel with the paper documents). To do this, one should register in the system of exchange of electronic documents between the court and the participants in the process, print the application for obtaining procedural documents in the case electronically, and submit it to the court. This is carried out in civil and criminal cases providing for that a summons letter can be sent through e-mail, fax or telephone or through other means of communication ensuring the fixation of a call.

Recently, on October 3, 2017, the Verkhovna Rada adopted a Draft Law No. 6232 "On Amendments to the Commercial Procedural Code, The Civil Procedural Code, the Code of Administrative Justice of Ukraine and other legal regulations", according to which a Single Judicial Information and Telecommunication System was introduced in Ukraine enabling exchange of electronic documents between all parties to the proceedings and the court, as well as video-streaming of the hearings and participation through a video conference.

Especially, the new regulations consider the modernization of legal proceedings, its electronization and the creation of electronic registries, through which both the court and participants in court proceedings will be able to access information and evidence necessary for the consideration of cases, which should significantly accelerate the resolution of disputes by the court. It should be noted that the evaluation of the adequacy of funding courts does not always depend on formal procedures for consulting or submitting judgments by the judiciary. Direct involvement of courts has always been an important necessity though. It should be noted that the answers to the questionnaire repeatedly revealed many shortcomings: from the lack of necessary material resources (premises, furniture, office equipment, computer equipment, etc.) to the complete lack of assistance needed by judges to ensure



the modern judicial functioning (qualified staff, special assistants, access to computerized documentation sources, etc.).

It should be noted that in Ukraine, the general lack of budget funds for e-government has led to a decrease in the number of meeting rooms, offices, IT and/or staff (the latter means that judges sometimes have to perform non-judicial functions). One of the problems of financing e-justice is that the judiciary, not always considered as a separate branch of government in the country, has specific needs for fulfilling its tasks and maintaining its independence.

In accordance with the current legal regulations, the centralized procedure for the financing of courts has been established in the State Budget of Ukraine for the current year. Analysing the Budget for 2017, financing of courts increased by 40%. This is a positive change. According to 2017 reform, financing of the courts shall be agreed with the High Council of Justice, which has not been formed yet. Meanwhile, the High Council of Justice will carry out its duties at least until 2019, according to experts' forecasts. To date, the Constitutional Court of Ukraine, the Supreme Court of Ukraine, the highest specialized courts, and the State Judicial Administration administer state funds for the maintenance of courts.

A practical scheme was also implemented to follow the mechanism of the future judicial telecommunication system. In accordance with the Order of the State Judicial Administration No. 367 as of March 23, 2017, since April 01, 2017, in seven pilot Ukrainian courts, the Temporary Regulation of electronic documents exchange has been introduced. For example, along with the positive practice of introducing e-justice, the Zhovtnevyi District Court of Odesa and Vinnytsia District Administrative Courts may already indicate shortages and necessary revisions of the E-Court regulatory framework.

The pilot project "E-Court in the Kyiv District Court of Odesa" can be an example. The first steps of electronic interaction were made between the two institutions, the Kyiv District Court of Odesa and the Odesa Research Institute for Forensic Examination of the MJU. Initially, it was the sending of applications electronically, followed by an additional corresponding paper copy that allowed saving 3-4 days on the exchange of documents and laid the foundation for establishing a dialogue.

The abovementioned process enabled to avoid sending paper copies of documents, consequently, to save both time and budget funds (no need to spend money on resending the letter, going to post offices, and waiting in meter queues). Therefore, the initial stage of the interaction between the institutions achieved significant results: the reduction of the forensic examination period, the improvement of efficiency of interaction between the institutions, and faster resolving of the court proceedings of participants' disputes (Chvankin).

It is difficult to overestimate the prospects for the further development of judicial institutions. Evidently, through electronic communications, it will be possible to send requests, answers, advisory materials, materials of cases for conducting expert research in the shortest period.

The final and transitional provisions of the Draft Law No. 6232 "On Amendments to the Commercial Procedural Code, the Civil Procedural Code, the Code of Administrative Legal Proceedings of Ukraine and other legislative acts" provide for that the transfer of proceedings to the e-Court will occur gradually. Cases initiated by materials in paper form prior to the operation of the Single Judicial Information and Telecommunication System and not yet completed should be considered in paper form. The participants in the proceedings still have the right to submit paper documents to the court after the introduction of the e-Court system.

The novelty is the introduction of electronic evidence, that is, electronic (digital) information that contains circumstances relevant to the case, including electronic documents (text files, graphic images, photographs, video and audio), the websites (pages), text, multimedia, and voice messages. They can be stored in backup systems, other places of electronic data storage, including Internet resources. Electronic evidence is filed in the original or in electronic copy, certified by an electronic digital signature. The Draft Law also contains innovations regarding the registration and issuance of executive documents: they are represented in electronic form using the Single Judicial Information and Telecommunication System and are signed by an electronic digital signature of the judge. Within 5 days after the court judgment is enforced, the enforcement document is submitted to the Unified State Register of Executive Documents, and its copy is sent to the payee at its official e-mail address, or by a registered or certified letter (Hrishyna).

The reform is inspired by the state intention to build a people-centred, open, and aimed at the development Information Society, which provides everyone with free access to the use and exchange of information by exercising their right to free access to information and raising the quality of life (Pro Osnovni zasady rozvytku informatsiynoho suspilstva v Ukraini, 2017).

However, effective functioning of the system provided by the Law No. 6232 needs interrelation of the proper economic and financial support of the e-Court and the human factor. Considering in total, the e-Court is an undeniably qualitatively new and promising process. Nevertheless, some questions exist. In Kyiv and other regional centres, technological innovation problems should not arise. What about small towns and villages? There the courts lack the human resources to ensure quality and fast legal proceedings in paper form, process participants cannot receive court decisions for months, so prospects for e-justice seem out of reach.



Along with the advantages regarding the introduction of the e-Court and the reduction in the corruption component by removing direct contacts between the court process participants, third-party interference with the e-justice system is possible. In the era of information technology, the access of key process participants (judges) to e-justice must be protected from the influence of third parties at the highest level. Moreover, uninterrupted access of all process participants to the e-Court should be ensured so that such key principles of justice as publicity and openness of the trial are in no way impaired due to technical malfunctions of the system (Roik).

### 3. Conclusions

Therefore, e-justice as one of the sectors of e-government is a safe area of development on the way of forming a new information society (Roik). With conviction, e-Court has many advantages. First, it can save time considerably. The exchange of documents is more reliable and operative. Second, it provides operational access to the materials of the case. Some situations require receiving or transmitting urgently a certain document that the materials of the case contain. For now, an appropriate application should be written, which often takes weeks. Third, there is no

need for certifying copies of documents. Electronic legal proceedings enable to avoid the time costs of producing paper copies of documents, and the recipient of such a document will always receive an exact copy, the validity of which can be verified through the data of the telecommunication system. Therefore, the Ukrainian judicial system is ready to introduce a meaningful e-Court. However, the introduction of such technologies should be backed up by the relevant legal regulations in the legal sphere.

At the same time, it should be emphasized that the management of budget funds allocated to courts for the implementation of the e-justice system implies more and more responsibility and needs a professional approach. The systems controlled by judicial authorities or by persons or by a body accountable to the judiciary or an independent body with the necessary administrative support differ noticeably from the systems, in which the government unit or service is fully responsible for management. The state should review existing procedures for the financing and management of electronic legal proceedings. In particular, the necessary resources should be provided to the e-Court system in order to enable it to function in accordance with national and international standards.

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## COMMUNICATIVE COMPETENCES IN ENHANCING OF REGIONAL COMPETITIVENESS IN THE LABOUR MARKET

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**Abstract.** The characteristic of the regional labour market requires the usage of modern aspects for the key factors' analysis of labour cost increase. The high rate of migration, covering Ukraine in recent years, is influencing negatively on the labour market structure. It is necessary to remark among positive features that the demand increasing for highly intellectual staff, skilful in communication in foreign languages and building up social relations is of great importance. *The subject of scientific research* defines communicative competences as the key factors of human capital, which promotes the increase in competitiveness of an individual in the labour market and, as a result, an increase of the regional competitiveness. *The aim of the research* is to establish the dependency between the level of communicative competence and competitiveness in the labour market studying communicative competence factors in terms of the theory of human capital, the determination of the conformity between the requirements to human capital and the conformity of the investigated factors to these requirements. Communicative competencies are a set of skills, which allows labour market entity distinctly expressing and applying the business format of communication. The practical use of oratory allows negotiating with foreign counterparties, putting into practice the etiquette of business communication, and competently solving the complicated situations. The research of existing requirements to communicative competence defined the levels of qualification, which ensure the development of new kinds of activities. It defined the position of Ukraine in professional communicative competence in the world rating. The research was to carry out of rating assessment of the economic situation in regions according to economic indicators, which can be changed under the influence of a factor of the communicative contractors' competence (average monthly-paid salary per an employee, export, and import of goods in the region, turnover of retail trade). *The methodology of the research* is based on the research of the role of human capital factors in increasing the cost of labour on the basis of the statistical method and analysing data of the labour market economic indicators, and in substantiating the relationship between the level of professional communicative competence in the country and its social and economic indicators. *Value/originality.* The methods of analysis and synthesis allowed revealing regularities and formulating recommendations for improving the competitiveness of the regional labour market by inducing the development of communicative competences and raising the index of human capital of the country in a whole. Positive dynamics of import and export, business activity, direct foreign investment and overall trade turnover indicators will be immediately reflected in a whole at the regional level and at the level of the country. Life expectancy of the population, the level of education and culture, the criminal situation decreasing will be approved by the social indicators.

**Key words:** European integration, foreign language, human capital, rating, international trade, export, import.

**JEL Classification:** F02, F15, I25, O11, O25

### 1. Introduction

Currently, the importance of the research of communicative competencies is gaining significant relevance under the conditions of transnational corporation activities. Most of the foreign researches about the influence of individuals' communicative

competencies on the country's economy involve economic and social integration of immigrants.

Hence, in accordance with the same principle, it is possible to characterize the positive influence of salary increase among the citizen of the state in the national and regional market. Any profession imposes its

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requirements on a specialist, especially if it concerns highly professions. One of such requirements is the ability to solve the professional tasks with the help of correct, competent, and skilful speech. Characteristics of the labour market of Eastern European countries including Ukrainian, considering the influence of the communicative skill's factor on the cost of labour, is of considerable interest from the point of view as an employer and as an applicant. On one hand, it effects on the competitiveness of an individual in the labour market, judging from the point of an applicant, and on the other hand, it has an influence on the competitiveness of the labour market institutions in the struggle for well-educated and skilful labour resources, judging from the position of the employer.

Considering the phenomenon of competitiveness, it must be noted that this category must be accepted through the prism of the factors, which determine it. During the decades, Ukrainian and foreign scientists have developed methods, which are based on different approaches in order to identify key factors of competitiveness.

Interdisciplinary research is now becoming increasingly relevant; it is characterized by a symbiosis of economics and philology, studying the communicative competencies of individuals (Chiswick, 2008). Implementation of the theoretical substantiation empirically allowed establishing a direct relationship between the growth of communicative competences of individuals and economic indicators of economic development.

Indeed, the ability to be skilful in communicative competencies is considered as an independent form of human capital by foreign scientists. Therefore, it is an asset that requires investments and is embodied in a man and it will increase the productivity of the labour market in a whole (Chiswick, Miller, 1995, 2007; Chiswick, 2008).

The financial state of living standard of the population has a direct imprint on its quality of life and well-being (Evans et. al., 2010). Obviously, the low income of the family also restricts the educational rate of investments (Nkechi, 2008). Therefore, the development of the communicative competencies, as the impetus for human being development, is limited by the financial budget of the family. Therefore, in this situation, it is necessary to mention the role of the state and the local authorities as the "investors" of the economic development via the population gaining of the necessary communicative competencies, language awareness, and educational programs. Concomitant empirical researches show that highly educated individuals are more likely to emigrate and choose countries with higher pay per hour (Nkechi, 2008; Grogger, Hanson, 2011). So the creation of conditions for personal development and provision of a competitive labour market are the most important conditions, which the implementation will reduce migration processes in Ukrainian society.

Meanwhile, the development of communicative competencies increases the efficiency in the labour market and, on the other hand, proficiency in a large number of foreign languages make people more "efficient in the consumption of goods and services" (Barry, Chiswick, Miller, 2014) (in this case, the term is the purchase of goods or services of higher quality at lower prices). The popularization of Internet commerce, the use of digital marketing, of course, is impossible without the development of communicative competences.

The development of the innovative potential of the region is achieved by the concentration of the educated population as a driving force for the economic development of the region. Therefore, the proposed assessment of intangible assets in the region through a methodology based on the assessment of human potential creativity (Florida, 2005) suggests that the most competitive regions are those, which population is dominated in specialists with advanced communicative competencies. It is due to some factors. Firstly, the dependence of the value of the labour market on the quality of competencies requires further research. Secondly, significant immigration processes in Eastern European countries relate to highly skilled personnel. Thirdly, the European integration processes of the countries of the Eastern Partnership with an increase in the rate of trade with the countries of the European Union and foreign direct investment also depend on these factors.

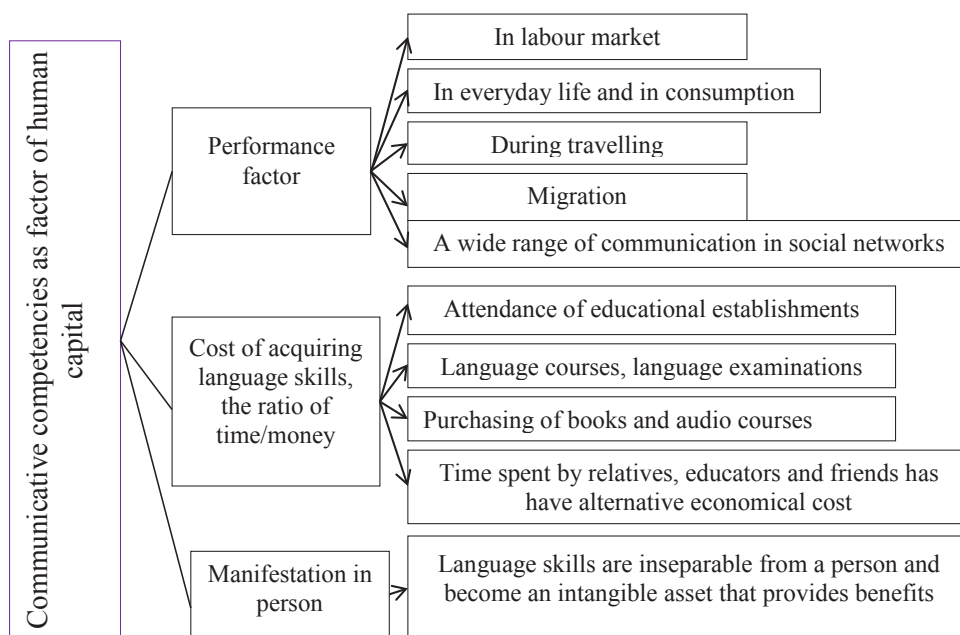
The purpose of the article is to research the influence of the study on the development of communicative competences and on increasing the regional competitiveness of the labour market in the context of European integration processes.

## **2. The development of communicative competences as a factor of human capital**

Communicative competencies meet three requirements to human capital. Firstly, they have features of efficiency. Secondly, they are expensive to acquire. Thirdly, they are embodied in human activity (Schultz, 1962). The indicated properties at the macro level are directly related to the formation of the phenomenon of human capital (Figure 1).

When considering investments into other forms of human capital, such education and training are likely to be more productive, if they are acquired by communicating in the language of the dissemination of relevant knowledge in the labour market (Barry, Chiswick, Miller, 2014).

The presence of the individual communicative competences is one of the hallmarks of his professionalism and the ability to solve his professional tasks. Acquiring communicative skills takes place in the individual during his training, gaining his first professional experience.



**Figure 1. Clarification of the requirements, which the communicative competencies of the human capital factor correspond to**

Source: Developed by the authors based on (Barry, Chiswick, Miller, 2014)

The demand for highly skilled personnel in the labour market forms the following requirements for the applicants:

1. High level of education (higher education, master's degree, postgraduate study, doctorate).
2. Profession related to the scientific and technical sphere, creativity, art.
3. Foreign languages awareness.
4. Cultural leisure during non-working hours and at weekends.
5. Social and public activity.

In its turn, the material stimulation of communicative skills in the population creates the necessity of introducing new wage systems that take into account the knowledge and competencies of the worker and motivate the worker to further acquisition of these skills, so as the popularity of the remuneration system, which is so-called "payment for knowledge", becomes widespread.

According to the principle of employee remuneration for the acquisition of additional skills or knowledge is the fundamental principle of such systems, but it is not definitely the number of hours spent working in order to achieve the goals of the enterprise (the basic principle of the traditional system of remuneration). In this case, it is important for the company's managers to identify a set of competencies, qualifications, skills that employees will be rewarded for. It must be mention that a set of this knowledge should be changed when the strategic objectives of the enterprise are to be changed too.

A person must demonstrate some competencies to be granted by reward. Advantages of payment systems

for knowledge and competence are likely to orient the workers to acquire new skills, professions, knowledge and they provide an increase in the quality of human resources in the organization, which contributes to its competitiveness increasing. The disadvantages of payment systems for knowledge and competence include the following: they can cause conflicts in the team and besides this; they reward potential but not the result of labour. In addition, the organization's salary costs become constant and do not depend on the volume of sales. Finally, it is a complex and not always an objective process to define employees' knowledge and competence (Gibson, Ivancevich, Donnelly, 2000).

Nowadays at large Western European enterprises, there is a system of investment into workers in order to acquire communicative skills and knowledge of workers in term of the instruments of individual incentives. In this case, there is a link between the received monetary incentive in the form of wages and the qualifications of the employee, but not the results of labour. This form of individual incentives more often gets the form of non-payment tuition, but a loan that will be cancelled, if after training an employee does not work in a firm for a certain period of time (Gibson, Ivancevich, Donnelly, 2000).

The evaluation of the factor of the development of communicative competences at the macro level at the same time gives the opportunity to form a state policy of employment and professional orientation to the state, which the level of education and literacy of the population depends on. Wage rates in the labour



market, migration processes, the state of export/import of goods and services, cultural development, and even demographic situation are given by it. The key factors of the human capital concept are the impact of learning on personal development and career promotion, healthcare, and the discovery of a new factor of production, which called information (Schultz, 1962). It should be added that advanced linguistic competences have a positive impact on communication with foreign private and state counterparts, assisting to overcome linguistic, cultural, and psychological barriers in communication. The Go Global International Initiative receives support from the National Reform Council in studying a foreign language by students and additionally with the direct participation of volunteers from different countries. The development of communicative competences in childhood allows you to teach a leader's psycho type, to develop critical thinking, to acquire education and experience, and to get rid of linguistic and cultural barriers in communication.

Table 1

#### Ukraine in the global rating of English language proficiency

Year	Place in the rankings among the countries surveyed	Level of English language proficiency in the country
2013	27 from 60	Middle
2014	44 from 63	Low
2015	34 from 70	Middle
2016	41 from 72	Low
2017	47 from 80	Low

Source: compiled by the author based on data (Education First English Proficiency Index, 2018)

Table 2

#### Dependence between the level of knowledge of English language and individual social and economic indicators, 2015

Level of English language proficiency	Life expectancy, years	Amount of annual income per capita, USD	Number of researchers per million people	Expenditure of GDP allocated to research, %
Very high (Netherlands, Sweden, Denmark, Norway, Singapore, Finland, Luxembourg, South Africa)	80	31335	4930	2,3
High (Germany, Austria, Poland, Belgium, Malaysia, Switzerland, Philippines, Serbia, Romania, Portugal, Hungary, Czech Republic, Slovakia)	78	18318	3047	1,7
Middle (Bulgaria, Greece, Lithuania, Argentina, Dominican Republic, India, Spain, Hong Kong, South Korea, Nigeria, France, Italy, Vietnam, Costa Rica)	77	11302	2724	1,4
Low (China, Japan, Russia, Indonesia, Taiwan, Brazil, Macao, Uruguay, Mexico, Chile, Bangladesh, Ukraine, Cuba, Panama, Peru, Colombia, Pakistan, Thailand, Guatemala, Ecuador, Tunisia, United Arab Emirates)	76	7518	972	0,7
Very Low (Syria, Qatar, Morocco, Sri Lanka, Turkey, Jordan, Azerbaijan, Iran, Egypt, Kazakhstan, Venezuela, El Salvador, Oman, Mongolia, Saudi Arabia, Angola, Kuwait, Cameroon, Libya, Iraq, Laos)	73	2646	450	0,3

Source: compiled by the author based on data (Education First English Proficiency Index, 2018)

### 3. Analysis of the influence of communicative competences on the level of development of the region and the labour market in general

According to the EF EFI (Education First English Proficiency Index, 2018) at the beginning of 2018 Ukraine ranked the 47th position in the global ranking of foreign language proficiency out of 80 surveyed countries (or 25th out of 27 European countries) in comparison with a low level of EF EFI 50, 91. It is ahead of Cuba and inferior to Bangladesh (the dynamics are reflected in Table 1).

According to the EF EFI study conducted in 70 countries of the world in 2015 (Table 2), there is a direct relationship between the levels of English language proficiency. Life expectancy, number of researchers per one million permanent residents and % (percentage) of GDP expenditures spent on researches. So the higher the level of knowledge of English language, the higher general social and economic indicators of the country, such as life expectancy, the annual income per capita (i.e. GDP in general), the number of researchers in the country, and the level of spending on researches in the structure of GDP.

We also carried out a regression analysis of the dependence of the EF EPI (2017) index on the nominal Gross Domestic Product, calculated according to the methodology of the International Monetary Fund. The linear dependence (Figure 1) is defined, which is described by the formula:  $y = 9,11x + 99,126$ .

Thus, we received a positive correlation between the EF EPI index and the nominal GDP of the 85 reviewed countries.  $R^2$  is equal to 0.2% variation of the dependent variable. Although the model depicts a slight positive increase, nevertheless it exists and defines the necessity

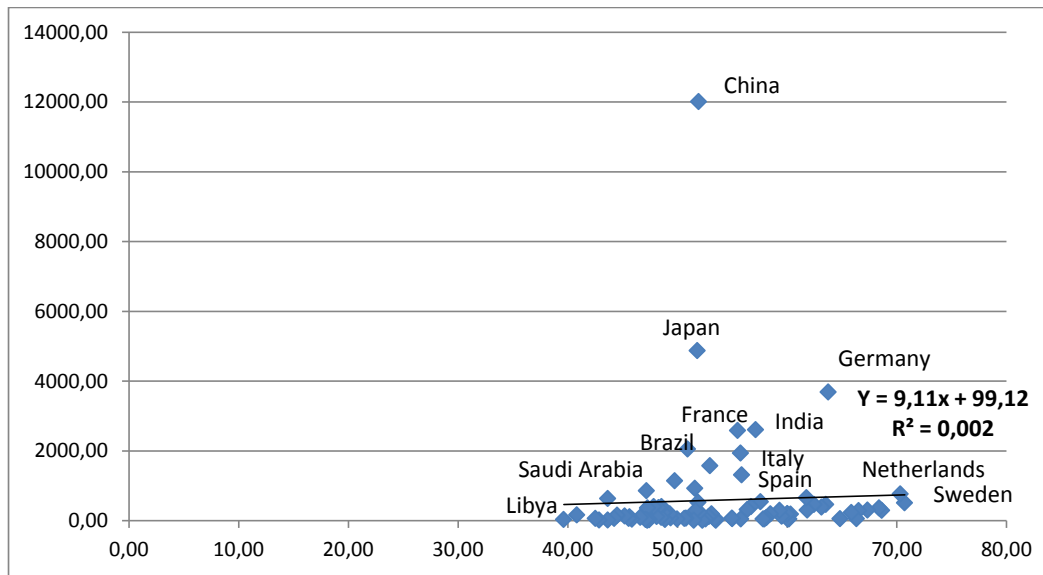


Figure 2. Dependence of nominal GDP of countries of the world on the index of EF EPI Score, 2017

for further deeper investigation of the development of communicative skills of the population. If all variables in the model are equal to "0", the value of the coefficient  $Y = 99,126$ . That is, the GDP value is influenced by other factors not described in the model (except for the communicative competences of the population). The values of coefficients 9, 11 indicate that the index of knowledge of foreign language has an effect on GDP.

The results of Indian scientists' researches (Azam, Chin, Prakash, 2013) show that increasing communicative skills of the population, especially in terms of proficiency in the foreign language (in English), leads to an increase in profits by 45%. As far as Turkey is concerned, it has been established (Paolo, 2013) that skills in foreign language and the improvement of the communicational skills among citizens of Turkey lead to approximately 37% of the "remuneration" of ordinary earnings. These studies were conducted using the statistical method of processing personal data.

It should be noted that those, who can speak two foreign languages, communicate a generalized cognitive advantage over monolinguals in the so-called executive functions, associated with the psychological characteristics of the individual: the ability to control attention and task switching, creativity and originality in solving problems (Leikin, 2012).

Communication skills are also heavily related to R&D in business and in the academic world (Fidrmuc, 2011). The command staff of scientific centres, speaking foreign languages, can follow new scientific and technical developments, as well as interact with international researchers and institutions in the process of creating new products, methods, and tools.

Thus, improving knowledge of foreign languages increases the country's scientific potential, leading

to innovations and investments that can contribute to economic growth in the short-term perspective (Segerstrom, 2000) and long-term perspective (Howitt, 1999). However, the cost of research in Ukraine is too low (less than 1% of GDP according to 2017) comparing with developed countries (from 2 to 5% of GDP), which results in a low level of return on assets and productivity (Koval, Slobodianiuk, Yankovy, 2018).

Thus, communicative competences can increase individual profits by increasing their own personal productivity via their direct influence. This influence may also be mediated, because communicative competences will open up individuals to access more paid professions, to increase their skills and cognitive skills, and potential performance (Paolo, 2013).

Regarding macroeconomic factors, it is known from the theory of international trade that the general language of communication increases trade flows by about 40% (Otten, 2013). In the course of the survey, according to the statistics, a regional rating of Ukraine in 2017 was carried out on the basis of indicators of the average monthly-paid wage per employee, export and import of goods, and retail trade turnover. The abovementioned indicators are selected out of all indicators of the social and economic status of the region. In our opinion, they mostly depend on the level of knowledge of foreign languages, spoken by residents of the region. So Kyiv, Dnipropetrovsk, Lviv, Donetsk, Kharkiv, Odesa regions are the most developed regions according to the indicators of average monthly-paid wage, export and import of goods, and retail trade turnover, indicated in statistical data of 2017. These are regions with developed international relations, the highest population density and developed industry.

Table 3

**Main indicators of the labour market in Ukraine, 2017**

	Number of unemployed '000 people	Vacancy rate ř'000 people	Salary with a bonus for foreign language competence, UAH
Agriculture	92,1	2,2	15921
Industry	53,9	92,4	14314
Building	7,8	2,2	14314
Wholesale and retail trade; wheeled transport and motorbikes maintenance	48,1	107,6	10576
Transport, storage facility, mail service and express delivery service	13,7	5,4	9726
Hospitality industry and catering service	6,8	1,4	9861
IT and telecommunications industry	4,1	0,4	23673
Finance and insurance business	9,1	0,5	12927
Real estate services	2,7	0,7	9426
Research, academic, and technical activities	6	1,1	11355
Activities in the sphere of executive and supportive services	6,4	2	9426
Public administration and military defence; compulsory social insurance services	37,1	4,2	29357
Education	7,2	2,7	11355
Healthcare and social service	10	3,4	16485
Art, sport, entertainment and recreation services	1,6	0,5	11797

Source: compiled by the author based on data (State Statistics Service of Ukraine, 2018)

We also conducted a hierarchical classification method and the *k*-means data on the number of unemployed, demanded in the labour market; the number of vacancies, supplied in the labour market, and the labour cost based on English language skills, taking into account the allowance for communicative competences, among kinds of economic activity with the help of cluster analysis with application of the software package *Statistica*. The main source data used to calculate *Statistica* with the application of software is shown in Table 3.

The data, brought to the standardized form, form a hierarchical classification in the Euclidean dimension according to the results of the study (Figure 3). The full-band method determines the distance between clusters as the largest distance between two different objects in different clusters.

According to the results of the hierarchical classification, it is found that for further investigation of the *k*-means method, it is expedient to use the assertion that this data array forms 4 clusters (four areas are identified, which "touch each other" more closely). The *k*-means method determines which of clusters types of economic activity are enlisted according to the calculations (Table 4). These clusters form similar types of economic activity, in which the professions have similarity in terms of demand, supply, and value of labour in the labour market. In each of the clusters, there are objects with similar influence.

The results for cluster characteristics are shown in Table 5.

**Table 4****Distribution of activities by clusters**

Type of economic activity	Cluster
Agriculture	1
Industry, wholesale and retail trade; wheeled transport and motorbikes maintenance	2
IT and telecommunications industry, public administration and military defence; compulsory social insurance services	3
Building, transport, storage facility, mail service and express delivery service, hospitality industry and catering service, finance and insurance business, real estate services, research, academic, and technical activities, activities in the sphere of executive and supportive services, education, healthcare and social service, art, sport, entertainment and recreation services	4

For 4 clusters received, standard deviations were calculated for the three indicators used in the study. In Figure 4, the average and confidence intervals for the variables in each cluster are graphically depicted.

Thus, the use of mathematical modelling methods to confirm the hypothesis about the influence of communicative competences on the country's economy has allowed identifying trends regarding the direct influence of the development of communicative competences on nominal GDP and structuring the labour market into clusters by types of economic activity, identifying 4 clusters using the hierarchical method and *k*-means method.

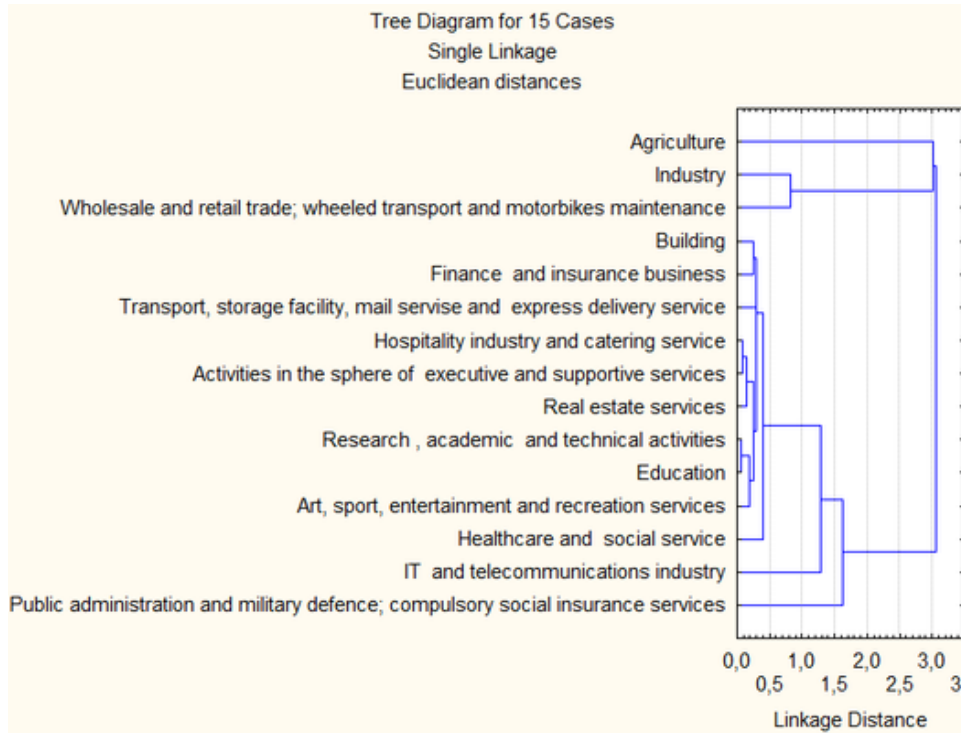


Figure 3. The result of the hierarchical classification

**Table 5**  
**Summary of characteristics of clusters in the labour market in Ukraine, 2017**

Type of economic activity	Number of unemployed '000 People	Vacancy rate '000 People	Salary with bonuses for foreign language competence in UAH	Case	Cluster	Distance
Agriculture	2,75910344	-0,373075989	0,3333893	1	1	0,00
Industry	1,28830032	2,23287039	0,0494394351	2	2	0,24
Building	-0,486674121	-0,373075989	0,0494394351	3	4	0,27
Wholesale and retail trade; wheeled transport and motorbikes maintenance	1,06498467	2,67200991	-0,611048801	4	2	0,24
Transport, storage facility, mail service and express delivery service	-0,259508194	-0,280625564	-0,76124008	5	4	0,25
Hospitality industry and catering service	-0,52517682	-0,396188596	-0,737386171	6	4	0,18
IT and telecommunications	-0,629134109	-0,425079354	1,70313376	7	3	0,47
Finance and insurance business	-0,436620612	-0,422190278	-0,195637393	8	4	0,14
Real estate services	-0,683037888	-0,416412127	-0,814248767	9	4	0,25
Research, academic, and technical activities	-0,55597898	-0,404855823	-0,473402911	10	4	0,04
Activities in the sphere of executive and supportive services	-0,5405779	-0,378854141	-0,814248767	11	4	0,23
Public administration and military defence	0,641454973	-0,315294473	2,70747168	12	3	0,47
Education	-0,509775741	-0,35863061	-0,473402911	13	4	0,03
Healthcare and social service	-0,401968182	-0,33840708	0,433045631	14	4	0,50
Art, sport, entertainment and recreation services	-0,725390857	-0,422190278	-0,395303446	15	4	0,13

Source: built by Statistica



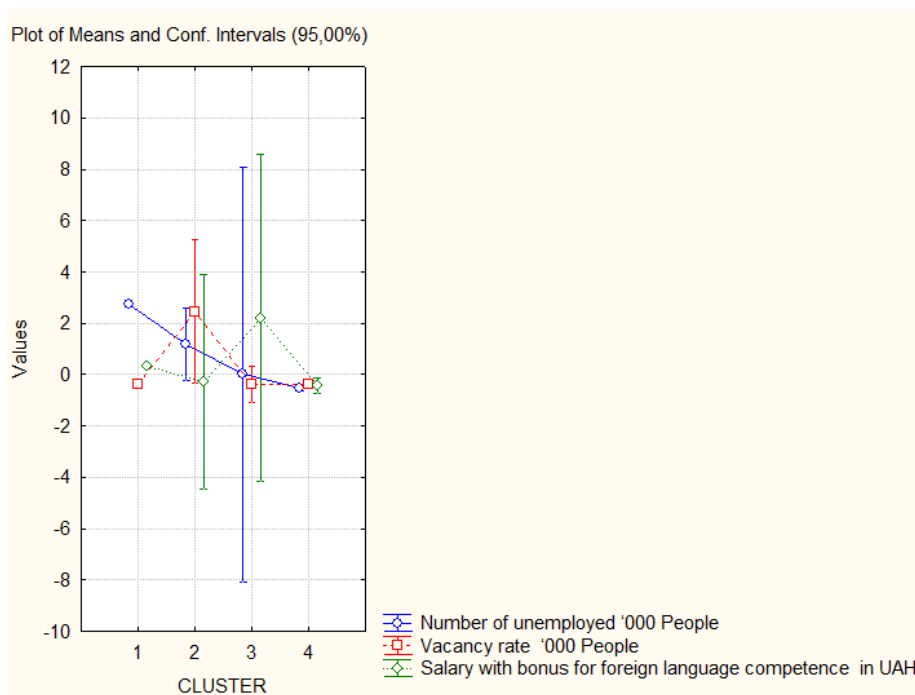


Figure 4. Graph of average and confidence intervals for variables in each cluster

#### 4. Conclusions

Communicative competences are the factor of human capital, which leads to productivity and competitiveness increasing at micro and macro levels and it ultimately increases the efficiency of an economic entity's activity at any level, having a synergistic effect of action, it improves the social and economic status of the identity, stimulating the development of professional skills and competencies. It should become one of the main prerogatives of public administration. On the other hand, according to the results of researches of domestic and foreign scientists, it has been established that the acquisition and improvement of communicative competences, especially a combination of them with foreign languages, the applicant increases the cost of his labour in the market and receives more benefits in acquiring professions, which can be embodied in raising earnings in cash equivalents, opportunities for further intellectual development and improvement of personal and professional skills, the possibility of combining several positions and faster career promotion.

Under the present economic situation, the creation of conditions for the development of professional skills and competencies are of great importance, but also the application of policy, restrictive methods. Migration processes that have become active in Eastern Europe have a negative impact on the formation of a nation's intellectual fund. One of the reasons for this process is the extremely low labour costs in the labour market comparing to European ones. Government and business must work together in order to develop communicative

skills of the population, taking into account international experience. Their development has a direct impact on the prosperity of the state and its role on the international scene. To do this, it is necessary to develop a Strategy for Enhancing Communicative Skills and Developing New Approaches to Linguistic Education Policy. Enterprises should be encouraged to invest into the development of communicative competences of workers through incentive methods, including financial incentives. On the part of educational institutions, schools, and centres, they should plan to use a range of free resources to support the development of communication skills that are accessible locally, through the Internet, international cultural centres and institutes, charitable foundations and organizations for international exchange and education.

The financial factor is the most important one. Therefore, dissemination of the promotion of the necessity to develop professional skills and competencies and to provide the conditions for knowledge acquisition among the poorest layers of the population will allow correct social policy and increase the index of human capital of the country in a whole. At the moment, the development of Internet technologies, the process of acquiring knowledge is becoming simpler. Creating a methodological basis and a bank of free Internet services will give an impetus to non-teaching time education for all segments of the population.

Further studies in the field of knowledge economy require the development of methodological tools for the formation of remuneration systems of enterprises based on the assessment of the communicative competences of workers.

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## EFFICIENCY EVALUATION OF COOPERATION BETWEEN TRANSPORT ENTERPRISES AND HIGHER EDUCATION INSTITUTIONS IN THE TRANSPORT AND LOGISTICS CLUSTER

Maryna Kovbatiuk<sup>1</sup>, Vladyslava Shevchuk<sup>2</sup>

**Abstract.** The processes of formation and efficiency evaluation of the transport and logistics clusters' operation as a tool of national transport competitiveness, possibility to attract investment to the field, in order to reach a high point of innovation development, are of a great interest nowadays. All mentioned above make additional requests to the modern specialists in the transport industry. It is possible to solve this problem as a result of cooperation between transport enterprises and higher education institutions in the process of cluster operation. Thus, *the subject of research* is effective cooperation between transport enterprises and higher education institutions in the process of cluster structures' cooperation. *The aim of the research* is the development of an integrated index of operating efficiency evaluation of transport enterprises and higher education institutions to evaluate its cooperation under the conditions of operation of transport and logistics cluster (TLC). *Methodology.* In the research process, the methods of scientific knowledge such as analysis and synthesis were used in studying of the activity of self-supporting separated subdivision of Kiliya Shipbuilding and Repair Yard of Private Joint-Stock Company "Ukrainian Danube Shipping Company" and State University of Infrastructure and Technologies in 2015–2017. Economic-mathematical methods were used to make integrated index calculation of operating efficiency evaluation of transport enterprise and higher education institute, value scale determination of the integrated index of operating efficiency evaluation of the clusters' entity. The expert evaluation method is used to define the values, characterized operation of transport enterprises and higher education institutions under the conditions of their cooperation within TLC and their significance. Method of scientific abstract is applied to come to theoretical general conclusions. The system approach is the main one in the research. *Results.* In the article, the methodological approach was used, it includes value system determination based on the expert evaluation, method of integrated index calculation and value scale development of an integrated index to evaluate performance efficiency of transport enterprises and higher education institutions under the conditions of their cooperation in transport and logistics cluster. This approach was applied on the example of the activity of self-supporting separated subdivision of Kiliya Shipbuilding and Repair Yard of Private Joint-Stock Company "Ukrainian Danube Shipping Company" and State University of Infrastructure and Technologies. It is determined that entities of transport and logistics cluster can achieve a general positive economic impact. *Practical implications.* Practical consequences are connected with the opportunity to use suggested methodological approach to make the calculation of entities' efficiency as a result of their cooperation in the cluster. The practicability of the cooperation between transport enterprises and educational institutions in the transport and logistics cluster in this research is proved by the opportunity to get a lot of advantages as a result of this cooperation, by the positive change of main operating index of the cluster's members. It is base for the development of further enterprise development strategy, proved by a jury of opinion and calculated integrated index of the effectiveness of their activity. *Value/originality.* Originality lies in the development of scientifically-grounded formulas for integrated index calculation of operating efficiency evaluation of transport enterprises and higher education institutions in the transport and logistics cluster and opportunity to identify efficiency level of their cooperation according to developed value scale.

**Key words:** transport and logistics cluster, transport enterprises, higher education institutions, cluster entities' cooperation, integrated index of efficiency evaluation.

**JEL Classification:** C13, D61, R49

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## 1. Introduction

Under the conditions of globalization and integration to the European Union, the processes of economics reformation of Ukraine have to form a new attitude type between entities and to develop also new implementation mechanisms of their economic interests, one of them is clustering. National competitiveness increase is a pre-condition in forming an effective economic system of any country. According to the global experience and conclusions of Ukrainian scientists, the main direction of strategic changes in the economy of Ukraine is a structural reformation of regional economics and operating of active investment policy focused on the development of modern industry and providing of transport services with the help of transport and logistics clusters (TLC).

Formation of the transport and logistics clusters is an efficient tool to increase the competitiveness of the national economy by means of costs minimization in the field of transport and logistics (Chupaylenko, 2013). Thus, the processes of formation and efficiency evaluation of transport and logistics clusters as a tool of national transport competitiveness, providing facilities to attract investment to the field in order to achieve the high level of innovation development are of a great interest.

All mentioned above make additional requests to the modern specialists in the transport industry. It is possible to solve this problem as a result of cooperation between transport enterprises and higher education institutions in the process of cluster operation. Thus, the subject of research is effective cooperation between transport enterprises and higher education institutions in the process of cluster structures' cooperation.

The aim of the research is the development of an integrated index of operating efficiency evaluation of transport enterprises and higher education institutions to evaluate its cooperation under the conditions of operation of transport and logistics cluster (TLC).

**Methodology.** In the research process, the methods of scientific knowledge such as analysis and synthesis were used in studying of the activity of self-supporting separated subdivision of Kiliya Shipbuilding and Repair Yard of Private Joint-Stock Company "Ukrainian Danube Shipping Company" and State University of Infrastructure and Technologies in 2015-2017. Economic-mathematical methods were used to make integrated index calculation of operating efficiency evaluation of transport enterprise and higher education institute, value scale determination of the integrated index of operating efficiency evaluation of the clusters' entity. The expert evaluation method is used to define the values, characterized operation of transport enterprises and higher education institutions under the conditions of their cooperation within TLC and their significance. Method of scientific abstract is applied to come to theoretical general conclusions. The system approach is the main one in the research.

## 2. Literature review

A considerable contribution to the development of theory and methodology clustering is made by the famous scientist M. Porter. He considered that enterprises of separate industries can be located in the particular regions of the country, have an active impact on the market entities, within they cooperate – suppliers, consumers, and competitors. In such a way, enterprises increase their competitiveness and as a result of such cooperation, a synergistic effect is appeared (Porter, 2006).

Such issues as particulars, advantages of the clusters' formation, grounding of necessity of clusters' creation in Ukraine are considered in the researches of P. T. Bubenko (Bubenko, 2009), V. Heyets (Heyets, 2008), N. G. Kanishchenko (Kanishchenko, 2006), U. E. Kirilov (Kirilov, 2013), I. O. Martynyak (Martynyak, 2008), S. V. Onishko (Onishko, 2010), S. I. Sokolenko (Sokolenko, 2004), and others.

Transport and logistics clusters as a category, their role and essence, problems of functioning and development are thoroughly studied by leading Ukrainian scientists as O. O. Karpenko (Karpenko, 2015), O. M. Polyakova (Polyakova, 2009), I. G. Smirnov (Smirnov, 2008, Smirnov, 2012), O. A. Chupaylenko (Chupaylenko, 2013). However, the research papers are outlined with an efficiency evaluation of the cluster's functioning or transport and logistics enterprises in the cluster structure.

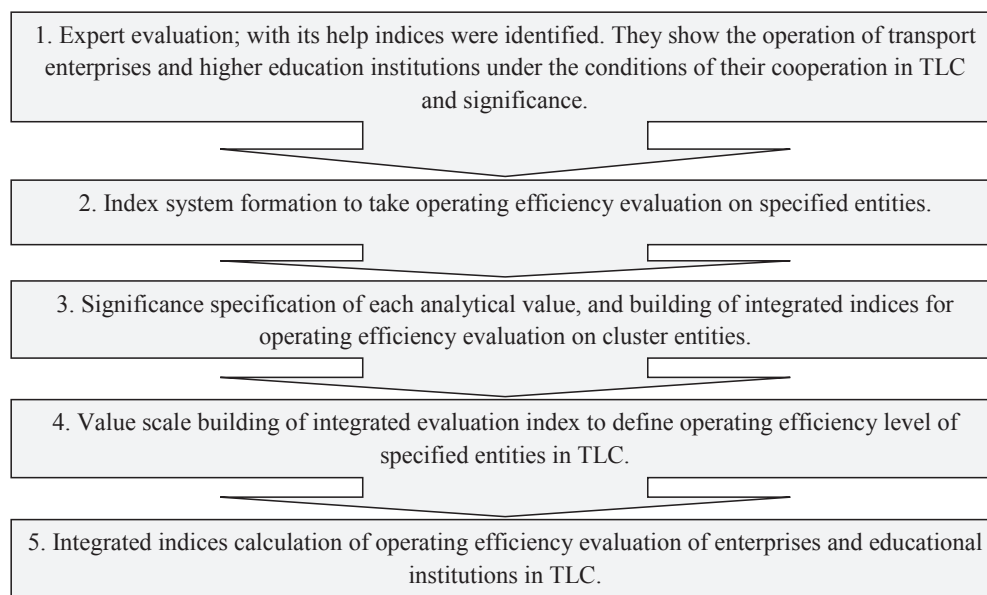
Therefore, research issue on the functioning of transport and logistics clusters is relatively new in the scientific literature. Simultaneously, a variety of aspects, including efficiency evaluation of enterprise activity and educational institutions as the result of their cooperation, is poorly considered and needs further studying. The necessity in grounded work on this aspect determines the choice of a research line.

## 3. The main material of the research

Practicability and efficiency in forming and functioning of cluster in the transport and logistics industry are based on the operating index of the logistics centres, logistics companies, storage facilities, suppliers, customers, financial lending institutions, design and scientific-research organizations, consulting and audit firms, insurance companies and forwarding agencies, labour forces and financial resources, having an effect on the level increase in management decision making: cost minimization, risk mitigation, helped to use in full resource potential and opportunities in the market for transport services.

The efficiency of the transport and logistics cluster is a relative index, showing the relationship between results and costs, connected with the usage of production goods, labour power, entrepreneurial abilities by transport services, providing of certain





**Figure 1. The process of operating efficiency evaluation of TLC under the conditions of their cooperation**

*Source: developed by the authors*

quality under the conditions of limited resources and unlimited wants. Therefore, an efficiency increase of the operation of transport enterprises and their association with other enterprises in the transport and logistics cluster provides a new development level of relationship between enterprises of the region, including transport and logistics technologies, improvement of investment attraction and territory (Chupaylenko, 2014).

There is a difficult relationship system among participants in the cluster, providing important synergetic effect from its functioning and playing a key role in the formation and maintaining of competitive strength. Relationships among cluster members are different and dynamic.

After establishing relevant relationships between TLC entities, there is a need for efficiency evaluation of their cooperation with the help of an integrated index of operating efficiency in each of them under the conditions of cluster functioning.

The target of evolution is to define the current level of social and economic efficiency of the management system and to achieve eventual results of cluster entity's activity.

The research was conducted on the basis of the methodological approach; its sequencing is shown in Figure 1. It includes index system specification based on the expert evaluation, methods of integral coefficient calculation and development of the value scale of the integrated index of operating efficiency on specified cluster entities.

On the first stage, based on the expert survey (employees of transport enterprises, shipping companies; managers of logistics companies and scientists of the

higher education institutions etc.), there were indices identified for integrated indices specification in order to find operating efficiency evaluation of transport enterprise and higher education institute in the cluster, and also their significance was identified.

On the second stage, the analytical index system was formed from the most significant and informative indices. It is made for operating efficiency evaluation of transport enterprises and higher education institutions under the conditions of their cooperation in the transport and logistics cluster.

As a rule, in national practice, the index system is used to define the economic operating efficiency of enterprises. It shows us the relation between expenses and obtained results, i.e. impacts that could be obtained from the interactive system in the cluster. Taking into account that the main focus of the research is high-quality staff training, the indices are identified to show the result of their usage (Table 1).

Operating efficiency of higher education institutions is better to evaluate with the help of indices, indicated both educational and scientific constituent of their activity. The system of corresponding figures is set out in Table 2.

On the third stage to divide relative share among specified indices (for further integrated index calculation of operating efficiency of cluster entities), the authors made a survey of 10 Ukrainian experts in clustering field, business-structures, state infrastructure authorities etc. Survey findings are set out in Table 3 and Table 4.

Calculation data show us 38% of profit ration; 14.5% of labour productivity index; 17% of employment capacity

Table 1

**Indices of operating efficiency evaluation of transport enterprises**

Index	Calculation formula	Specification
Profit ratio	$k_p = \frac{Pr}{C}$	$Pr$ – profit from realization of products (works, services), thousand UAH; $C$ – costs, thous. UAH
Labour productivity index	$I_{LP} = \frac{LP_1}{LP_0}$	$LP_1$ – value of labour productivity of accounting period, thous. UAH; $LP_0$ – value of labour productivity of base period, thous. UAH
Employment capacity coefficient (staff)	$k_{ec} = \frac{Qe_r}{Qe_t}$	$Qe_r$ – number of regular employees; $Qe_t$ – total number of employees (permanent employed+ temporary employed).
Workplace providing coefficient	$k_{wp} = \frac{Q_u}{Q_p}$	$Q_u$ – number of used workplaces; $Q_p$ – number of possible workplaces.
Coefficient of educational-qualification staff level	$k_{eqt} = \frac{Q_{ste}}{Q_{she}}$	$Q_{ste}$ – number of staff with transport education, people; $Q_{she}$ – number of staff with higher education, people.

Source: developed by the authors

Table 2

**Indices of operating efficiency evaluation of higher education institutions**

Index	Calculation formula	Specification
Students' number index	$I_s = \frac{Qs_1}{Qs_0}$	$Qs_1$ – students' number of accounting period; $Qs_0$ – students' number of base period.
Employment coefficient	$k_e = \frac{Qs_e}{Qs_g}$	$Qs_e$ – number of employed students; $Qs_g$ – number of graduated students.
Graduation coefficient	$k_g = \frac{Qs_g}{Qs_a}$	$Qs_g$ – number of graduated students; $Qs_a$ – number of accepted students in higher education institute.
Part of economic contract paper subjects	$k_{ECPS} = \frac{ECPS}{PS}$	$ECPS$ – number of economic contract paper subjects; $PS$ – number of scientific-research subjects (economic contract + state-financed).
Budgeting coefficient for economic contract paper subjects	$k_{B_{ECPS}} = \frac{B_{ECPS}}{B_{PS}}$	$B_{ECPS}$ – budget volume for economic contract paper subjects, thous. UAH; $B_{PS}$ – budget volume for scientific-research subjects (economic contract + state-financed), thous. UAH.

Source: developed by the authors

Table 3

**Expert survey findings on indices significance of operating efficiency evaluation of transport enterprise in TLC**

Expert	Profit ratio	LP index	Employment coefficient	Workplace providing coefficient	Coefficient of educational-qualification staff level
Expert 1	0,3	0,1	0,2	0,2	0,2
Expert 2	0,3	0,1	0,3	0,2	0,1
Expert 3	0,5	0,25	0,1	0,1	0,05
Expert 4	0,4	0,1	0,15	0,2	0,15
Expert 5	0,3	0,25	0,2	0,05	0,2
Expert 6	0,4	0,1	0,2	0,1	0,2
Expert 7	0,5	0,1	0,1	0,15	0,15
Expert 8	0,3	0,15	0,2	0,05	0,3
Expert 9	0,5	0,15	0,1	0,05	0,2
Expert 10	0,3	0,15	0,15	0,15	0,25
Average value of index relative share	0,38	0,145	0,17	0,125	0,18

Source: developed by the authors

Table 4

**Expert survey findings on indices significance of operating efficiency evaluation of higher education institutions in TLC**

Expert	Students' number index	Employment capability coefficient	Graduation coefficient	Part of ECPS	Budgeting coefficient for ECPS
Expert 1	0,3	0,15	0,1	0,2	0,25
Expert 2	0,35	0,1	0,05	0,3	0,2
Expert 3	0,5	0,2	0,1	0,1	0,1
Expert 4	0,4	0,15	0,05	0,15	0,25
Expert 5	0,35	0,1	0,1	0,2	0,25
Expert 6	0,3	0,2	0,1	0,2	0,2
Expert 7	0,45	0,15	0,1	0,15	0,15
Expert 8	0,4	0,05	0,1	0,2	0,25
Expert 9	0,35	0,1	0,15	0,2	0,2
Expert 10	0,3	0,1	0,15	0,15	0,3
Average value of index relative share	0,37	0,13	0,1	0,185	0,215

Source: developed by the authors

coefficient; 12.5% of workplace providing coefficient; 18% of the coefficient of educational-qualification staff level have an effect on the integrated index of operating efficiency at the transport enterprise.

Expert evaluation consistency was estimated by Pearson  $\chi^2$  criterion (Vasylenko, Sencha, 2011). Experimental value is more than a critical one, that is why we can consider obtained expert evaluation with a probability value of 0,95 as finalized.

On basis of obtained data, we generate an integrated index for operating efficiency evaluation of transport enterprise ( $I_{TE}$ ) as a result of cooperation with higher education institution in transport and logistics cluster:

$$I_{TE} = 0,38 \cdot k_p + 0,145 \cdot I_{LP} + 0,17 \cdot k_{ec} + 0,125 \cdot k_{wp} + 0,18 \cdot k_{eq} \quad (1)$$

It is proved that 37% of students' number index, 13% of employment capability coefficient, 10% of graduation coefficient, 18.5% of a part of economic contract paper subjects, 21.5% of budgeting coefficient for economic contract paper subjects have an impact on the integrated index of operating efficiency in higher education institute.

Reliability of obtained findings is evaluated in a similar way and proved by finalizing expert assessment.

As a result, we get the following formula of the integrated index for operating efficiency evaluation in higher education institute ( $I_{HEI}$ ) in cooperation with transport enterprise in transport and logistics cluster:

$$I_{HEI} = 0,37 \cdot I_s + 0,13 \cdot k_e + 0,1 \cdot k_g + 0,185 \cdot k_{ECPS} + 0,215 \cdot k_{B_{ECPS}} \quad (2)$$

Value of integrated indices of operating efficiency evaluation of enterprises in TLC, calculated by suggested formulas including relative share each of the coefficients, is the basis for proving cooperation practicability of considered entities in the cluster.

To identify operating efficiency level of entities in TLC, we build value scale of integrated indices on the fourth stage. To achieve it, we use dispersion analysis of alternative and specified features and define average

quadratic deviation in alternative distribution number of integral coefficients of indices significance.

Quantified variability is figured by the low reference value, indicated as 0. Highest value can be 1 and more, because a part of indices, according to that integrated indices of operating efficiency of cluster entities are calculated, focusing on 1, and only a few coefficients can increase 1 under particular conditions.

Then  $p$  – a part of units of integral coefficients of group weight that we calculate by the formula below and get the highest critical value on a scale value of the integrated index for transport enterprise and higher education institute:

$$p = \sqrt[5]{a_1 \cdot a_2 \cdot a_3 \cdot a_4 \cdot a_5} \quad (3)$$

$a_i, i = \overline{1,5}$  – integral coefficients of group weight.

Accordingly,

$$q = 1 - p \quad (4)$$

Thus, the average quadratic deviation of integral weight coefficients from the reference value is calculated by the formula:

$$\sigma = \sqrt{p \cdot q} \quad (5)$$

We obtain the following result thanks to the calculations above:

$$p_{TE} = \sqrt[5]{0,38 \cdot 0,145 \cdot 0,17 \cdot 0,125 \cdot 0,18} = 0,1839,$$

$$\text{consequently, } q_{TE} = 1 - 0,18 = 0,82$$

$$p_{HEI} = \sqrt[5]{0,37 \cdot 0,13 \cdot 0,1 \cdot 0,185 \cdot 0,215} = 0,1804,$$

$$\text{consequently, } q_{HEI} = 1 - 0,18 = 0,82$$

As we can see, part of units of integral coefficients of group weight for transport enterprises and higher education institutions is the same in this research. Consequently, for both cluster entities, the results from the average quadratic deviation of integral weight coefficients, and accordingly, a scale value of the integrated index of operating efficiency are the same.

$$\text{Thus, } \sigma = \sqrt{0,18 \cdot 0,82} = 0,38.$$

The obtained result from average quadratic deviation of integral weight coefficients give us the opportunity to define course length of sufficient level of operating efficiency in TLC entity and it reaches 0,38.

Having used method  $3\sigma$ , we build scale in units of standard deviation parts, having determined interval scale as  $\frac{1}{2}\sigma = 0,19$  and we obtain course length of the next level (low). Then scaling interval of operating efficiency of cluster entity is calculated as  $2 \cdot \frac{1}{2}\sigma = \sigma = 0,38$ , made the difference between upper bound of low and sufficient levels, and the difference between lower bound of low level and upper bound of sufficient level has to be  $3 \cdot \frac{1}{2}\sigma = \frac{3}{2}\sigma = 0,57$ .

Taking into account reported values, we build scale for magnitude estimation of the integrated index of operating efficiency in cluster entities (Table 5).

Table 5

**Value scale of the integrated index of operating efficiency evaluation at transport enterprise and in higher education institution in TLC**

Indicator value	Specification
Less than 0,19	Critical level of operating efficiency of TLC entity
From 0,2 to 0,39	Low level of operating efficiency of TLC entity
From 0,4 to 0,77	Sufficient level of operating efficiency of TLC entity
From 0,78 and more	High level of operating efficiency of TLC entity

Source: developed by the authors

Table 6

**Main participants of transport and logistics cluster of Danube region**

Line of activity	Name of enterprise, organization, institution
Transport companies	1) Zovnishtrans, LLC 2) Ust-Danube Waterway, SE 3) Ukrainian Danube Shipping Company, PJSC
Freight-forwarding firms	4) Avtologistika, LLC 5) Dunay-Multi-Service, LLC 6) SWTRANS, LLC 7) Odessa Regional Chamber of Commerce and Industry
Repair and maintenance enterprises	8) Kiliya Shipbuilding and Repair Yard 9) Danube Shipping Management Service, PJSC in Izmail 10) Vilkovo Marine Shipyard Repair and Maintenance 11) Branch of Ukrrichflot, JSSC
Ports, railway stations	12) Ust-Danube Commercial Sea Port 13) Izmail Commercial Sea Port 14) Reni Commercial Sea Port 15) Izmail Airport
Educational institutions	16) State University of Infrastructure and Technologies 17) Izmail Maritime Institute
Insurance companies	18) PJ Stock Insurance Company "INGO Ukraine" 19) BC KRONA, PJSC
Banks	20) Privatbank, PJSC
Database	21) Ukrainian transport portal UkrTransport 22) Transportation Information system Olantrans
Government support	23) Ministry of Infrastructure of Ukraine

Source: developed by the authors

This scale helps us to identify operating efficiency level of transport enterprise or higher education institution as a result of their cooperation in the cluster.

On the fifth stage, we evaluate the operating efficiency of transport enterprises and higher education institutions in TLC by means of corresponding figures calculation.

#### 4. Results

We use suggested methodological approach on a specific example.

Having analysed the potential capacity of each region of Ukraine on the creation of a transport and logistics cluster, border areas draw our attention. Their centres are large cities and urban agglomerations, international transport corridors pass through them.

We consider the creation of transport and logistics cluster in the Danube region is long-range for the development of international cooperation and experience exchange, and also for meeting EU requirements.

Let us make it clear, what transport enterprises and educational institutions can be its constituent part (Table 6). The Danube region has a lot of water transport enterprises, among them are Kiliya Shipbuilding and Repair Yard, PJSC "Ukrainian Danube Shipping Company", PJSC "Danube Shipping Management Service" in Izmail, Vilkovo Marine Shipyard Repair and Maintenance, branch of JSSC "Ukrrichflot". These companies can form a business association at the premises of shipbuilding and repair enterprises.



Secondly, there are such companies as Ust-Danube Commercial Sea Port, Kiliya Port Station, Izmail Commercial Sea Port, Reni Commercial Sea Port; SWTRANS LLC, Zovnishtrans LLC, Ust-Danube Waterway, Izmail Airport, Odesa Regional Chamber of Commerce and Industry.

Thirdly, among educational institutions, where the future specialists of transport industry study, are Izmail Maritime Institute and separated subdivisions of State University of Infrastructure and Technologies (former Kyiv State Maritime Academy named after Hetman Petro Konashevych-Sahaidachny), in particular, Danube faculty of Maritime and River Transport (in Izmail) and Kiliya Transport College (in Kiliya).

To make an assessment, we have chosen self-supporting separated subdivision of Kiliya Shipbuilding and Repair Yard of Private Joint-Stock Company "Ukrainian Danube Shipping Company" (SSS "KSRY" PJSC "UDSC") and State University of Infrastructure and Technologies (SUIT) future specialists study at. Analytical and integrated indices of their performance are calculated and set out in Table 7.

Table 7

**Performance indices of KSRY and UDSC in 2015-2017**

№	Indices	2015	2017
Kiliya Shipbuilding and Repair Yard			
1	Profit ratio	0,124	0,012
2	Labour productivity index	3,06	0,98
3	Employment capacity coefficient	0,99	0,95
4	Workplace providing coefficient	0,11	0,08
5	Coefficient of educational-qualification staff level	0,63	0,65
	<b>Integrated efficiency index</b>	<b>0,78</b>	<b>0,43</b>
State University of Infrastructure and Technologies			
1	Students' number index	0,99	1,02
2	Employment coefficient	0,8	0,85
3	Graduation coefficient	0,95	0,97
4	Part of economic contract paper subjects	0,5	0,5
5	Budgeting coefficient for economic contract paper subjects	0,09	0,5
	<b>Integrated efficiency index</b>	<b>0,67</b>	<b>0,78</b>

Source: developed by the authors

Kiliya Shipbuilding and Repair Yard is having lost positions by selected indices during the analysed period. For example, profit ratio is decreased by 11,2 points, labour productivity index is down by 2,08, employment capacity coefficient – by 0,04 and workplace providing coefficient – by 0,03. However, the coefficient of educational-qualification staff level is increased by 0,02 points. And it makes possible to come to a conclusion about the unstable state of the enterprise operation.

Conducted research on the operating efficiency of the State University of Infrastructure and Technologies

shows us the increase of all main indices: students' number index is up by 0,03 points, employment coefficient – by 0,05, graduation coefficient – 0,02, budgeting coefficient of economic contract paper topics – by 0,41.

It is worth mentioning, development enterprises and those with relaxation, having got united in the transport and logistics cluster, can achieve positive economic effect thanks to mutual support among all participants of the clustering process. That is the main advantage of clusters. Because of advantages from enterprise incorporating in TLC, including expert commentary and researches of the leading scientists, it is expected the following increase of main operating indices of cluster entities in clustering: industrial production is increased by 6.5%; part of innovative-active enterprises in total amount from industries is increased to 30.3%; rate of development of transport infrastructure is up to 15%; increase of cargo transportation is up to 8.5%; investment activity is up to 5.3%.

Taking this trend into account, the predictable indices of operation in KSRY and UDSC were calculated. Based on these values, the calculation of the integrated index of its operating efficiency as members of transport and logistics cluster for 2022 was made (Table 8). Forecasting period consists of four years because it is impossible to train skilled staff for KSRY (training for specialists according to shortened program takes three years, whereas a complete program is developed for four years) and do effective teamwork among considered entities.

Table 8

**Predictable indices of operation in KSRY and UDSC**

№	Indices	2022
Kiliya Shipbuilding and Repair Yard		
1	Profit ratio	0,15
2	Labour productivity index	1,53
3	Employment capacity coefficient	1
4	Workplace providing coefficient	0,55
5	Coefficient of educational-qualification staff level	0,89
6	<b>Integrated efficiency index</b>	<b>0,68</b>
State University of Infrastructure and Technologies		
1	Students' number index	1,14
2	Employment coefficient	0,9
3	Graduation coefficient	0,98
4	Part of economic contract paper subjects	0,65
5	Budgeting coefficient for economic contract paper subjects	0,7
6	<b>Integrated efficiency index</b>	<b>0,9</b>

Source: developed by the authors

Obtained predictable values from integrated indices of members' activity in transport and logistics cluster as a result of their cooperation after joining cluster are proof of:

- integrated index of operating efficiency of Kiliya Shipbuilding and Repair Yard reaches 0,68, therefore, it is within the scope of 0,4 and 0,77 and demonstrates sufficient level of the operating efficiency entity in TLC;
- integrated index of operating efficiency of State University of Infrastructure and Technologies reaches 0,9, i.e. it is within the scope of 0,78 and more and demonstrates a high level of the operating efficiency level in TLC.

Thus, joining the cluster and further cooperating of entities enable to achieve both individual and synergetic effect.

## 5. Conclusions

Therefore, based on made calculations, we come to the conclusion that cooperation between transport enterprises and higher education institutions as TLC entities will have a positive impact.

Moreover, conducted research is a proof of practicability in cooperation between transport enterprises and higher education institutions in transport and logistics cluster and makes emphasis on the opportunity to get a lot of advantages from its cooperation, positive change in main indices of cluster members' activity.

Suggested indices of operating efficiency evaluation of transport enterprises and higher education institutions in the cluster enable us to make a forecast about the impact from cooperation for similar entities in long-range transport and logistics clusters in other regions of Ukraine, for instance, in Kyiv and Mykolaiv. After that, it is possible to identify the level of these indices by developed value scale and give well-grounded recommendations on joining of selected entities the cluster.

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## THE STATUTORY DEFINITION OF GIFT VALUE AS A “FILTER” FOR EFFECTIVE STATE POLICY IN THE PUBLIC SERVICE

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**Abstract.** The paper substantiates the importance of standardization of gift’s “value feature” for a public person as a reliable “filter” for eliminating threats for effective implementation of the state policy in the public service. *Methodology.* The analysis of regulatory and law enforcement experience of different countries allowed distinguishing three basic regulatory models of “gift relations” in the public service – prohibitive, permissive, and mixed. Clarification of the essence of each of them led to the conclusion on the expediency to choose the mixed model as an optimal alternative for an effective counteraction to the unlawful, non-purpose use of gift resource in the public service under the conditions of modern reformation state-building and law-enforcement processes. This model due to a simultaneous regulation of the principles of “prohibitive gift” relations, “permissive gift” relations envisages determination of the limits for possible reception of other gifts by public servants. It ensures elimination of the prerequisites as for making “gift relations” in the public service, so for unreasonable use of the gift as a source for enrichment, encouragement means, and “instrument for influence” on the professional official activity of a public servant. *Results.* A unique character of the gift in the public-official relations is caused, first of all, by its trifling “symbolic” value. Due to this fact it can be considered as a “symbolic manifestation” of respect, gratitude to a public servant for his competent, honourable, lawful professional official activity. Its symbolic “value feature” is its central feature that causes the need for its obligatory complete regulatory determination. On the basis of the comparative legal analysis of rule-making and law-enforcement experience of different countries, a number of basic approaches to the definition of “value feature” of a gift are distinguished (in a completely determined amount, in a multiple of the guaranteed rates established by the state, in a multiple to the salary of a public servant, in a generalized form without any quantitative indicators and with the list of possible external forms of gift’s manifestation etc.), and it is justified the feasibility of its binding to a certain number of the national currency (“solid”, “constant” indicator). *Practical implications.* Standardisation of this gift feature along with others which carry out an additional role (frequency of reception and source) should be at the level of the basic legislative act, which consolidates principles of “gift relations” in the sphere of public service in its entirety. Taking into account the importance of this gift feature, any sub-legislative “alternative” in relation to the determination of gift value can’t exist eliminating the grounds for a controversial nature of regulation of relevant relations. *Value/originality.* It will help to unify the regulatory standards for using gift’s resource in the public service as a whole, regulatory “filtering” effectiveness of the implementation of public policy in the sphere of public service as a whole.

**Key words:** public service, public servant, model, gift, statutory regulation, value, feature, proposals, filter, legislation.

**JEL Classification:** D31, E24, J31, K00

### 1. Introduction

Effective implementation of the state policy in the sphere of public service depends on a range of factors including “quality” of statutory regulation of its principles. In addition, it is important not only to consider positive domestic and foreign experiences of the functioning of institutions, which directly generate

content of the public service but also of those ones, which play a role of “protectors” of its non-effective functioning. Special restrictions for public servants have been occupying a prominent position and keep it now among protectors and non-compliance with which are considered as an unlawful act (in different forms of its manifestation) and stipulates a legal responsibility.

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Traditionally, special restrictions for public servants are regarded to be a type of anticorruption measures and their non-observance is a violation of corruption content (with the consolidation of various formulations, type diversity in the legislation of different countries). For this reason, determining the main priorities of state policy in the sphere of public service, it is statutory consolidated not only the principles of introduction, disciplinary responsibility for public servants but also “filters” of anticorruption policy in order to eliminate the threats for an effective implementation of the state policy in the sphere of public service at large. Analysis of the legislation of different states indicates that special restrictions for public servants are paid a lot of attention to (either at the level of a component of the main legislative act on public service or in individual legislative act of anticorruption nature), and the restriction for public servants concerning gifts reception is marked among their entire diversity. It is worth mentioning that gifts always “accompany” public official relations in different countries, however, their influence degree on these relations have differed in various countries that mainly caused by the specific nature of the chosen model for regulating relevant relations. Prohibition, restriction, and permission are the most widespread methods for regulating relations, which are “ground” of official regulatory “gift” model in public-service sphere in different countries, practical realization of which taking into account historical, national peculiarities of rulemaking and law enforcement led to the different effectiveness degree of the state policy in the public service. It is important not only to choose one of the basic “gift statutory models” for regulating relations in the public service but also to introduce the “filters” putting in detail the principles of use of their resource, which would ensure an effective implementation of “gift” policy as an integral part of the state policy in the public service. That sort of “statutory filters” is traditionally considered the definition of gift source, the frequency of its receiving, type diversity of a gift etc. In addition, gift value should occupy a special place among them as it can lead to “gift quality” and degree of its influence on a public servant and his professional activities. Regulatory determination of a gift facilitates resolving the issue on the delimitation of a gift from improper advantage, as well as classification of unlawful acts, which can be performed by a public servant that in its turn envisages different legal effects for the latter.

In the context of a radical reconsideration of the state policy fundamentals in the sphere of public service, anti-corruption policy, searching for effective means for prevention of unlawful acts of corruption nature commissioned by public servants negatively influences the functioning of the public service as a whole, activation of regulatory and draft activities aimed at elaborating and adopting new regulatory legal acts geared towards the regulation of relevant relations,

the issue of “regulatory filtering” of restrictions of public servants takes on particular importance. It is very important to analyse rulemaking and law-enforcement experience of different countries from the perspective of gift value for a public servant in order to clarify what model is the most perfect in content and the most effective in exercise. Analysis of available provision of subject scope is vital in order to form a reliable scientific basis for understanding the phenomenon of gift value for a modern rulemaking process, which provides for complying with the principle of scientific character during the latter one. It allows specifying a range of problematic issues directly connected with regulatory determinacy of gift value for public servants, formulating proposals for the building of optimal regulatory “cost model” to settle relevant relations as an integral component of “gift” policy in the public service. All these issues are the **purpose** of the article. When writing the paper, we have used as general methods of scientific knowledge, as well as special, which allowed distinguishing the cost of a gift among all features diversity of the latter, justifying the expediency of its normative definition, formulating specific proposals for its statutory regulation taking into account the results of comparative legal studies of the experience of rulemaking and law enforcement of different countries. The basis was scientific, journalistic, regulatory sources. However, there are no research papers directly devoted to the issues of “value feature” of the gift for a public servant. There are either papers devoted to the range of problems towards special restrictions for public servants in general (Vylloriia, Synnestrom, Bertok, 2010) or restrictions on gifts receptions, however without focusing on gifts value (Kolomoiets, Verlos, Pyrozhkova, 2018), or experience of certain countries regarding regulating issues concerning gifts restrictions for public servants (Zimneva, Chumakova, 2015), or general analysis of determination of gift value for public servants, but using selective approach to characteristic of the experience of each country and separation of regulatory legal acts which fix gifts value (Suslova, Fluri, Badrak, 2017). Overall, this leads to a simplified approach to clarifying a resource of “values feature” of the gift for a public servant and its regulatory determinacy as a “filter” for effective implementation of the state policy in the sphere of public service.

## **2. “Basic” regulatory models of “public relations” in the public service**

Analysis of foreign experiences shows that in general, there are three “basic” regulatory models, which are consolidated as follows: prohibitive, permissive, mixed. The first, prohibitive, model envisages a total prohibition for public servants to receive any kind of gifts and in such a case gift value is not important. So, “gift feature” is not consolidated at the regulatory level for such a kind of



model because prohibition makes any actions with gifts on the part of public servants impossible. For example, Argentina provides the prohibition on gifts reception by public servants and criminal liability for prohibition violation (Suslova, Fluri, Badrak, 2017). "Prohibitive" model of "gift" relations is also consolidated in Norwegian legislation indicating that prohibition is caused by "elimination of moral obligation for donator to create special conditions for public servants" as well as in the legislation of Lithuania and Czech Republic to guarantee "incorruptibility" of public servants (Suslova, Fluri, Badrak, 2017). In particular, public servants don't have the right to receive gifts in Great Britain, Germany, and Spain. The latter legislation states that "...must reject any gifts..., which can put exercise of servant's official functions in dependence on certain conditions" (Vylloriia, Synnestrom, Bertok, 2010). At the same time, along with the prohibition on gifts reception, the legislator clearly specifies the duty of public servants to declare their income, which serves as an additional regulatory "filter" for monitoring public servants regarding their compliance with "gift" legislation. Such a strict model, undoubtedly, "simplifies" the regulation of relations in the public service, ensures their determinacy and controllability. However, as the analysis of available scientific sources shows, gifts still "accompany" the public service relationship, including by virtue of "traditions" in relation to the exchange of souvenirs, signs (manifestations) of hospitality, loyalty, courtesy, etc. The diversity of relations that mediate professional activities of public servants, the subjects of such relationships, envisages the possibility of preconditions for "gift" relationships that can negatively affect the staffing of the public service as a whole, and serve as the basis for "activating" "gift" relationships in the public service, which also negatively affects the latter. It raises the issue whether it is necessary, taking into account the above mentioned, to introduce a prohibitive model of "gift" relations in the sphere of public service or will it be effective during the implementation?

Permissive model of "gift" relations provides lack of any indications towards the prohibition of gifts reception by public servants and hence indications towards their value that is quite logical. In particular, the legislation of Japan doesn't have any restrictions or prohibitions on gifts reception by public servants (Suslova, Fluri, Badrak, 2017) as well as in Taiwan (Suslova, Fluri, Badrak, 2017). However, permission to receive gifts doesn't mean uncontrolled nature of particular relations. By giving the right to public servants to receive a gift, the legislator simultaneously introduces the obligation for public servants to declare it. If there are no reasons to suggest about bringing of public servants to legal liability for violation of "gift" legislation in the part of compliance (non-compliance) with prohibitions or restrictions in relation with their lack. At the same time, there is a possibility to bring public servants to

responsibility for non-compliance with requirements concerning the declaration of received gifts. In practice, in this case, the declaration legislation plays a role of a specific element of "gift" legislation in the sphere of public service, "filter" of state policy effectiveness in the public service.

It is not expedient to justify such a "simplified" comprehension of the role and significance of a gift in the public-official relations (with the lack of any standards for conduct). Gifts reception of any value from any persons in any number by a person authorized to exercise public authoritative powers creates a certain threat to the impartiality, transparency, objectivity, and legality of the activity of such a person. A gift can play a role not to show respect, appreciation, to press a person, sources of enrichment of the latter, etc. Under such conditions, it is quite possible to use gift resource, not for its target purpose. It is not enough to rely on the obligation to declare all received gifts of public servants taking into account the fact that degree of compliance with the legislative requirements in the part of public servants' declarations (under different conditions, circumstances) can differ. "Gift" relations in the sphere of public service, taking into account the features of the latter, should be regulated in terms of determining the behaviour patterns of their subjects in order to ensure the effectiveness of the implementation of state policy in the public service.

A mixed model is the most widespread regulatory model of "gift" relations in the sphere of public service, which simultaneously provides prohibition, permission, and restrictions on gifts reception by public servants and its "value feature" obtains sense in relation to the determination of the abovementioned restrictions. Mixed type is the most typical regulatory model for most countries. For example, the legislation of Mexico stipulates that delegates and their closest relatives are forbidden to receive "any commercial papers, real estates, proprietary rights or cession of rights on any kind, regardless of their value, independently or by virtue of other people from any persons, corporations, establishments whose interests touch upon the issue under consideration or if it can lead to conflict of interests" (Suslova, Fluri, Badrak, 2017). At the same time, other gifts can be accepted, the most important thing is that they should not exceed the salary of a person up ten times and they must be declared. In the USA, it is prohibited to receive gifts that are directly related to the professional activities of a person and "gifts in cash". At the same time, it is allowable to receive gifts from relatives and even "gifts on the basis of personal relations", gifts received during official events (however, according to certain requirements for their use). In relation to other gifts, their reception depends on complying with some requirements including their value (Kolomoiets, 2018). The similar model is also consolidated in the legislation of Ukraine as follows:

the prohibition covers the gifts that are directly related to the official activity of a person, as well as received from subordinates, and permissions are for gifts from close relatives and publicly available bonuses, discounts, privileges. The same models are introduced by other countries, however with some details for the grounds for reception of permissive gifts (for example, in Ireland, public servants can accept gifts from relatives, close persons on "special occasions"), "restrictive" gifts (for example, in Australia there is delimitation of gifts from official and non-official sources, in South Africa there is specification on gifts' reception during a year from one source) (Suslova, Fluri, Badrak, 2017). It is a mixed model that allows identifying "polar" conduct parameters of subjects of "gift" relations in the sphere of public service as follows: what is generally forbidden ("taboo"), what is generally allowed ("absolute plus"). In addition, "gift" relations between these "polar" ("diametrically opposite") parameters are also normalized by virtue of established frontiers ("boundaries", "limits") that provides an opportunity to mark "gifts which are restricted in their reception", so-called gifts "limited in reception". What does play a role of such boundaries? Defining prohibitions and permissions on gifts reception, the legislator specifies subjects-donors in practice. In the first case, these are persons who enter in relations with a public servant, which are connected with a professional activity of the latter, or those who have relations based on subordination with them. In the second case, these are close persons of a public servant and persons who entry into relations with the public servant for whom his special status is the most important thing in general. In other words, in advance, the legislator determines the range of potential subjects of "gift" relations with the participation of public servant and defines subjective boundaries regarding relations with "restrictive gifts". Decided upon the subjects of "gift" relations with regard to "polar" and "limited" components, the gift itself should be subject to standardisation with a focus on its features. In this context, normative consolidation of gift definition takes on particular importance with the purpose of providing harmonisation of law-enforcement in the mentioned sphere. As a rule, the definition of a gift is formulated through enumerating its possible external forms of manifestations. For example, in the USA legislation, the gift for a public servant is considered as a "money reward", non-act or other actions or things that can have a monetary expression", "services, payment of education, transport, local travel, meals either in a natural form or in another one" (Kolomoiets, 2018). Almost similar definitions can be found in the legislation of Ukraine, Brazil. In general, there are several trends in the normative consolidation of a gift for a public servant – a narrowed and extended list of possible external forms of its existence. However, it is obligatory to indicate that it is received not for the unlawful conduct of a relevant

person, but it is a reaction to the lawful acts of the latter. This gift feature distinguishes it from improper advantage. At the same time, as a reaction to the lawful actions of a public servant, the gift is not a payment for such an activity, therefore, it cannot be such that it is provided on a regular (periodic) basis, be proportionate to the efforts made by the public servant in the course of his professional activity, cannot play the role of incentive for the mandatory provision of a gift to a public servant in the future. In other words, the gift, according to its recourse, is a "symbolic" manifestation of respect, appreciation of a public servant for his lawful effective, fruitful activity according to its recourse. The nominal value of the gift, among other things, is intended to define this "symbolic" nature. The gift for a public servant is not his salary, neither incentive nor means of influence, including an illegal one, on professional activity of a public servant, not a source of his enrichment, but only "symbolic" gratitude, respect to the public servant. These gifts shouldn't be mistakenly identified with treasured gifts, which according to the legislation of many countries, are recognised as the incentives for essential achievements in professional official activities of a public servant (for example, the legislation of the USA, Ukraine, China), as well as separate from "official" ("business") gifts, which can be accepted by public servants, as representatives of the state, community, during official events. "Value feature" in relation to "official" ("business") gifts are not important as they are presented for a state, territorial community, according to statutory established procedure, and for the government or municipal ownership of the state and their "direct contact" with public servants are temporary and caused by exercise of his special legal status. Analysis of different foreign legislations shows that among all diversity of features of "restrictive" gifts, gifts' value plays the most important thing and, as a rule, is the first in the list. And this fact justified as gift value significantly influences the whole resource of the latter causing influence of the gift on a public servant. In public-official relation, the gift plays a role of means of respect, gratitude to a public servant for his rightful professional activity. This fact raises profound attention to the definition of gift value and its regulatory consolidation. If this is a symbolic gratitude, respect manifestation, so they can't be too large and, accordingly "symbolic", "nominal", "metaphoric", provoke the feeling of return of the public servant or play incentive role for a similar obligatory gift reception in the future, desire for a personal enrichment by virtue of gifts. This stipulates a balance of a small value (symbolic nature) of the gift and its slight (symbolic) influence on a public servant in the form of manifestation of respect, gratitude and moral satisfaction. The value that should be absolutely determined at the legislative level can provide the implementation of a relevant real resource of the gift in public-professional relations.

The use of value definition in this case like “that conforms to common norms” (for example, in the legislation of Korea), “corresponds to the universally recognized concept of hospitality” (for example, in the legislation in Ukraine), “under common traditions of communication”, “... in the context of courtesy manifestation” (for example, in the legislation of Spain) can be only additional, however it is not advisable, as stipulates their subjective manifestation when defining and applying, practice variety of arbitrary resolution of the same issue by different persons, or by one person of different issues of “gift” content. This issue can be regulated by virtues of normative consolidation of a specific gift value as a “filter” of permissive nature for a public servant.

### 3. Regulatory consolidation of gift value for a public servant in different countries

In general, the legislator has followed this advice, but there is a distinct nature of the approach to the direct consolidation of the gift value for a public servant in different countries. For example, in Australia gift value from non-official source can't exceed two hundred Australian dollars and five hundred Australian dollars for the gift from official source, in Canada – two hundred Canadian dollars, in Ireland – five hundred pounds, in Korea – one hundred thousand wons, in Russia – three thousand roubles, in Singapore – fifty Singapore dollars (Bykeev, 2013), in Brazil – one hundred reals (Vasyleva, 2015), in the USA – twenty dollars for one donator in every particular case upon condition that the total value of all gifts from one source doesn't exceed fifty US dollars during a year, and for congressmen and senators – three hundred and two hundred US dollars respectively (Bykeev, 2013). For the majority of European countries, gift value is one hundred euro, but in Denmark, the value is equal to one hundred and forty euros (Bonsing, Langsted, 2013). In Great Britain, the gift value for persons, who hold appointive position, can't exceed one hundred and forty pounds (Vyllorriia, Synnestrom, Bertok, 2010). There are countries, the legislation of which consolidates gift value for public servants not in a “solid amount” but in “tying” to a particular regulatory determined amount. For example, in Ukraine, the value of “restrictive” gift for reception by a public servant shouldn't exceed one minimum cost of living for an able-bodied person established on the date of gift reception. At the same time, the value of all gifts received by a public servant within one year from one source may not be greater than two minimum costs of living established for an able-bodied person on the first of January of the year, in which the gifts were received (Kolomoiets, Verlos, Pyrozhkova, 2018). The definition seems somewhat large and raising some questions on the adjustment of the coefficients for determining the value of one and a set of gifts, taking into account the potential possibility, considering sufficient regulatory

permitted grounds, adjustment of the size of the subsistence minimum during the calendar year. The experience of Mexico is also interesting, as already mentioned, according to its legislation the value of gifts “cannot exceed ten times the salary of the person receiving them” (Suslova, Fluri, Badrak, 2017). There is a question, how one can clarify the issue of compliance with the requirements of “gift” legislation by a public servant in a case of change of his salary amount during the year in practice and, even more so, if such a change is repeated? Is it possible to hope for the effectiveness of the regulatory consolidation of gift value in such a “format” as a “filter” for the implementation of public policy in the sphere of public service? The same question is raised in the case of a regulatory consolidation of the list of prohibitive (for example, in the legislation of Mexico) or permissive (for example, in the legislation of China) forms of the external gift manifestation without an indication on their “maximum” value for a possible reception by civil servants. In particular, the legislation of China stipulates that public servants are forbidden to receive any gifts except books. As a consequence, analysis of law-enforcement practice illustrates frequent cases of the reception of unique books editions with covers made with the use of precious metals and stones by such persons. Statutory consolidation of gifts “tying” for public servants exclusively to the periodicity of their reception is not justified in the context of providing the effectiveness of the implementation of government policy in the public service that in its turn can provoke clarifying the issue of their number. For example, the legislation of Ukraine and South Africa has indications on the availability of multiple gifts reception by public servants during a calendar year. In addition, a specification of legal frameworks can be connected with the identification of gift resource. In particular, the provision “from one source” is consolidated in the legislation of Ukraine, South Africa, “with an indication of the information about a donator” – in the legislation of Italy, “from non-official source” – in the legislation of Australia. Without dispute, taking into account the specifics of the gift itself, which cannot be received permanently or periodically, it is important to consolidate quantitative restrictions towards gifts reception for public servants in terms of legislation. In order to eliminate threats of “gift influence” on a public servant, his professional activity on the part of a person (group), it is essential to provide for regulations on the minimisation (as a rule, no more than two) “gift” contacts of a public servant. However, it should be kept in mind that one “gift” contact with the gift which, due to its value, can influence a public servant more powerful than frequent “gift contacts” with the presence of low cost. Thus, under any conditions, the gift value has to play a key role when defining and consolidating principles “gift relations” in the public service. An indication of a minimum frequency of gift reception



and determination of its source will additionally consolidate a “symbolic nature” of the gift. And even the gift, which is repeatedly received by a public servant during a year from the same person, can’t significantly influence his professional official activity due to its low cost. For this reason, when formulating the principles of “gift” relations in the public service concerning so-called “limited gifts”, first of all, it is necessary to fix their maximum authorised value and then the restrictions on the frequency and source of their reception. The lack of a clear, statutory defined “value” feature of the gift causes models variety of “gift” relations with the participation of public servants that cannot be justified in any case. Only a total regulatory definition of gift value, which can be received by a public servant, allows guarantying transparency, monitoring of “gift” relations in the sphere of public service in whole. How “value feature” of a gift should be defined? An answer to this question should be found simultaneously with an emphasis on the specific nature of the national rule-making. If in the state statutory instruments, which regulate the relations in the public-legal sphere, are aimed at taking into account “strong” figures (particular for countries with a high level of economic development), therefore, “gift” relations should be regulated using the same figures. If the regulatory activity of the state is connected with a dominant use of “minimum guaranteed value” (as a rule, it is particular for countries in the transitional period of their development, pivotal modification of functioning vectors etc.), so it is quite possible to consolidate “tying in” of the gift value for public servants to such measures at the regulatory level. Any options of a statutory definition of gift value should be aimed at its maximum minimization that it plays exclusively the role of manifestation of “symbolic” respect, gratitude to a public servant, and eliminates any expression of interest in it on the part of the public servant. As well as the definition of the gift, subject of its reception and donation, the value of gift (or particular “solid” amount in the national currency, or “tying in” to the minimal government-guaranteed amount, which can’t change during a calendar year) should be regulatory consolidated in the basic legal act, which secure the models of “gift relations” in the public sphere. The definition of a “value” feature of a gift should be of such nature as to make impossible any unreasonable interpretation on the part of any subject of public-official legal relationships, and therefore, it should be absolute. The issue of the need to amend statutory stipulated regulation regarding “value” feature of a gift in the case of changes in the economic development of the state does not have particular urgency as the value of the gift must not be in line with economic processes in the state in any way. “Symbolic” value rate should keep its position under any conditions, which is confirmed by experiences of the countries, the legislation of which have been consolidating “value” feature of the gift for

public servants in a particular amount of the national currency for a long time. It is quite logical to raise the question what can be the value of a gift for a public servant? Offering a suggestion to standardise the specific amount of gift value for a public servant in the form of a constant “solid” indicator, it would be worth specifying the proposal. What estimation should be a base for the definition of “value feature” for gifts which are regulatory restricted? Unfortunately, analysis of “gift practice” in most countries doesn’t allow determining approaches’ solidarity of developers of legislative acts. At the same time, basically, value indicators of gifts for a public servant, which are consolidated in the current “gift law” in the sphere of public service in different countries, are from 10 to 45 per cent of their average salary. It would be perfectly possible to borrow the same practice and to develop unified legal standards for “gift relations” regarding the value of a gift for a public servant. To determine the “value” of the gift, it would be quite possible to propose the following algorithm of action. Developers of a legislative act that fixes the principles of “gift relations” in the public service based on the amount of the average salary (without taking into account premiums, supplements, and possible extra payments) of a public servant in the country and determine “value feature” of the gift in the amount of ten percent of the average salary of a public servant in the national currency units. “Value feature” of a particular gift is consolidated as a “solid indicator” in a relevant legislative act and is not subject to improvement as under any conditions the gift keeps the role of manifestation of “symbolic” respect, gratitude despite inflationary processes and change of average salary rate of a public servant. The most important thing is that statutory fixed approach to the definition of the “value” of the gift is consistent with the general tendencies of lawmaking and law-enforcement in the sphere of public service, public-tort sphere for a violation of public service law in order to ensure a high “quality” of legal framework for the implementation of state policy in the sphere of public service as a whole.

## 6. Conclusions

Guarantee of the effective implementation of state policy in the sphere of public service is directly related to the “quality” of statutory consolidation of its principles also including those that are focused on eliminating threats to such efficiency. Violations of a corruption nature along with breach of special restrictions by public servants, including restrictions on gifts reception, take a prominent place among such sort of principles. In spite of the standardisation of “gift relations” in different countries with choosing the basic model of such relations (prohibitive, permissive, mixed), in practice, the gifts “accompany” public-service relations adversely affecting the public service as



a whole. Practical inexpediency of the implementation of “polar” regulatory models for a settlement of “gift” relations in the sphere of public service (prohibitive and permissive), due to which their promotion takes place, or excessive use of gift’s resource with the permissive modification of its intended purpose, causes choosing mixed model as an optimum alternative. The latter, thanks to the simultaneous regulatory consolidation of the principles of “permissive” and “prohibitive” “gift” relations, stipulates the fixation of the behaviour of public servants in relation to other (so-called “restricted for receiving”) gifts, which promotes the unshadowing of all “gift” relationships in the public service sector. In the definition of diametrically opposed, in content, behaviour models for public servants regarding gifts reception, namely prohibition and permission, the legislator actually determines the subject line for the gifts “restricted for receiving” as one of the standard “filters” of “gift policy” as a whole. The resource of the gift itself is important, the use of which can affect a public

servant, his professional activity in different ways, in different extent. In order to prevent such an impact, it is expedient to fix the maximum value of a gift for public servants (“value feature” of a gift), which will create a “symbolic character” of a gift for a public servant, the role of manifestation of “symbolic” respect, gratitude for his professional bona fide, qualitative, lawful official activity. Absolute determination of the “value feature” of a gift (in the form of a clearly defined number of the national currency units as the most alternative option) without the use of any estimative factors will contribute to unifying the practice of applying legislation on this issue, eliminating any subjective manifestations of its unreasonable interpretation. The statutory regulation of the “value feature” of a gift (as its primary feature) will serve as a reliable “filter” (in combination with limits on the frequency and sources) for an effective elimination of the risks for the implementation of “gift policy” in the sphere of public service and national policy in the public service as a whole.

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# THE APPLICATION OF MONETARY INCENTIVE POLICY IN CURRENT ECONOMIC CONDITIONS

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**Abstract.** *The aim of the article* is studying the process of implementation of promotional monetary policy by investigation of the functionality of the transmission mechanism channels. The paper singles out the peculiarities of the implementation of monetary policy in well-developed and developing countries. *The subject of the study* is: the structure of the monetary transmission mechanism; the functionalities of both traditional and non-traditional channels and their influence on promotional monetary policy are defined. An analysis of the existing structure of the transmission mechanism made it possible to determine the strength and speed of feedback between participants and the degree of influence on the real sector and to formulate appropriate proposals for its adjustment or activation. In addition, it is indicated that, under the present conditions, it is non-traditional channels that acquire special significance; also, the main factors that have shifted the priority vector in their direction are defined. Alongside this, the study presents modern modifications of promotional monetary policy and their significance for the modern economic world. *Methodology.* The classic methods of scientific research are used in the article, among which are the following: observation, abstraction, comparison, systematic approach, analysis, and synthesis. *Results.* The conducted study clearly demonstrates that, in the process of changing financial relations, the significance of the transmission mechanism channels in the process of implementing promotional monetary policy changed, too. At the same time, it is expedient to single out the reasons that lead to a change in the role of some channels of monetary transmission in relation to others. Current research and developments are not limited to the above structure of the transmission mechanism channels. Moreover, their list is constantly replenished, which is indicative of the existence of transformational processes affecting the financial sector. The approaches to the structure of the transmission mechanism and the functionality of its channels, determined in this article, make it possible to assess the effectiveness of implementing monetary policy. *Practical implications.* Clarified complex causes of destructive nature, which initially level out practically any actions with regard to the system approach, namely, the absence of the integrated combination of interests of all social and economic spheres: state-business-society. Also, the results of the study provide an opportunity to identify further trends in the changing transmission mechanism channels in the implementation process of monetary policy and use this knowledge by planning and forecasting for the functionality of transmission channels. *Value/originality.* This research was carried out within the framework of the scientific work of the Department of Theoretical and Applied Economics of the National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute" (No. 0112U007817) on the topic: "Globalization of industrial capacity formation trends in the terms of post-industrial transformation".

**Key words:** promotional monetary policy, channels of monetary transmission mechanism, structure of monetary transmission mechanism.

**JEL Classification:** B50, E50

## 1. Introduction

Modern transformations of the world economy, which form the strategic foundations of its future development, lead to a revision of the system of established values and views: from the role of the state, social institutions,

political elites, the financial market to a change in the structure of economic development factors.

The pluralism of approaches when choosing a rational strategy for monetary policy and making specific managerial decisions is felt particularly deeply

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today since unique features of the formation and development of states are reflected in the process of the above-mentioned choice. At the same time, in the transformation processes, the dominant role is played by the speed of change of ideological institutions, the historical development of which differs significantly from state to state, which further enhances the adaptive lag and, accordingly, the management process becomes more complex and requires a regular review of the fundamental foundations of one or another society. In the context of collisions of globalization processes, with simultaneous localization of economies, confrontation of political systems and meta-goals, the only way to increase the effectiveness of monetary policy is the application of a systematic approach that covers all aspects of development in a comprehensive manner.

Modern world trends show that promotional monetary policy becomes the most relevant, which is associated with some negative medium-term trends that determine the widespread slow growth of the economy.

Not only potential economic growth in well-developed and developing countries fall due to a reduction in capital expenditure, but also actual economic growth is anaemic and below its potential dynamics, which is caused by the continuation of the painful process of reducing the debt burden, first in the US, then in Europe, and now in highly debt-laden developing countries.

In this situation, numerous technological innovations did not lead to increased productivity, the progress of structural reforms remains slow, and the prolonged cyclical stagnation dilutes the basis of both professional skills and industrial capital. In addition, economic policy, especially monetary policy, is becoming less traditional; non-traditional instruments of monetary policy have become the norm in most well-developed and developing countries.

In this case, we can state another economic aberration: inflation still remains extremely low and continues to fall in well-developed countries, despite all the unconventional measures of central banks and their growing balances.

In our opinion, special attention, bearing in mind the issues raised, should be given to the study of exactly the transmission mechanism of promotional monetary policy, which allows taking into account the interaction of all socio-economic processes, while harmonizing the interests of all groups of participants and balancing resources of all kinds.

## 2. Theoretical background of the research

The results of the study of the transmission mechanism and its influence on the strategic development of the state are presented in works of many scientists and experts including: J. M. Keynes, J. Tobin, F. Mishkin, B. Bernanke, J. Taylor, M. Gertler, S. Cecchetti, M. Friedman, J. Stiglitz, and others.

Studies show that the most significant results based on considerable theoretical and practical research were achieved by industrialized countries. At the same time, it should be noted that despite such significant developments in the field of studying the mechanism of monetary transmission, the views on its impact on the development of economy differ significantly, which is explained by individual conditions and goals of the functioning of a state.

For the first time, the transmission mechanism and its impact on the economy are mentioned in the Keynesian analysis. J. M. Keynes called the transmission (transfer) mechanism a system of variables, through which the supply of money affects economic activity. He believed that monetary regulation and changes in the volume of money supply have an impact on reproduction only by influencing the investment process and only if it is able to change the psychological situation in the money market by lowering the rate of interest. Keynes published his work on the analysis of economic activity in 1936, but his views' peak popularity among economists came in the 1950s and early 1960s when most economists adopted his system of evidence (Semiturkin, 2013). Over time, representatives of the monetarist school of economic thought supplemented this theory in a number of aspects.

Now, when it is especially important to continue research, these issues are dealt with by the Central Banks of various countries of the world, as well as by supranational organizations. Economic theory and world practice have developed certain approaches to understanding the operation of the mechanism presented, which allows central banks to use them when developing and implementing monetary policy. Taking into account theoretical and empirical approaches to the study of this issue, specialists significantly expand the concept of the transmission mechanism and present it as a dynamic phenomenon characterized by constant changes, endogenous with respect to the characteristics of the economic system. In fact, the study of the effect of the transmission mechanism is very complex, but the socio-economic processes taking place in a state largely depend on its effectiveness.

As for developing countries, their experience and achievements are not so significant, since in most cases, they are only approaching the process of developing the most acceptable model of the transmission mechanism, one of the main goals of which is to ensure the efficiency of transformation processes. It should be noted that, despite so much attention from developing countries to the study of the transmission mechanism, the ability to implement already proven practices is offset by a number of factors. The main ones are the following: underdevelopment of market institutions, intervention by the state or a number of states in economic processes, monopolization of the economy, a significant proportion of the shadow economy, high

inflation, dollarization, and a number of other aspects. All this leads to the fact that the measures developed do not correspond to the real state of affairs, feedback is lost between the participants in the process; the mechanism of the transfer mechanism, the quantity and quality of the statistical data are distorted, which, in turn, seriously complicates the problem of an adequate assessment of its impact. Thus, when studying the transmission mechanism in developing countries, it is necessary to take into account a huge number of exogenous and endogenous factors, as well as a constant change in the economic behaviour of the subjects, the formation and development of the institutional and technological structure. These aspects have a significant impact on the structure of the transmission mechanism and, as a consequence, on the effectiveness of monetary policy.

Within this context, at the first stages of the study of the mechanism presented, the process of analysing its structure, namely, determining the most important and significant channels for transferring monetary policy impulses to the real economy, taking into account the dominant factors and conditions, is of particular practical value. In addition, an analysis of the existing structure of the transmission mechanism makes it possible to establish the strength and speed of feedback between participants and the degree of influence on the real sector and to formulate appropriate proposals for its adjustment or activation.

### 3. Several approaches to defining the structure of the transmission mechanism

In the conventional form, the structure of the transmission mechanism is represented as a set of channels, which are peculiar links of macroeconomic variables, through which the impulse of change is transmitted (Mishchenko, 2015). The analysis of the existing developments on the structure of the transmission mechanism we conducted allows us to state that there is only a description of the general specification of the aggregate of its channels, without an unequivocal opinion on the significance of each of them, as well as on individual aspects of their functioning. It should be noted that views on directions of the transmission influence of monetary policy differ even in countries with a well-developed market economy, despite the length of theoretical and empirical research. At the same time, the modern basis for the study of the transmission mechanism very successfully operates with different views on defining its nature and structure and, despite the difference in approaches, in the applied aspect, they complement each other very harmoniously. At the heart of their differences, there are such fundamental questions as: by what means does monetary policy influence the behaviour of the subjects of the real sector and by what channels do its impulses reach the microlevel.

According to the “money view”, central banks influence the short-term interest rate in order to transfer the impulse to the exchange rate and the long-term interest rate. Their correction leads to a change in the costs of attracting capital, in the ratio of internal and attracted funds, in the volume of investment in production. However, taking into account modern developments in this area, it should be noted that international studies have revealed the low elasticity of short-term interest rates to the costs of raising capital (Semiturkin, 2013).

The main role in the “money view” is given to the demand for investment from the private sector, as a result of which the weaknesses of the financial sector and externalities fall out of the sphere of attention. Supporters of the “money view” stand for models with a minimal number of equations, the main variable of which is represented by monetary aggregates and, as a rule, this theory is used when targeting such ones. The “money view” is also called “traditional” because its postulates are more characteristic of Keynesianism. Moreover, it examines the influence of monetary policy only through the lens of the financial sphere, which greatly narrows down and simplifies its perception. Nevertheless, this approach has its own application potential since it is completely based, as it has already been mentioned above, on traditional macroeconomic models and has a full structural theoretical justification, which is very convenient to use in econometric modelling.

The processes of the influence of monetary policy on aggregate demand and on the development of production are reflected to the fullest extent possible in the “lending view” of the transmission mechanism.

As for the “lending view”, its theory is based on the microeconomic models of the neo-Keynesian school and focuses on the fact that the imperfection of the financial market prevents the effective functioning of the financial sector. On the one hand, this leads to limitations of cross-sectoral capital flows, on the other one, to a rise in the cost of credit, that is, to the appearance of a premium for external financing, which is paid by enterprises in the real sector in addition to the initial interest rate. The key point of the “lending view” is that the central bank influences not only interest rates but also the volume and cost of the loan (the amount of the premium). The influence is exercised through a change in the welfare of enterprises, which acts as loan support. The relationship between monetary policy and premium derives from the characteristics of the functioning of the credit market. This feature can be represented in the form of a relationship between the welfare of an enterprise and its creditworthiness: the lower the welfare of enterprises, the less creditworthy they are, that is, the higher the premium for them and the lower the possibility of new borrowings. This effect of the influence of monetary policy on the economy is called a “financial accelerator”. It is worth noting that the



“lending view” is most applicable for economies with a well-developed banking system and a high proportion of loans in financing the real sector. Moreover, the practical importance of this approach is expressed in determining the special role of information asymmetry in determining the amount of the premium for external financing; it divides the behaviour of large and small companies. The “lending view” has considerable analytical potential in determining the viability of a financial institution, which makes it possible to apply it in microeconomic analysis of the selective influence of monetary policy on individual financial institutions.

Relatively recently, in the 2000s, a third view – the “supply view” – emerged. The basis of the “supply view” is the supply of production factors. After the formation of a monetary impulse, it is production companies that are the first to react, correcting the needs exactly in the factors of production. Thus, restrictive monetary policy lowers the demand for labour, capital and thus leads to a negative production shock. The “supply view” makes it possible to expand the explanation of the work of the transmission mechanism since it views the economy not only from the side of aggregate demand but also from the supply side. This approach has gained special practical recognition due to the fact that it allows studying transformations in the real sector of the economy, to which theory traditionally attributes stationary behaviour in the short term (Moiseev, 2013).

Theoretical and practical analysis of these approaches testifies to the absence of an agreed opinion on the structure of the transmission mechanism. The main reason for the discrepancy in this area lies in the field of the transfer of and control over impulses generated by monetary policy – it creates an initial impulse that is transmitted through the transmission mechanism, without further control over it. In view of the research conditions introduced above, in the process of analysing and evaluating the transmission mechanism channels, particular attention is paid exactly to the channels through which monetary policy maximally impacts the real economy. If we consider this process from a pragmatic point of view, its results should reflect the channel’s functionality in achieving the goal set (investment activation, output growth, exchange rate stability, inflation targeting, multi-targeting, etc.), as well as further features and prospects for operation.

Thus, the study of the structure of the transmission mechanism must begin with a review of the stages of development of impulses transmitted by monetary policy to the real economy. Initially, central bank instruments have an impact on the exchange rate, interest rates, asset prices, and lending terms. At the second stage, there are changes in the nominal expenditures of enterprises and households associated with the correction of prices for financial assets, which in turn leads to a change in the structure of the balance of borrowers, the volume of savings, loans, and investments. The second stage

of the correction of market interest rates begins. The third stage is the result of the combined effect of the first two ones and is characterized by the transition to a new economic equilibrium through macroeconomic adaptation, which entails a revision of prices and wages. Differences between the channels of money transmission are observed in the first two stages. These differences are based on the nature of the relationship between participants in economic processes – the presence of violations or lack of communication in any part of the transmission mechanism can reduce or even neutralize the results of monetary policy (Tuleuov, 2014). As for the channels, through which the monetary impulse of the changes passes, such channels as the interest channel, the foreign exchange channel, the credit channel, the asset price channel, the expectations channel, the monetarist channel, etc., are traditionally singled out. However, in order to obtain more accurate research results, a more rigorous and clear classification of the transmission channels is needed.

#### **4. Classification of channels of monetary transmission**

For effective implementation of promotional monetary policy, a clear understanding of its structure and features of the functionality of the channels declared in the structure is necessary.

The approaches to defining the nature and structure of the transmission mechanism considered above demonstrate that the basis for the theories that define the principles of the transmission mechanism operation is formed by the conditions, under which the market operates (perfect/imperfect ones); within this context, traditional and non-traditional channels of the transmission mechanism (Sinelnikova-Muryleva, 2017) are singled out. Traditional channels operate in the absence of market frictions, aberrations, and asymmetries; the functionalities of these channels are described within the framework of traditional models of the macroeconomic theory.

Imperfect conditions of the functioning of the market are reflected in the functionality of non-traditional (banking) channels, with an emphasis on studying the behaviour of credit institutions. The study of these channels, with consideration for the chosen topics, has a greater practical potential for application since they function under imperfect market conditions, in the presence of information asymmetry in the borrowed funds market, behavioural aberrations of economic agents, which, in principle, characterize modern market conditions. Frictions of the financial market do not allow talking about equality in the cost and availability of domestic and external sources of financing for various economic agents.

In general terms, the classification of the transmission mechanism channels is shown in Figure 1.

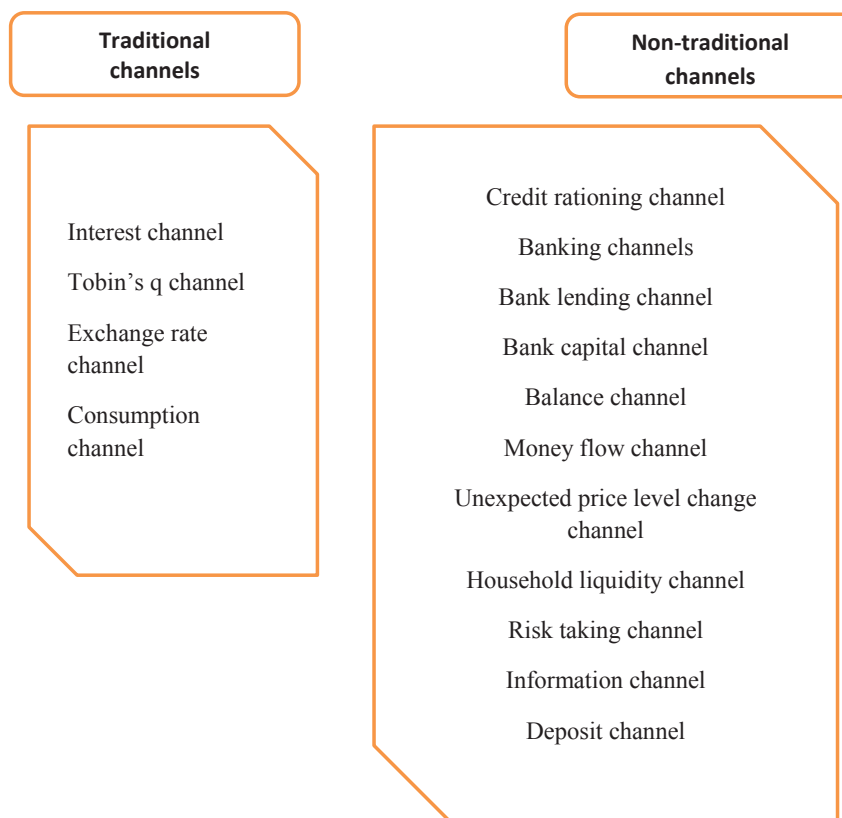


Figure 1. Classification of channels of monetary transmission

In the modern world, many experts are sceptical about studying the neoclassical transmission channels; their arguments are reduced to operating with the fact that the conditions in which they manifest their functionality, by and large, represent a theoretical construction. However, in our opinion, the results of these fundamental developments should be used to solve specific problems. With the help of the ideas outlined in this approach, we can assess the “degree of market perfection”, identify factors of influence on the behaviour of economic entities, and adjust monetary activities.

The functionality of these channels, in general, is reflected in the “money view” of the structure and essence of the transmission mechanism.

*Interest channel.* The functionality of the interest channel is as follows: promotional monetary policy leads to a decrease in nominal interest rates, which reduces the level of real interest rates, which, accordingly, reduces the cost of capital, which leads to increased investment and further to output growth. The degree of the impact of monetary policy on the real economy through the direct interest rate channel depends on the horizon of the effect of interest rates on the costs of economic agents, which is why the focus in this channel is on the relationship between real long-term interest rates and economic agent costs since it is long-term interest

rates that reflect the cost of new investment projects. As a consequence, decisions of economic agents on making investments when changes in interest rates take place are decisions made on the basis of analysis of some long-term prospects.

The ambiguity of judgments about the functionality of this channel led to the study of channels that expand the scope of its influence on the choice and behaviour of economic entities. Traditionally, they include: Tobin's q channel, the exchange rate channel, and the consumption channel. Let us consider the features of the functionality of each of the presented channels.

*Tobin's q channel.* Nobel laureate economist James Tobin suggested that companies make investment decisions based on the following ratio, now called the “Tobin's q ratio” (Tobin, 1969). Tobin's indicator relates the market value of a company (measured by the market price of its shares) to the replacement value of its assets (1):

$$q = \frac{P}{C} \quad (1)$$

where:  $P$  is the value of capital assets that is formed in the securities market;  $C$  is the replacement value of the company's assets equal to the amount of expenses necessary to acquire the company's assets at current prices.

Tobin believed that the amount of net investment should depend on whether  $q$  is more or less than one.

If  $q$  is greater than one, then the securities market values the registered capital at an amount greater than the cost of its replacement. In this case, enterprises can make new investments at the expense of fewer shares that have a high price in the market.

The Tobin's  $q$  model makes it possible to describe the following transmission mechanism: the result of the promotional monetary policy is an increase in the amount of money in economic agents, as a result of which they are inclined to invest these funds, including in the stock market. The growing interest in investing in the stock market leads to an increase in the value of shares, which, accordingly, increases the  $q$  indicator. As a consequence, the cost of new equipment becomes inexpensive relative to the market value of a company, which stimulates companies to make investments and, ultimately, increases output.

*Exchange rate channel (international trade channel).* This channel is one of the key channels of the transmission mechanism. In its functionality, parity of interest rates is also included. With lowering the interest rate, the value of domestic assets of a state is also reduced. In comparison with foreign assets, they lose their investment attractiveness. The change in the vector of interests of economic agents towards foreign assets whose value is expressed in foreign currency devalues the national currency. Positive results of the devaluation of the national currency are represented by an increase in net exports and aggregate demand. A large number of scientific works are devoted to the investigation of the functionality (working capacity) of this channel (Sinelnikova-Muryleva, 2017). Such interest is caused by its immense importance for monetary policy and its effective implementation. Through the exchange rate, formed within the framework of flexible exchange rate formation, this channel is one of the most volatile macroeconomic indicators: it is the first to react to various shocks and economic changes due to the absence of rigidity in the foreign exchange market.

Empirical analysis of the functionality of this channel makes it possible to identify several significant and important points affecting its effectiveness: the sensitivity of the exchange rate to changes in interest rates, as well as the degree of openness of the economy, since the more open the economy, the greater the importance of the exchange rate channel. In addition, the growth of globalization and openness of economies is an important factor leading to the growth of the importance of the role of the exchange rate channel in monetary transmission.

*Consumption channel.* The functionality of this channel allows displaying the actions of monetary transmission in the field of consumption by changing the relative prices in the economy. In addition, its functionality allows identifying several effects, the consideration of which will allow clearer determining the environment of its influence: the substitution effect and the effect of wealth (the income effect).

The direction of the substitution effect is always "negative", i.e. in response to the growth (relative) of the price of a product the consumer reduces its consumption. The direction of the effect of wealth in the general case is not determined and proceeds from an agent's preferences, as well as from the condition of the initial (original) possession of wealth. The mechanism of the effect of wealth lies in the fact that promotional monetary policy will increase agents' demand for assets in view of the fact that agents will have more money in their hands and they will strive to spend them, including in the markets of various assets, which leads to an increase in their cost. The consequence of the increase in the cost of assets will be an increase in the financial wealth of a household, which will increase the amount of resources available for consumption. This will stimulate the consumption of economic agents and, as a result, increase aggregate demand. However, when studying the influence of this effect, it is worthwhile to clearly understand that the direction of its influence will depend on whether an agent is a lender or a borrower, as a change in prices redistributes wealth between them. A fall in the price level increases the real value of the debt of a borrower, as a result of which the creditor becomes enriched.

The study of the functionality of the non-traditional channels of the transmission mechanism, as already mentioned above, is carried out under imperfect conditions of the financial market, namely in all kinds of credit markets, as a result of which very often these channels are called credit channels. These channels make it possible to explain the compositional effects of monetary policy to a greater extent, as they reflect the increased role of the credit market in the development of the economy and, as a consequence, the transition of monetary authorities to the use of measures of unconventional monetary policy. In general, the functionality of non-traditional channels can be represented as the process of redistribution of limited borrowed funds for both banks and corporations.

*Credit Rationing Channel.* Credit rationing is observed in cases where creditors do not issue loans to borrowers willing to pay interest at the rate set, even if they all agree to deposit the relevant funds as collateral and meet all other requirements for their solvency. Lenders are confident that a high-interest rate will lead to more rapid growth in bad debts than a low-interest rate. Therefore, with the implementation of promotional monetary policy, a low-interest rate makes loans more affordable and raises demand from less risk-prone borrowers. The result will be an increase in the number of solvent borrowers, which weakens the problems of creditors relating to adverse selection. All this is reflected in the rise in lending levels, which stimulates an increase in investment and, further, in output.

*Banking channels.* This type of transmission mechanism channels is considered by experts as mechanisms, through which the impact of interest rates on the market

is increased. In addition, the existence of these channels is explained by the fact that economic agents do not always have access to ways of financing investments other than bank loans. Banking channels are divided into the bank lending channel and the bank capital channel.

The bank lending channel arises as a result of the presence of information asymmetry in the financial market and, directly, banks play a key role in its resolution. Information asymmetry in the financial market leads to the fact that, for most of the economic agents, bank lending is the only available source of borrowed resources. This significantly limits the freedom of choice and the interchangeability of resources. Empirical analysis has shown that the bank lending channel has the greatest impact on small businesses and households that have no access to alternative sources of financing, unlike large enterprises.

The functionality of this channel is that promotional monetary policy increasing reserves and bank deposits, accordingly, increases the volume of a bank's credit resources, which, given the situation, allows lending to a large number of economic agents; as a result, the growth of investment activity and of aggregate demand takes place. It should be noted that the bank lending channel is connected with the study of the influence of monetary policy on the volume of lending by various deposit institutions.

A critical question posed by experts when examining the functionality of this channel is whether monetary policy really has such a significant impact on the supply and price of bank resources (Bernanke, Gertler, 1995). With a restraining monetary policy, as a result of open market operations conducted by the central bank, the volume of bank reserves, including deposits, is significantly reduced, which leads to a reduction in lending volumes. Taking into account this situation, the process of adaptation to new conditions, which directly depends on the rate of substitution of deposits by alternative sources, becomes very important for banks. This situation took place in the United States as a result of "Regulation Q"; it was characterized by higher reserve requirements and the presence of less developed and liquid markets for banking obligations. However, experts note a decrease in the functionality of this channel due to the simplification or cancellation of a number of institutional constraints, as well as to the rapid spread of financial innovations.

*Bank capital channel.* The ideological component of the functionality of this channel is based on the fact that the state of the balance sheet of financial intermediaries affects their credit potential. Promotional monetary policy can lead to an increase in asset prices, therefore, external financing for banks becomes cheaper, the risk of losses in the structure of the loan portfolio is reduced, and its quality increases. It is quite logical to revise the active part of the bank balance in the direction of increase. In addition, low-interest rates

increase net interest margins and lead to higher profits for banks, eventually improving their balances due to the possibility of reinvesting profits and increasing the return on assets (Bernanke, 1988). This will have a positive effect on the investment climate in the state and will help increase output.

*Balance channel.* Numerous scientific studies conducted within the framework of studying the functionality of the balance channel demonstrate its significance for the implementation of promotional monetary measures for the development of the state economy (Bernanke, Gertler, 1989). The main emphasis in the studies is put on the study of the potential impact of changes in monetary policy on the state of an enterprise's balance sheet and its main indicators. It should be emphasized that, as in the case of the bank lending channel, consideration of its functionality takes place in the presence of information asymmetry in financial markets. At the same time, despite the similarity in functionality with the bank capital channel, there is a difference between them, which consists in the fact that, in the first case, balances of financial intermediaries (creditors) are analysed, and in the second one, balances of economic agents (enterprises and households). The mechanism of action of this channel is that during the implementation of incentive monetary measures, the value of the assets of an enterprise increases, which is reflected in the increase in its collateral value and, accordingly, its creditworthiness; at the same time, the share of agents in the authorized capital of the enterprise also increases, which focuses their attention on the development of the enterprise and leads to a drop in demand for risky projects. The share of non-creditworthy enterprises decreases, the probability of non-repayment of loans decreases, information asymmetry decreases, the problem of unfair behaviour is partially levelled off, which leads to increased lending.

The study of the influence of the state of a borrower's balances on his business activity has developed in the theory of "financial accelerator" (Bernanke, Gertler, Gilchrist, 1999). The essence of this theory is that the primary shock that led to a change in a borrower's balance sheet, as a result of the effect of "financial accelerator", multiplies many times, affecting his business cycle.

Very often, in the literature, one can find another channel that complements the analysed one, namely, the money flow channel (Sinelnikova-Muryleva, 2017). The functionality of the channel with promotional monetary policy leads to a reduction in interest payments on the loan of an enterprise, which increases its money flow, improves its balance and liquidity, as well as the creditors' confidence in paying the loan.

*Unexpected price level change channel.* The functionality of this channel leads to a decrease in the value of a company's debt obligations in real terms as a result of unexpected growth in stock prices. Thus, reducing the debt burden leads to an increase in the company's real value.



*Household liquidity channel.* The functionality of the channel in question is that, as a result of promotional monetary policy, the prices and the value of an enterprise increase, which in turn influences its investment preferences toward investing in illiquid assets; accordingly, the demand for durable goods and real estate increases, which increases output.

*Risk-taking channel.* It should be noted that this channel has received its understanding and development relatively recently. Under conditions when interest rates are close to zero, this affects the reduction of bank profits, which leads to the fact that banks are more inclined to invest in risky projects (Borio, 2012). It is noted that, in addition to the above, low-interest rates increase the value of assets and collateral, which is reflected in an increase in the bank balance and in the improvement of the financial condition of a borrower, which leads to a reassessment of bank risks.

*Deposit channel.* Just like the risk-taking channel, it is quite new. Its functionality is based on such assumptions as: banks have market power, which is to regulate the liquidity of economic agents; in addition, the value of deposits for agents is determined by their liquidity and security (Drechsler, 2014). An example of the functionality of this channel can be the United States, where the growth of the rate for federal funds led to an outflow of deposits due to a disproportionate change in spreads for different types of deposits. Analysis of empirical data showed that the interest in highly liquid demand deposits increased more than the interest in urgent deposits. The result is capital flow from deposits into cash, and then the latter is invested in less liquid assets, and not in deposits, but rather in shares or bonds. In a natural way, this reduces the credit resources of banks and the volume of investments and output decreases.

*Information channel.* Recently, special attention has been paid to studying the information channel of the transmission mechanism; this is due to the fact that the importance of certain channels due to the development of financial markets and the weakening of market frictions is falling. The functionality of this channel is expressed in maintaining by the central bank a certain level of expectations of economic agents through information interventions. Supporting a high level of inflationary expectations, the monetary authorities also affect the reduction in the real interest rate, which is well explained by the Fisher equation and is considered as the difference between the nominal rate and the expected inflation and leads to an increase in investment activity.

## **5. Modern modifications of promotional monetary policy**

Analysis of modern approaches to the study of monetary policy demonstrates that the functionalities of many channels lose their relevance and significance

under modern conditions characterized by economic instability, the unpredictability of emergence of crisis situations, and the presence of contradictory trends. Already now, the world economy is characterized as the “new abnormal” in terms of production volumes, economic policy, inflation, the behaviour of financial markets, and the dynamics of prices for key assets (Rubini, 2016).

As a result, special attention is paid to the effective implementation of non-traditional monetary measures that provide an opportunity to take a fresh look at the already established (traditional) and especially to highlight the functionalities of non-traditional channels. Non-traditional monetary measures include: zero interest rates policy (ZIRP), quantitative easing (QE), credit easing (CE), central bank statements about future intentions/signalling measures (FG – forward guidance), negative deposit rates (NDR), unsterilized foreign exchange intervention (UFXInt). Each of the presented non-traditional measures represents a derivative of innovative approaches in the financial field and of the functionality of non-traditional monetary channels.

Zero interest rates policy is a direct outcome of promotional monetary policy; it is based on the functionality of the interest channel and is used during periods of economic downturn. Central banks minimize the interest rate, which makes the monetary resources as accessible to all groups of economic agents as possible.

The program of quantitative easing is used in conditions of zero/near-zero short-term interest rates when the alternative costs of keeping money are also close to zero; there is the so-called “liquidity trap” that, with increasing money supply, absorbs excess money supply through increased money demand. Investment activity is falling, which leads to lower output and neutralizes, ultimately, promotional monetary actions. To overcome this problem, as it has been mentioned above, the quantitative easing program is used, which is used when the interest rate cannot be pushed any lower. This program operates on the basis of various methods for mitigating national reserve requirements: reducing mandatory reserve requirements, introducing new rules for averaging reserves, expanding the list of allowed exceptions in calculating reserve requirements, etc. As a result, the level of money supply increases, which affects investment and output. A distinctive feature of quantitative easing is that its purpose is not to change the interest rate but to increase the money supply.

As for credit easing, its mechanism of action is that, on the basis of various methods, for example, through lending to financial institutions, through the provision of liquidity to key credit markets or through the acquisition of long-term securities, various financial markets are stimulated. The application of these measures allows central banks to perform the function of the lender of last resort in a new way.

The effectiveness of the policy of quantitative and qualitative easing can be well traced in the case of well-developed economic countries such as Japan and the United States, the analysis of which makes it possible to identify the necessary condition for effective implementation of those monetary measures, namely, a smooth process of bank lending.

Signalling measures act indirectly through perceptions and expectations of economic agents. The mechanism of the action of signalling measures is essentially based on the immanent results of promotional monetary policy; it is the impact on the level of inflationary expectations on the part of economic entities. In addition, the expectation factors include: expectations from the future policy course, expectations of a relative shortage of various assets and their risks. In addition, it can also be seen in the literature that signalling measures are also called policy commitment or policy announcements (Kavitskaya, 2011).

The policy of negative deposit rates implies an increase in the money supply by additional injection into the economy through a negative interest rate. The mechanism of action of this policy is that an amount less than the loan amount has to be returned, which increases the amount of monetary resources of the bank and, accordingly, of economic agents. In 2008-2016, against the backdrop of the global crisis, the policy of negative interest rates was introduced on a temporary or long-term basis in countries such as Sweden, Japan, Denmark, Italy, Switzerland, and the Netherlands; also, in 2014, negative rates were introduced by the European Central Bank. Supporters of this policy believe that it can facilitate the emergence of utterly debt-ridden Western economies from the crisis.

Unsterilized foreign exchange intervention is one of the types of official currency interventions that result in changes in the monetary base. In the context of promotional monetary policy, the central bank buys foreign currency and sells the national currency, as a result of which there is an increase in international reserves and an increase in the monetary base and, accordingly, an increase in the money supply.

It can be stated that critical changes in the leading countries of the world led to a revision and further modification of promotional monetary policy and, accordingly, of the role of non-traditional channels.

It should be noted that the central banks of not only well-developed but also developing countries had to resort to such measures. However, the scope of application of non-traditional monetary measures in developing countries was much smaller. The sets of instruments used by the central banks of developed and developing countries were also significantly different.

A very important point that demonstrates the need for such a careful study of all approaches to and views of the structure of the transmission mechanism of promotional monetary policy is that there is no single

recipe for its application. One cannot just limit oneself to the division of countries in well-developed and developing ones. A certain economic community is present; on the other hand, well-developed countries have a high level of institutional development; their structure of financial markets and their scheme of the interaction of fiscal and monetary policies, their high standard of living etc. are fundamentally different than those of developing countries. And, despite the growing role of economies of developing countries, it is not possible to overcome certain aspects of the ideological component of their development in the near future.

The study of the fundamental bases of the strategic development of developing countries demonstrates either the absence of a systematic approach, or it is considered only at the theoretical level as such, without further implementation in real economic life. As a result, we can observe a number of negative and, what is not unimportant for the implementation of effective monetary measures, destructive consequences; they include, at the methodological level: the absence of a single conceptual apparatus, the absence of a unified system of indicators for assessing effectiveness, the absence/non-use of adequate forecasting techniques, imperfection of methodological tools, insufficient application/non-use of economic-mathematical methods; at the organizational level: the absence of an adequate regulatory framework, nominal and declarative nature of measures, the absence of effective monitoring, control, and coordination mechanisms, lack of accountability, a high degree of bureaucratization, inertia and lack of flexibility, the complexity of the planning procedure, etc. However, with a deeper analysis of the causal relationships, we can state more complex causes of destructive nature, which initially level out practically any actions with regard to the system approach, namely, the absence of the integrated combination of interests of all social and economic spheres: state-business-society. Moreover, the study of each component of the presented triad, in developing economies, in most cases, indicates that they are also in the process of formation – without clear contours, rules, and principles of functioning, since a country that is at the stage of transforming the ideological foundations passes a sufficiently long stage of their formation, which is often expressed in conflicts of interests and the adoption of destructive solutions at all levels.

In fact, this explains the absence or an insignificant number of really adequate, and therefore effective, promotional monetary measures since they are developed taking into account clearly arranged and functioning elements, which, a priori, is not true. To introduce something in order to obtain a maximum effect is possible only if there is a “contact”, feedback, and clear rules between the participants in the process.

At the same time, when studying the transmission mechanism in developing countries, it is necessary to

understand that the influence of destructive factors is strengthened by such aspects as: the formation of the transmission mechanism occurs under the conditions of a continuous change in the economic behaviour of agents, of the formation and development of the technological and institutional structure; the influence of a huge number of exogenous and endogenous factors, for which reason the central bank must take into account the consequences of economic shocks arising independently of its own influence, as well as the impact of technological and structural changes in the transformational economy and changes in the behaviour of economic entities.

Empirical analysis of monetary policy and, accordingly, the transmission mechanism in most developing countries has shown that the most significant channels are the exchange rate channel, the interest channel, and the credit channel. The functionalities of these channels have been discussed above, but their reach is limited by such conditions as: a low level of financial market development, high public sector share, a high degree of dollarization of financial assets, exposure to macroeconomic shocks. The result of the influence of these factors is reflected in the functionality of each of them.

Despite positive consequences of the devaluation of national currency in the form of growth in net exports, this leads to a decrease in net wealth, makes investment less attractive, which affects the amount of financial resources attracted and results in lower investment and output.

As for the interest channel, its impact on the real economy is rather insignificant, primarily due to a low level of the development of the financial market. Also, in economies with high inflationary processes, the effect of this channel is neutralized by the high volatility of inflation.

The range of the functionality of the credit channel is often limited by the functionality of the banking channels (the bank lending channel and the bank capital channel). The functioning of this channel is not efficient enough due to the unfavourable credit climate, high risks, the absence of solvent borrowers and tight

price and non-price lending conditions amid a general decline in the profitability and solvency of borrowers.

## 6. Conclusion

The conducted study clearly demonstrates that, in the process of changing financial relations, the significance of the transmission mechanism channels in the process of implementing promotional monetary policy changed, too. At the same time, it is expedient to single out the reasons that lead to a change in the role of some channels of monetary transmission in relation to others.

The first group includes institutional changes in financial markets. We should also note that the structure of financial markets is of key importance from the point of view of the functionality of individual channels of monetary transmission, as well as of the effectiveness of monetary policy in general.

The second group of reasons would include changes in monetary policy modes to achieve the corresponding goal. In particular, a transition from one mode of monetary policy to another is usually associated with the fact that the central bank starts using different instruments of monetary policy. The most significant factor in the third group is the emergence of the so-called expectations channel, which plays an increasing role in terms of monetary transmission, reducing the importance of traditional channels.

Modern research and developments are not limited to the above structure of the transmission mechanism channels. Moreover, their list is constantly replenished, which is indicative of the existence of transformational processes affecting the financial sector. The approaches to the structure of the transmission mechanism and the functionality of its channels, determined in this article, make it possible to assess the effectiveness of implementing monetary policy.

Further research will be aimed at determining the impact of monetary policy modes used on the structure of monetary transmission.

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# FINANCIAL OFFENSES IN THE CIRCULATION OF MEDICINES IN THE CONTEXT OF GLOBALIZATION

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**Abstract.** *The aim of the article* is to study theoretical legal principles of financial offenses in the circulation of medicines in the context of globalization. *The subject of the study* is financial offenses in the circulation of medicines in the context of globalization. *Methodology.* The study is based on general scientific and special-scientific methods and techniques of scientific knowledge. The historical and legal method enabled to determine the challenges of the circulation of medicines in Ukraine. The comparative legal method enabled to compare doctrinal approaches to the differentiation of medicinal products in the pharmaceutical market in Ukraine and the EU as a whole. The system-structural method contributed to the consideration and identification of the most negative effects of the shadow circulation of medications on the Ukrainian economy. The methods of grouping and classifying were the basis for the author's approach to the identification of types of trafficking in medicines in Ukraine. The technical legal method enabled to interrogate the state of affairs in the regulatory and legal regulation of the national system of the pharmaceutical market of Ukraine and highlight the problematic issues of drug trafficking in the pharmaceutical market of Ukraine, as well as the negative trends in increasing the total medication circulation in the shadow pharmaceutical market. *The results of the study* enabled to highlight the drivers of the prosperity of drug trafficking in the pharmaceutical market in Ukraine. *Practical implications.* In the study: first, the key aspects of the definition of the concept and types of financial offenses in the circulation of medicines are outlined; second, the challenges of detection of financial offenses in the circulation of medicines in Ukraine are underlined, and scientific approaches to certain financial and legal challenges of detection, available in the special literature, are analysed and compared; third, the author's original perspective concerning potential solutions to the challenges of detection of financial offenses in the circulation of medicines in Ukraine is substantiated. *Relevance/originality.* The original author's approach to the definition of the concept, types, and challenges of detection of financial offenses in the circulation of medicines is the basis for developing the most promising areas of improvement of domestic legislation in this sphere.

**Key words:** corruption, public administration, financing, shadow economy, financial offenses, medicines.

**JEL Classification:** D73, H76

## 1. Introduction

The current development of Ukraine requires the introduction of globalization trends in all spheres of public administration with the aim of improving the country's economic situation, social protection of the population, raising the standard of living of citizens and the standards of medical care, the active introduction of advanced information technologies, etc. Undoubtedly, these trends concern the sphere of the circulation of medicines. To date, the issue of globalization of the circulation of medicines through the provision of adequate quality, safety, and affordability is determined as relevant and vital not only in Ukraine but in the entire international pharmaceutical industry.

In legal science, the issues of procurement of medicines were studied by domestic and foreign scientists, such as N. O. Vetiutneva, S. H. Ubohov, O. V. Kuzmenko, V. K. Kolpakov, H. H. Pylypenko, A. P. Radchenko, M. V. Rymar, O. H. Strelchenko, L. O. Fedorova, and others. However, public procurement of medicines is not considered enough, consequently, the chosen topic of the scientific article is relevant and important.

Therefore, consideration of the doctrinal approaches to public procurement of medicines becomes relevant and constructs the aim of this article. For its successful achievement, the following **tasks** should be solved: first, to outline the key aspects of financial offenses in the circulation of medicines; second, to analyse the perspectives available in the specialized literature in

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relation to the types of medicines and the concept of the circulation of medicines; third, to propose an author's original approach to the definition of financial offenses in the circulation of medicines in Ukraine.

## 2. Main material

To describe the category "globalization in the circulation of medicine", it should be noted that the term "globalization" (from English "globe") is used in several meanings:

- a prolonged process of integration between the world national economies to solve the global problems of mankind;
- a complex phenomenon of economies interdependence, arising out of the exchange of goods and services and flows of capital;
- the process, due to which the achievements, decisions, and activities of people in one part of the globe affect significantly individuals and their communities in all parts of the world (*Hlobalizatsiia ta hlobalni problemy liudstva*);
- process of world economic, political, and cultural integration and unification (Pashkov, June 17, 2013);
- the objective social process of the growing interconnectedness and interdependence of national economies, national political and social systems, national cultures, as well as the humanity and environment interaction. The basis of globalization is the development of world markets for goods, services, labour, and capital (*Hlobalizatsiia ta hlobalni problemy liudstva*).

It must be emphasized that globalization is not limited to socio-economic changes only, that is, in spreading a market model of a neoliberal pattern throughout the planet. Globalization also promotes the spread of the neoliberal economic doctrine in the world, which puts a free market exchange in the basis of all human relations, completely liberalizes economic life, and exempts capital from state and society control. The most orthodox model of neo-liberalization excludes the state interference in the economy at all. According to the Strategy of Ukraine's innovative development in 2010-2020 under the challenges of globalization, market reforms in the new post-Soviet countries, including Ukraine, were carried out on this model. By removing the state from direct participation in the economic process, neoliberalism has caused not only the separation of the financial system from material production and the transfer of competition from it into the sphere of financial transactions, but also created the conditions for its exploitative behaviour in relation to the sphere of production, the speculative component growth in the economy. While at the beginning of neo-liberalization, 90% of international financial transactions belonged to the real economy and only 10% were speculative, by the mid-1990s, this ratio has changed to the opposite. Finally, neoliberalism contributes to the strengthening of the capitalization of innovation and inhibits their socialization (*Stratehiia innovatsiinoho rozvytku Ukrainy na 2010-2020 roky v umovakh hlobalizatsiinykh vyklykiv*).

Objectively, neo-liberalism increases the risk of the crisis in innovative economic development. This crisis is specific to countries with different stages of economic development. For countries with a developed economy, the crisis occurs due to the dominance of the financial factor in economic growth; for less developed ones, due to the gradual destruction of their innovative potential. The latter is fully applicable to Ukraine.

The tools of globalization enable 15% of the planet's population, the so-called "safe countries" of Europe and the United States, to consume 75% of all resources extracted by all humanity, while 85% of the remaining population obtain 25% of resources (Ospishchev, Lukianchenkova, 2011). According to WHO estimates, human health is 70% dependent on lifestyle and nutrition and only 15% on the medical service and genetic features (Zotova, Krikun, Latyk, 2006).

It should be noted that the concentration of economic power on the part of individual entities could reach extreme parameters, without formal violation of the legislation on economic competition. This problem can be acute if foreign companies, in particular multinational corporations reach such a level of economic power (Zadykhailo, 2006). In addition, the growth of expansion of transnational corporations can adversely affect the development of national economies through the creation of conditions, under which national producers are not in a position to compete with powerful companies and are forced to give up their interests to sustain their market position (Peshko, 2006). Therefore, in Ukraine, an expansion of foreign producers displaces domestic producers from their own markets (Nazarenko, Reshetniak, 2011). These circumstances make domestic producers use various kinds of economic malpractice, including corruption, financial offenses to maintain the economic growth rates of their own pharmaceutical companies, as well as for their own enrichment.

It should be noted that the pharmaceutical market is among the five most profitable branches of the international economy (Hladkykh, 2015). All this indicates that medicines are of constant need and the demand for them grows. In addition, the world pharmaceutical market purposefully demonstrates the growth of this demand in almost all stages. The statistical dynamics of the growth of the international pharmaceutical market supports this trend. Therefore, according to the estimates of the Institute of Information Security of Health, the total world circulation of medicines in the pharmaceutical market, compared to 2017, will increase from \$1.1 trillion dollars to \$1.4 trillion by 2020 (*Statystychna informatsiia Derzhavnoi sluzhby statystyky Ukrainy*).

At present, pharmaceutical companies are increasing marketing costs (about \$27 billion); accordingly, the share of financing for the creation of new medications is decreasing, which reduces the development of the pharmaceutical industry. Meanwhile, functioning and the competitiveness of any pharmaceutical company require

releasing a number of new original medications (brands). Accordingly, even large corporations cannot create such brands that need about 10 years of research and hundreds of millions of dollars a year to be manufactured. Consequently, large corporations are united into even larger structures whose budgets reach between \$1 billion and \$8 billion annually (Myronyshyna, 2007). For example, the top 10 largest international pharmaceutical corporations that have been merged by another one, are: acquirers: Actavis, Amgen, Valeant Pharmaceuticals, Perrigo, McKesson, AstraZeneca, Shire, Forest Laboratories, Salix Pharmaceutica, and target companies merged with larger corporations: Onyx, Bausch & Lomb, Forest Laboratories, Elan Corp, Celesio, BMS Diabetes, Viro Pharma, Aptali, Santras.

Globalization in the circulation of medicine in Ukraine has significantly affected the industrial production of medications. Thus, for today, industrial production of medicines is carried out by such enterprises as InterChem SLC, Arterium Corporation, Biopharma, Borshchagov Chemical and Pharmaceutical Plant, Darnitsa PrJSC (Pharmaceutical Firm), Enzym PrJSC, TM Vishpha (Zhitomir Pharmaceutical Factory), Indar PrJSC, Medicines of Ukraine UC, Lubnyfarm JSC, Farmak JSC, which synthesize pharmaceutical substances, create original medicines, provide Ukraine with them, and export abroad. The Ukrainian pharmaceutical industry produces more than 1,400 medications, half of which are sold on the domestic market. Domestic manufacturers are developing analogues of imported medicines, but they cannot fully meet their needs. An acute problem is the provision of vital and essential medications, on which the life of patients depends (Importozamishchennia: pohliad vitchyznianskykh vyrobnykiv).

However, under challenges of globalization, Ukrainian producers are forced to lose their pharmacological markets and progressively commit financial frauds and corruption crimes against financial reporting to protect their own companies from destruction. They do not shun the development and supply of counterfeit medicinal products to the market. Therefore, according to the State Medical Service, in Ukraine, during the establishment of criminal responsibility for counterfeit medicines or their circulation, total fraudulent medications increase, since over the last five years, this central executive authority has issued 310 resolutions on banning the circulation of 326 series of 183 names of fraudulent medicines. During this period, the State Medical Service sent 440 service letters to the law-enforcement bodies, such as the Ministry of Internal Affairs of Ukraine, the National Police of Ukraine, the Security Service of Ukraine and their territorial units, with relevant materials regarding detected facts of fraudulent medicines. Meanwhile, 141 criminal proceedings were registered by the investigating authorities of the Ministry of Internal Affairs of Ukraine (from November 2015, National Police of Ukraine) in the Uniform Register of Pre-

trial Investigations (7 in 2012; 55 in 2013; 20 in 2014; 27 in 2015; 32 in 2016; 46 in 2017) according to Art. 321 of the Criminal Code of Ukraine ("Counterfeiting of Medicines or Circulation of Counterfeit Medicines") indicate a negative dynamics and an acute problem of the circulation of counterfeit medicines in Ukraine and the need to improve regulatory and legal mechanisms to counteract this phenomenon (Melnychuk, 2011).

Such indicators are due to the low purchasing power of citizens, in addition, the cheapness of local medicines makes "white" counterfeiting disadvantageous for them; therefore, the "black" counterfeiting of rather expensive local drugs, for example, antibiotics replaced by cheap analogues, is becoming increasingly common. Such fraudulent medicines are made within the country because uncontrolled production and outlets, as well as the import of "in bulk" (it remains only to pack and stick labels), exist. Another way is to attract an administrative resource and funds to develop new ways of producing and selling counterfeit medicines that do not fall under the concept of a criminal offense and thus provide an opportunity to implement illicit schemes for enrichment in the pharmaceutical market of the state. For example, business entities could be created, such as legally operating firms officially registered, which have appropriate licenses, but under the guise of legal activities, sell counterfeit medicines; legally operating distribution companies created with the participation of domestic producers of medicines that illegally produce foreign medications; one-day firms created by executives of other types of firms that sell counterfeit medicines, which are for one or two transactions and function using false documents (registration and permits). The counteraction to the illegal activities of these entities is complicated by their use of contactless schemes and the Internet, leading to counterfeiters' commission of a criminal offense under Art. 190 of the Criminal Code of Ukraine (Fraud) (Kryminalnyi kodeks Ukrainy).

It should be noted that in the circulation of medicine in Ukraine, a range of unresolved problems occurs. For example, in the circulation of medicine, along with various bans on the sale and storage of certain medicines (for example, ATF-long, Cratal), offenders buy these drugs and illegally transport to the former ATO area (today JFO). That is, an uncontrolled distribution of drugs goes. The other side of the coin concerning the use of ATP-long is ineffectiveness in tablet form, as proven by Ukrainian researchers of medications. However, these medicines are actively used (offered) by certain Ukrainian medics, who profitably cooperate with pharmaceutical companies, and are prescribed to patients by now. Such medicines are distributed not only in Ukraine but also sold in foreign markets: Belarus, Armenia, Albania, Kazakhstan, Kyrgyzstan, Russia, etc.

Another problem is taxes. For example, conducting tax audits at pharmacological enterprises, such as the Borshchagov Chemical and Pharmaceutical Plant, where



from 2016 to 2018, together with other companies, fraudulent firms were created to cover the illegal converse of non-cash funds in cash, as well as to execute sales transactions. This scheme serves to reduce tax payments. In the course of the electronic reporting analysis, the tax authorities found that offenders recorded only a portion of the purchased goods while selling medicines to the companies of the real economy on a completely different nomenclature. Directly, the official documentation reflected selling some medications (for example, polypladone, kavomax) to the address of: Kyiv Vitamin Factory JSC, Kusum Pharm, Farmiko Ltd., etc. In addition, in April 2016, the management and employees of the plant were accused of large-scale fraud. That time, through 58 individuals, they tried to withdraw more than 11 million hryvnias. The management and employees faced from 3 to 8 years imprisonment (Yak Borshchahivskiy).

A separate and rather significant problem in the circulation of medicine is the offshore accounts of former company executives. For example, this topic can be considered in case of the Borshchagov Chemical and Pharmaceutical Plant. Therefore, in fact, the main stake is held by the family of the former head of the Borshchagov Chemical and Pharmaceutical Plant. To date, the largest stake is held by dismissed executives, their family, relatives, members of the supervisory boards and the accountant. For example, the Borshchagov Chemical and Pharmaceutical Plant's shares are nominally held by the entire management, up to 2.6%, but because of the offshore registration in the Virgin Islands (Lenik Group and Beldor Group), they actually own 41.5% of the company. The second largest stake, up to 29.9% of the shares, previously belonged to the city of Kyiv, but in 2016, they were bought by the Pharmaceutical Firm "Darnitsa," which was among the top three "players" in the pharmaceutical market. Up to 26% of the shares are still on the account of 300 current and ex-employees of the plant. Accordingly, the change of management will be ineffective, because the "former" still have control over the company, since more than 40% of the shares are owned by only 2 companies apparently that are located not in Ukraine. Therefore, a "chunk" of the plant is owned by two offshore offices of the plant management, up to 41.5%. The first is the Lenik Group S.A., which is located on the Virgin Islands and has 20.3169% stake in the plant and Beldor Group S.A., which has 21.2636% of the shares, located there too (Yak Borshchahivskiy).

Moreover, the fraudulent conspiracy of doctors and pharmaceutical companies is problematic, because with the consent of health officials, they prescribe certain medications to patients, advising to buy them in certain pharmacies. For "services provided" doctors received money, as well as tourist trips to foreign countries, from representatives of pharmaceutical companies. For example, doctors try to prescribe as many medicines as possible to patients, including those with several months before the expiration date.

(From the sale of such medicines, doctors receive 10% per one preparation from 50 UAH (1.5 USD) and 20% per drug from 80 UAH (3 USD) (Yak Borshchahivskiy).

Facts of fraud in the circulation of medicine are also often manifested in free release at inflated prices and in large batches of medicinal products subject to release on the special Prescription form no. 3, which must contain a medical stamp, a personal seal and a physician's signature, resulting in the illicit narcotic drug trafficking.

It should be noted that the problem of financial offenses in the circulation of medicine does not bypass any country. For example, in the United States, the most common medical actions that can entail large fines and sometimes even criminal liability: overstatement of medical services bills; conducting of procedures in the absence of clinical indicators; kickbacks; abuse in relations with the industry (Ovcharenko, Rieznik, 2017).

At the same time, the United States introduces effective methods of countering financial offenses in the circulation of medicine. In this country (and in other European countries), a health insurance system operates to ensure transparency of payment and all payment transactions, conducted by doctors and transferred to a health facility. It serves as the guarantor of the free provision of a certain amount of medical services upon the occurrence of the insured event (health problem).

In Japan, the regulation of healthcare differs slightly. In this country, the priority is the continuous improvement of medicine. This is manifested in investment activity: in Japan nowadays, health care costs make up 8.1% of GDP. Moreover, the contributions to technical equipment are made: there are no multi-volume paper manuscripts in the country; patient service is based on the latest advances in technology and computer technology, which facilitates the work of health staffs as a more progressive reporting method (Ovcharenko, Rieznik, 2017).

### 3. Conclusion

Therefore, in order to reduce financial offenses in the circulation of medicine in the context of globalization, it is necessary:

First, to standardize treatment by introducing standards for each clinical case, determining further doctor's actions.

Second, to reform the system of remuneration for medical personnel by raising the rate of official salaries.

Third, to introduce public control institutes, in the form of a voluntary association of independent medical specialists involved in the verification in the circulation of medicine.

Fourth, to conduct information campaigns targeted at different social groups to promote the elimination of a tolerant attitude towards corruption in the medical sphere, to develop a conviction of financial offenses in the circulation of medicine, to improve cooperation between authorities and citizens in this area through active public policy on preventing or stopping criminal acts in this area.



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## MODELS OF FINANCING OF HIGHER EDUCATION INSTITUTIONS IN FOREIGN COUNTRIES

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**Abstract.** *The aim* of the article is to study the problems of reforming the system of financing higher education in conditions of compliance with world quality standards of education. Besides, another aim of the article is also to substantiate of the perspectives of their use in Ukraine, on the basis of analysis of the main foreign models of higher education institutions financing. *The subject* of the study is the financing model of institutions of higher education in foreign countries. *Methodology.* The research is based on a comparative analysis of funding systems for higher education institutions in Ukraine and in foreign countries. The advantages and disadvantages of different systems of the financial provision of higher education are determined based on the analysis of the peculiarities of financing higher education institutions in Germany, USA, UK, Sweden, Norway, and Australia and in some other countries. On the basis of a comparative legal research of certain provisions of Ukrainian legislation, the possibilities and limits of the application of positive foreign experience in this field are defined. *The results* of the study showed that the financing of higher education at the expense of state funds should be directed only to the needs of the state. And the state, in its turn, should provide graduates with jobs that will help reduce unemployment among them. Currently, there is a partial improvement of diversification of funding sources in Ukraine. We mean that the provision of the status of a non-profit organization will give the first impetus to the formation of contract relations between higher education institutions and private organizations and will improve their financial position. The implementation of the foreign experience will make financing more transparent and will give an opportunity to distribute it according to the quality criteria of providing educational services. *Practical impact.* Experience of the developed economies and the analysis of the existing condition of financing of educational institutions of Ukraine allow defining the priority directions of improvement of a system of financing of the higher education. As the budget of Ukraine is not able to compensate all needs for financial resources of higher educational institutions, it is necessary to encourage private investments into education, training, and high technologies more actively. Besides, conducting researches, the international consultations, modelling and discussion of the schematic diagram and funding mechanism for the higher education in Ukraine is also expedient. *Correlation/originality.* Conducting a comparative analysis of financing models of higher education institutions in Ukraine and foreign countries is the basis for developing the most promising directions for the development of domestic legislation in this field.

**Key words:** institutions of higher education, autonomy, financing of education, foreign experience, financing models.

**JEL Classification:** I22, I23

### 1. Introduction

The tasks of providing Ukraine with professional personnel are in a number of strategic since the security and socio-economic progress of the country depend on their solution. State policy in the field of higher professional education, defining the directions of its development, creates the basis for the diversification of the composition of highly qualified specialists.

By joining the Bologna Convention, Ukraine has begun transforming the system of training highly qualified personnel to ensure its compliance with world quality standards of education, changing the composition and

structure of higher education institutions, giving them the freedom to choose sources of finance, as well as the possibility of commercializing their core activities. In particular, it is determined that financing of state institutions of higher education is carried out at the expense of the state budget funds on the terms of a state order for payment for training services for specialists, scientific and pedagogical staff, and at the expense of other sources not prohibited by law, in compliance with the principles of targeted and efficient use of funds, publicity and transparency in decision making (Zakon Ukrainy «Pro vyshchu osvitu»).

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There is a need to develop an effective system of financing higher education aimed at ensuring the proper training of specialists, which will provide:

- creation of a transparent market for educational services;
- the attraction of significant additional financial instruments, including credit resources, under state guarantees;
- the transition from the ideology of subsidies to the ideology of investing in education;
- stimulation of constant motivation of students to qualitative education;
- the attraction of funds from the banking sector to preferential student loans.

The main instrument of the new model of financing higher education should be the creation of a personalized system of access to financial resources for the implementation of individual human educational development (Postanova Verkhovnoi Rady Ukrainy).

The experience of the leading countries of the world shows that one of the most important levers of management of this process is the state financing mechanism of higher education. The foreign practice of financing educational institutions has a long history, is characterized by flexibility and market orientation in the selection of forms, methods, and tools. Analysis and implementation of a positive foreign experience in this area will allow Ukraine to continue its reforms in line with the strategic state priorities of financing Ukrainian state educational institutions of higher education.

The practice of state financing of education does not remain constant and unchanged, constantly changing internal and external conditions of functioning of the industry dictate the need to improve the entire financial mechanism: the tax base, the normative definition of funding, the system of intergovernmental fiscal relations. The urgent need is to create a transparent, targeted, stimulating nature of financing of budget spheres and education, including the strengthening of the elements of responsibility and the reduction of the influence of subjective factors (manual guidance) on the process of making financial decisions in the education system, which determines the relevance of our study.

Issues of education, sources of its funding and effectiveness have always been the focus of attention of scholars. The theory and practice of financial provision of higher education have been repeatedly investigated by such domestic scholars as V. Andrushchenko, J. Beskid, T. Bogolib, E. Boyko, V. Bukovinsky, O. Grishnov, I. Kalenyuk, K. Korsak, V. Kutsenko, D. Kucherenko, O. Martynyuk, M. Shavirin, L. Shevchenko. Also noteworthy is the research on the financing of the educational system of Western economic schools, in particular, T. Arnold, E. Dinnsion, T. Moe, H. Mayer, K. Nordstrom, M. Friedman, J. Schumpeter et al. The works of these scholars form the basis for further developments and are the theoretical basis of the study.

The purpose of the paper is to study the problems of reforming the system of financing higher education in conditions of achieving compliance with world standards of quality of education and on the basis of analysis of the main foreign models of financing higher education institutions substantiation of the prospects of their use in Ukraine.

## 2. The main material

The key problem in improving the financing of the education system (and not just it) is to increase the efficiency of public expenditures, which leads to the search for new approaches and mechanisms. It is obvious that this process must foresee, firstly, a clear idea of what and for what purposes the state funds come from. Secondly, the methods and forms of allocation of funds. Thirdly, the definition of the status of the institution receiving budget financing, which also covers issues of its authority and responsibility for the results of activities. It is the unclear understanding of these issues that is based not on inefficiency but rather on the lack of internal logic of directing the budget process towards transparency and efficiency (Kalenyuk, 2017).

In recent years, in world practice, there has been a change in the funding of public higher education systems and mechanisms for allocating budget funds between higher education institutions. This is due to the sharp increase in student contingents and the limited budget resources, which requires increased use of public funds and the involvement of various non-state sources. To a large extent, the transformation of the forms and mechanisms of financing is influenced by the change in the nature and content of higher education in connection with the need for the formation of individual educational programs of education, diversification of their content, terms and forms of delivery of educational services to the consumer.

In world practice, funding for higher education is costly. In the United States, higher education is the fifth in the monetary calculation of the US economy's export, which sometimes exceeds the amount of arms exports. In Australia, the educational sector is the third largest source of budget revenues in the country's economy. In 2014, the Canadian government has recognized international education as a key factor in creating new jobs and improving welfare and plans to double the number of foreign students to 450,000 by 2022. This will increase the cost of foreign students in the country to \$16.1 billion and will create in Canada, at least, 86.5 thousand new jobs.

According to the latest UNESCO data (2006–2012), the top 10 countries with the highest share of GDP spent on education are Lesotho, Cuba, Timor-Leste, Denmark, Moldova, Djibouti, Namibia, Cyprus, Botswana, and Iceland (Kharlamova, 2017).

An analysis of foreign experience clearly shows that in most countries any serious reorganization in this area

is preceded by a modernization of the current model of its management in the direction of strengthening the autonomy of universities in the issues of recruitment of students and the management of available resources. One of the most important directions is the strengthening of financial autonomy of higher education institutions both in attracting extrabudgetary funds and in using material and financial resources.

The value of autonomy for universities is not “academic freedom” but the ability and the right to determine their own lines of action without undue interference by the state, although such autonomy is relative since it calls for increased attention from society and state control. However, autonomy should not be perceived as the complete independence of universities from the state. Firstly, the provision of high financial and administrative autonomy to higher education is accompanied by an increase in the quality control of education. Secondly, the state everywhere continues to finance at least 70% of the higher education budgets (Laryonova, 2005).

It should be noted that the autonomy of higher education is understood as increasing the financial and administrative independence of universities from the state, which manifests itself in increasing the autonomy of higher education in all spheres of management – from personnel and administrative-financial policy to student planning, the content and volume of training courses, and the identification of priority areas of scientific researches.

The financial autonomy of universities is the main benchmark in the world practice of an educational organization, despite the fact that in many countries the state still has a dominant role in the financial provision of higher education. The increase of financial autonomy of higher educational institutions is indicated by a sharp reduction of the share of state financial participation. For example, in Germany and the UK, the requirements of higher education institutions to expand their autonomy are linked to the state administration with a reduction of their funding from the state budget, stating that if they want more autonomy, then they have to learn how to make money.

For example, in the United Kingdom, the Special Education Board for the financing of higher education institutions in the UK (HEFCE) calculates the volume of financial support for current activities on the basis of four groups of specialties: medical and veterinary specialties; exact and natural sciences, technological and engineering specialties; specialties requiring laboratory equipment; specialties that do not require laboratory equipment.

In turn, in Germany, each of the 16 Länder of Germany has its own Ministry of Education, which manages all institutions in its territory. In order to coordinate programs and curricula, national structures have been established, in particular since 1969, the Federal Ministry of Education (Hryshchenko, 2015).

In the EU, university autonomy is one of the main issues. When establishing the European Association of Universities in 2001 autonomy with accountability was identified as the most important principle. Subsequently, the four distinct types of autonomy were clearly identified in the 2007 Lisbon Declaration: Academic (decision on educational activities), financial (financing receipt and distribution, decision to pay tuition, use of profits, etc.), organizational (determining university structure, contracting, rector's election, etc. managers), and staffing (recruitment, remuneration, and personnel careers).

For each type of autonomy, indicators are set according to which its level is determined. For example, for financial autonomy, the following indicators have been set: duration and type of financing, the possibility of profit, the ability to receive loans, the ability to own real estate, the ability to set the level of payment for local and foreign students.

In other countries, including the United States, academic freedom is guaranteed by high financial autonomy, which forms its funds from various government (central, regional, and local) agencies and other sources.

Here is the so-called principle of budgeting, which allows you to focus on the result of activities within the framework of the state task and the state contract. An important experience for Ukraine is the financial support of the highest university potential in the US through the mechanism of the endowment, which of the 22 US higher education institutions ranked 1st – the 30th place under the Shanghai rating, in 2015 was 85% in 13 private establishments (Savchenko, Chumak, 2017).

In the member countries of the Organization for Economic Cooperation and Development (OECD), where the state has traditionally controlled the financial provision of educational activities, it is now recognized the superiority of the market mechanism in comparison with the administrative regulation of supply and demand for different forms of training provided to different groups of consumers.

In this regard, the state's attention is focused on the reform aspects of governance, strategy and prioritization, while the operational activities of universities are paying less and less attention. In some countries, including in Ukraine, this is reflected in the establishment of agencies to monitor the quality of teaching and research.

Thus, the Law of Ukraine “On Higher Education” provides for the creation and functioning in Ukraine of an independent permanent collegial body authorized to implement state policy in the field of quality assurance in higher education, – the National Agency for the Quality Assurance of Higher Education, whose members are elected by congresses of representatives of higher educational institutions of various forms of ownership, student self-government bodies of higher educational establishments, national and branch academies of sciences and employers.



In particular, the National Agency has the following powers:

- forms requirements for the system of quality assurance in higher education, develops the provisions on accreditation of educational programs, and submits it to the Ministry of Education for approval;
- analyses the quality of educational activities of higher educational institutions;
- conducts a licensing examination, prepares an expert opinion on the possibility of issuing a license for conducting educational activities in the field of higher education;
- coordinates the developed educational standards of educational activity and standards of higher education in each specialty;
- forms a single database of higher education institutions specializing in the training of higher education graduates at each level of higher education;
- decides on accreditation or refusal to accredit the relevant educational program;
- forms the criteria for assessing the quality of educational activities, in particular, scientific achievements, higher education institutions, which may include ratings of higher education institutions;
- submits proposals for granting the higher educational institution a national status in accordance with the procedure and according to the criteria established by the Cabinet of Ministers of Ukraine;
- participates in the procedure established by law in the formation of indicators of a state order for the training of specialists with higher education at higher levels of higher education and specialties, taking into account the medium-term forecast of the needs of specialists in the labour market, etc. (Postanova Kabinetu Ministriv Ukrainy).

In OECD member countries, central government usually controls certain points in the higher education system, including setting tuition fees or issuing permissions for tuition fees, giving universities a significant degree of freedom in shaping academic structures, curricula, and staffing. Methods of financing universities have undergone significant changes. Funds are provided to universities on a block grant basis, rather than through a detailed transfer of budget items. There is also a clear tendency to enter or increase the level of payment for tuition, budgeting, result-oriented, and targeted programs. These changes accompanied the strengthening of autonomy and simplification of reporting in the university administration. At the same time, the development of certain forms and methods of attracting funds from extrabudgetary sources depends on many circumstances that are dictated both by the possibilities of a particular higher education and by state policy.

In conditions of higher education autonomy, the state stimulates the effective use of their financial resources and property, creates conditions for the

distribution of income received for educational purposes. The basis of financial autonomy of universities in the leading countries of the world is the following principles:

- transition to flexible financing, payment for results (and other schemes);
- introduction of a more formalized system than before for scientific and educational activities;
- the distinction between permanent (guaranteed) and variables (on the efficiency of work) of government sources of financing. The guaranteed source of funding usually provides adequate provision (including pay) for the educational process, taking into account the medium-term, and sometimes the long-term perspective;
- distribution of funding flows for studies and research. In some countries, universities have the right to independently distribute received funds, while the funds for training are guaranteed, and for research – variable flow;
- diversification and fragmentation of funding for each individual university and even for individual departments, units, and laboratories;
- use of financial intermediaries, with the exception of the transfer of a guaranteed (permanent) part of state subsidies.

Financial autonomy and the status of a legal entity allow the university to obtain the right to create and operate other (except for property) funds, which are formed at the expense of money, other donations, shares, and other types of securities.

In international practice, up to 4,000 funding schemes for universities are distinguished, differing in terms of the degree of state coverage of higher education costs; the mechanism of selection of potential students in high competition; inclusion in the system of financing along with state non-state universities; coverage of vouchers of the higher education system; the level of independence of universities in setting the price of education; priorities for children from disadvantaged or low-income families, etc.

Summarizing the foreign practice of financing higher education, we will try to identify the main models of financing higher education, the delimitation of which is conditional, as in most countries of the world are used combined options to provide higher education financial resources.

Model 1. Includes two interconnected models:

- 1.1. The financing is focused on needs;
- 1.2. Acquisition by the state of educational services for certain purposes.

Model 2: funding of higher education, based on the results of their work.

Model 3: financing, which is carried out directly by consumers of educational services and oriented to the demand and internal needs of the institution of higher education.

Models of the first type are free of state higher education. Model 1.1 stipulates the obligation of higher education to train specialists with the qualifications necessary from a social point of view. In this case, the cost of training is set and agreed in advance; payment is made at the expense of the state budget. Such a model is valid for the countries of Southern, Central and Eastern Europe (including Ukraine), Africa, and Latin America.

Preference of Model 1.1 is that simultaneously the efficiency of using budget funds is increased and the expenses of the state are minimized. However, the relevance of the planned training to the needs of the labour market depends on the accuracy of the relevant forecasts of the state.

Model 1.2 envisages the participation of universities in competitions for obtaining a state order for the training of specialists, which ensures an efficient allocation of state tasks and reduces state expenditures. The order is received by the higher educational institution, whose educational services correspond to the conditions of the competition as much as possible, and the expenses for training are optimal.

In general, financing of the first type is characterized by a rather low degree of autonomy, as the use of financial resources is clearly controlled by public authorities.

The second type financing model is focused on the status of higher education, involves the allocation of public funds, depending on the results of its activities. The amount of funding is determined by the number of graduates, students admitted to the first year, the results of controlling knowledge of students, the complexity of training courses, the number of defended dissertations, etc.

Such models are implemented in Romania, Denmark, and the United Kingdom. In Sweden and the Netherlands, universities are funded on the basis of the awarded degrees and a positive assessment of their activities. The possibilities of using such a financing model for Ukraine are also being actively discussed.

The positive features of this model are the expansion of the authority of higher education in financial and administrative management. But the funding of higher education by "status" indicators provides the government with an effective management tool, while the Ministry of Education monitors the quality of education.

The third type financing model is aimed at realizing labour market needs, provides for the payment of educational services by direct consumers, and focuses on the demand and internal needs of an educational institution. This model uses government commitments, which are transmitted in the form of coupons, certificates (vouchers) to direct consumers of educational services. The significant constraint for the learner – the validity of the voucher.

In many countries, fees for higher education have been introduced by implementing a variety of third-party schemes (Australia, Austria, Brazil, Hungary, China, Kenya, New Zealand, Tanzania, etc.). In some of them, the state allows higher education to count a certain percentage of students based on full tuition fees. In this case, it is enough to get the minimum number of points to start training. In Australia, a fee is accepted for a fee of up to 25% of students from 1998, in China – since 1988, in Hungary – since 1997.

The benefits of financing education in this model are, firstly, in expanding autonomy in higher education enrolment courses, education planning and funding; and secondly, in conjunction with funding based on vouchers with payment by the students themselves.

### 3. Conclusion

As a result of the analysis of foreign experience in financing higher education, the following conclusions can be drawn: firstly, the cost of higher education should grow faster than the state funding that is provided to support it. Secondly, universities need a wider set of financial security instruments in an autonomous environment. Thirdly, corporate and private finance must be involved in the reimbursement of education costs. Fourthly, universities should manage their finances and assets more effectively to ensure long-term financial sustainability. Fifthly, the possibility of choosing different funding schemes allows the consumer of educational services to find the best option for providing financial investments in their own education, and higher – to provide additional cash inflows.

In the Ukrainian practice of financing education, it is advisable to combine different models of financial provision of higher education institutions since the advantages of each of the models considered are irrefutable in terms of their impact on the economy and the social sphere. The execution of a state order, financing higher than the performance indicators, the impact of the labour market – the actual tasks for the domestic high school.

The need for a transition to flexible financing by the state is determined by the needs of the Ukrainian labour market, which develops in accordance with global trends: the strengthening of migration processes and competition from foreign specialists. Therefore, for Ukraine, particular interest is the use of the model, oriented to the status of higher education, as it stimulates the educational institution to link its capabilities with the demands of employers. In connection with the transformation of state universities into autonomous institutions, the use of foreign experience in financing education in Ukrainian practice will allow the more rational use of public funds allocated for the educational sphere and actively implementing innovative educational financing instruments.

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# BIO-ORIENTED AGRARIAN ECONOMY INVESTMENT PROGNOSIS IN THE EU COUNTRIES

Valeriia Lymar<sup>1</sup>

**Abstract.** The purpose of the investigation is making a prognosis of bio-oriented agrarian economy investment in the EU countries and preparing a set of steps how to attract investment in the bio-oriented agrarian economy sectors. Nowadays investment is one of the critical factors of bio-oriented agrarian economy development. It was set as one of the priorities in the European Strategy 2020, where they defined the bio-oriented economy as the main engine for smart and innovation growth in Europe. *Methodology.* To make a prognosis, it was used BP Stat program, namely Brown's, Holt's, Box-Jenkins, and Olympus' methods. *Results.* In the third millennium, the global community faced many objective problems, which need cooperation and relations between nations to solve them. There were defined such challenges: climate changes, the growth of the global population, exhaustion of limited resources and others. To meet these challenges, the European Commission proposed the bio-oriented agrarian economy concept, which is an interdisciplinary phenomenon and combines elements of several fields of science: economy, management, chemistry, biology, pharmacy, physics, and mathematics. In accordance with the EC classification, there are such bio-oriented economy sectors: food, agriculture, paper/pulp, forestry/wood industry, fisheries and aquaculture, bio-chemicals. The main aim of the bio-oriented agrarian economy is a smart use of biological resources to produce healthy food and feed and minimizing the use of limited resources. During the investigation, there were given arguments and explained the necessity of bio-oriented agrarian economy development both on the EU and national levels. It was proved that without investment, it is impossible to develop such a concept. *Practical implementations.* Obtained prognosis allows to predict the dynamic of bio-oriented agrarian economy investment in Europe and develop a set of steps how to attract investment in this sphere, namely to invest in research and innovation sectors; support commercialization of knowledge and innovation; promote entrepreneurship in the sectors of bio-oriented agrarian economy; develop an innovation-friendly regulatory framework and support creating new jobs in the bio-oriented agrarian economy sectors. *Value/originality.* Results of the investigation help to improve the theoretical base of bio-oriented agrarian economy concept development and show the importance of investment of bio-economy sectors as on the national levels and on the European one.

**Key words:** investment policy, investment in agriculture, bio-oriented agrarian economy, biotechnologies, food and feed, bio-based products, green growth.

**JEL Classification:** O13, Q14, Q16

## 1. Introduction

The third-millennium economy is characterized by innovation and use of R&D in all spheres: from production to prediction of customers' needs and wishes and providing services. In addition, it is necessary to pay attention to the interdisciplinary phenomenon, bio-oriented agrarian economy, which integrates results of different fields of science, production, agriculture, and management.

The bio-oriented agrarian economy is the innovative challenge today. It has supporters and opponents. Such interdisciplinary phenomenon causes many questions and cannot exist without interest of those, who are interested in modern scientific tides and understand the

necessity of finding answers on global challenges, which society face with nowadays.

Modern marketing economy is the complex organizational mechanism with a big number of horizontal and vertical relations, which uses different resources and depends on the complex of self-governance instruments and methods of influence. The result of the activity of such a mechanism is the profitability and the effectiveness of business agents.

The effectiveness of the bio-oriented agrarian economy in the modern difficult conditions of the market conjunction needs fast decisions and non-standardized approaches to the production organization, development of relations with business partners, as well

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as the new economic vision of agricultural products producers.

Changes that nowadays take place in the system of economic relations, in particular, in the sphere of government regulation must be based as well as on the general regularities of market mechanisms and on the priorities of national development and functioning features and development of national agrarian economy in the context of its integration into the global economy.

The bio-oriented agrarian economy is aimed at the investigation of methods of optimization of the use of limited resources for production, processing, selling, and consumption of food. It is necessary to note that in agriculture, which is the main sector of the bio-oriented agrarian economy, the main economic laws act.

Last two decades, biotechnology has become an important factor for stable producing and development of neoteric products and services. The economical application of biotechnologies has to cause the bio-oriented agrarian economy growth and development, where a real share of outcomes depends on the application of biological and raw materials. The commercial and environmental advantages of biotechnologies have made an interest in the bio-oriented agrarian economy in many countries. Although, for the bio-oriented agrarian economy to grow, it is necessary to analyse its investment support and offer the plan of actions on how to attract the attention of investors to the bio-oriented economy sectors.

## 2. Literature review

Before analysing and making a prognosis of bio-oriented agrarian economy investment, we are going to highlight scientific works of some prominent native scholars. For Ukrainian scientists, it is relatively new and we are sure that it has not been studied very deeply yet. Although there are papers of Ukrainian scientists that deserve attention, in particular, we highlight papers of Baidala V. (2016); Volivach V., Kozlovskaya M., Kravchenko O. (2016), Matyushenko I. (2015), Selinnyi M. (2014), Pogrishchyuk B., Martusenko I. (2016), Butenko V. (2016), Proshchalkina A. (2016) and Gerasimchuk N. (2013), Talavyria M., Lymar V., Baidala V. (2015), Kozlovskiy S., Grynyuk R., Baltremus O., Ivashchenko A. (2017), Kozlovskiy S., Khadzhynov I., Vlasenko I., Marynchak L. (2017).

Above-mentioned investigations are devoted to working out theoretical basis of formation and development of bio-oriented agrarian economy in Ukraine, namely, to the directions of bio-oriented economy's development, investigation of the bio-economic factors of the region's agriculture development, concept of the resource-saving in the bio-economy system and defining prospects of this concept development in the future.

Investigations of Ukrainian scientists play a significant role in the development of the bio-oriented agrarian

concept, but it is necessary to highlight the contribution of European colleagues. The most interesting for our investigation are papers of Maciejczak M. (2015), Carrez D. (2008), Carlson R. (2008), Birch K., Tyfield D. (2012), Goven J., Pavone V. (2014).

Especially interest for the investigation has works of the European Commission experts, in particular, devoted to the knowledge bio-based economy – KBBE (The Knowledge Based Bio-Economy (KBBE) in Europe: Achievements and Challenges, 2010), sustainable growth and global challenges (Delivering Sustainable Growth by addressing the Grand Societal Challenges, 2014), prospects of bio-economy development to 2030 (The Bioeconomy to 2030. Designing a policy agenda. Main Findings and Policy Conclusions, 2009), importance of private and financial investors for the bio-economy (Importance of Private and Financial Investors for the Bioeconomy. Current Situation in Europe and Recommendations, 2014), innovations for sustainable growth (Innovating for Sustainable Growth: A Bioeconomy for Europe, 2012).

## 3. Methods

During the investigation, there were used such scientific methods: analysis (analysing approaches to the bio-oriented agrarian economy definition); synthesis (defining difference between traditional and agrarian economy); comparison (comparing investment of bio-oriented agrarian economy in the EU countries and Ukraine); abstraction, concretization, summarizing, formalization, induction, deduction, and analogy (defining the specific features of the bio-oriented agrarian economy in Ukraine and its sectors). In addition, we used BP Stat programming for developing a prognosis of the bio-oriented economy investment in the EU countries.

## 4. Results

To manage the global population, increasing environmental population and changes of climate, there is the necessity of changes of approach to the production, consumption, processing, storage, recycling of bio-resources. The Europe Strategy 2020 calls for the bio-oriented agrarian economy as the key element for the smart and green growth in Europe. Achievements in the bio-oriented agrarian economy R&D uptake will convince Europe to develop the management of its renewable bio-resources and to open new markets of bio-based products. Developing the bio-oriented agrarian economy in Europe has a great potential: it can cause economic growth and jobs in rural territories, reduce fossil fuel dependence and improve the economic sustainability of primary production and processing industries. The bio-oriented agrarian economy contributes to the purposes of the Europe 2020 flagship initiatives "Innovation Union" and "Resource Efficient Europe".

The new EU research and innovation program "Horizon 2020" which has a budget of 70 billion euro defines the importance of bio-oriented agrarian economy development for reduction of dependence on non-renewable and limited resources, adaptation to changes of climate, smart use of natural resources, food security, economic growth, creating new jobs and nations competitiveness in general.

Thus, according to the "Horizon 2020" "Knowledge-based Bioeconomy" – KBBE program was established. Today it is the part of the EC Strategy "Innovating for Sustainable Growth: a Bioeconomy for Europe".

It is necessary to highlight programs "Sustainable Food Security" with the budget of 138 million euro and "Blue Growth" with the budget of 100 million euro. Budgets of these programs are directed to the bio-oriented agrarian economy in Europe, where Finland, Ireland, Swiss, and Norway have already affirmed strategies of bio-oriented agrarian economy development on their national levels.

In accordance with the results of the made investigation before 2005 bio-oriented agrarian economy concept in documents of the European Commission was used for branches, which introduced and used biotechnologies very actively. Nevertheless, later the EC defined this concept as the production of renewable biological resources and their processing into food and feed, other biological products and bioenergy (Innovating for Sustainable Growth: A Bioeconomy for Europe, 2012).

Talavyria M, Lymar V., Baidala V. (2015) argue that bio-oriented agrarian economy creates the basis for renewable biological resources use and conversion of them into high value added goods, such as food and biofuels. Its sectors have powerful innovation potential thanks using technologies and tacit and explicit knowledge.

Maciejczak M. (2015) argues that from the view of systematic approach bio-oriented agrarian economy is a phenomenon, which has a positive impact on the environment, society, and the economy as a whole by application of innovative technologies in traditional branches, for example, in food production.

In addition, this scientist (Maciejczak, 2015) considers that for retention of utilization, use, and investment the bio-based agrarian economy under the influence of dynamics and stable changes have to create added value on the base of raw materials, which in the future form basis for ecological products. Classical and neoclassical economic theories define three main production factors: labour, land, and capital. Some scientists add to this list entrepreneurship and knowledge. At the time when these factors are actively discussed in the scientific literature, in the new concept like the bio-oriented economy they are not actual ones. Therefore, it is necessary to focus on basic economic assumptions like production functions with the aim to fill the lack in the modern bio-oriented economy understanding to identify the main factors that cause its development.

The bio-oriented agrarian economy has already made huge contributions to stable development and the contribution will grow in the future: higher quality, renewable, natural raw materials will be produced sustainably; food security and a healthy environment will continue to be assured. Conversion to a wider range of final products, whether food, feed, fuel or another healthcare or industrial products, is also sustainable, being efficient, producing little or no waste, and using biological processing. Developing all sectors of the bio-oriented agrarian economy will promote global food and feed security, improve nutrition and public health, make industrial processing cleaner and more efficient, and make a significant contribution to the effort to minimize climate change. The integrated bio-oriented agrarian economy is not simply only about science but is rather an integration of science with business and community.

On one side, the bio-oriented agrarian economy is a new phenomenon because it studies the economic use and application of renewable biological resources, on the other side, it is an old, maybe in some cases ancient concept because its roots go down deep in the history of food production. It is very simple to prove it because our ancestors used technologies of conservation and utilization of agricultural residues. As a separate field, the bio-oriented agrarian economy is being studied relatively not long ago, approximately from the last two decades of 20th century. Some scientists consider that it is a cross-scientific phenomenon because it connects knowledge of biology, chemistry, gene engineering, economy, and others (Birch, Tyfield, 2012) (Figure 1).

Lymar V., Tsaruk N. (2015) consider that the bio-oriented agrarian economy encompasses the sustainable production of renewable biological resources and their conversion and that of waste streams into food, bio-based products such as bioplastics, biofuels, and bioenergy. It includes agriculture, forestry, fisheries, food and paper production, as well as parts of chemical, biotechnological, and energy industries. Its sectors have a strong innovation potential due to their use of a wide range of sciences (life sciences, agronomy, ecology, food science, and social sciences), enabling industrial technologies (biotechnology, nanotechnology, information and communication technologies (ICT), and engineering), as well as local and tacit knowledge.

In previous papers, we analysed the knowledge-based bio-economy (KBBE), what has a pretty interest in this investigation too. We defined that the knowledge-based bio-economy is the transformation of life sciences into new, stable, ecological, and competitive products. From the point of view of effectiveness, the knowledge-based bio-economy is the stable management, production, and use of renewable biological resources on the basis of life sciences and biotechnologies.

The knowledge-based bio-economy is based on the next biotechnologies:

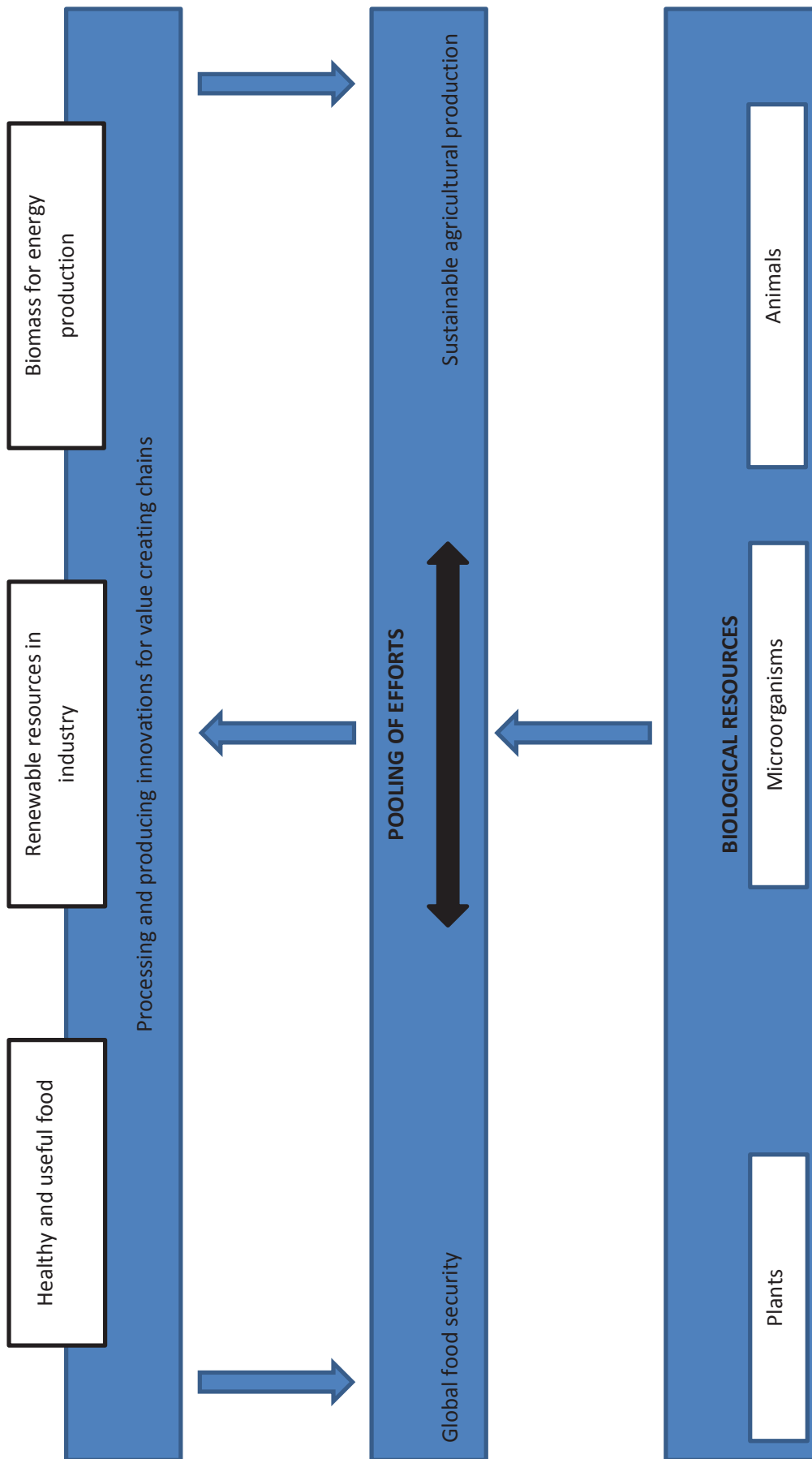


Figure 1. Bio-oriented agrarian economy concept vision

Source: developed by the author

red biotechnologies – production of medical equipment (development of new types of diagnostics and therapy) on the basis of the use of results of genomics and proteomics;

green biotechnologies – implementation agricultural biotechnologies, including renewable energy, produced from remains agricultural products;

white biotechnologies – implementation of biological processes into biochemistry, biopharmaceuticals production, food ingredients production with the aim to make the industry more ecological and less harmful for the environment;

blue biotechnologies – use of aquaculture products for ecological goods.

Knowledge-based bio-economy is the interdisciplinary phenomenon and it includes elements of many sciences, namely chemistry, biology, mathematics, physics, computer sciences, and economics.

According to the EC, the bio-oriented agrarian economy consists of the next branches (Table 1).

Table 1

**Bio-oriented agrarian economy sectors according to the European Commission classification**

Sector	Annual turnover, billion euro	Employment, thousands
Food	965	4400
Agriculture	381	12000
Paper/Pulp	375	1800
Forestry/Wood Industry	269	3000
Fisheries and Aquaculture	32	500
Biochemicals and Plastics	50	150
Enzymes	0,8	5
Biofuels	6	150
Total	2078	22005

According to this table, agriculture occupies the second position with the annual turnover of 381 billion euro in the EU. Therefore, it allows us to presume that for Ukrainian bio-oriented agrarian economy, the gross output of agricultural products is a very significant factor for development.

Given data show the fluctuation of the gross output of agricultural products in Ukraine. The lowest level of the indicator was in 2003, approximately 150 billion hryvnias, the highest one – in 2016 (about 254 billion hryvnias). In 2017, we see a dramatic fall to 150 billion.

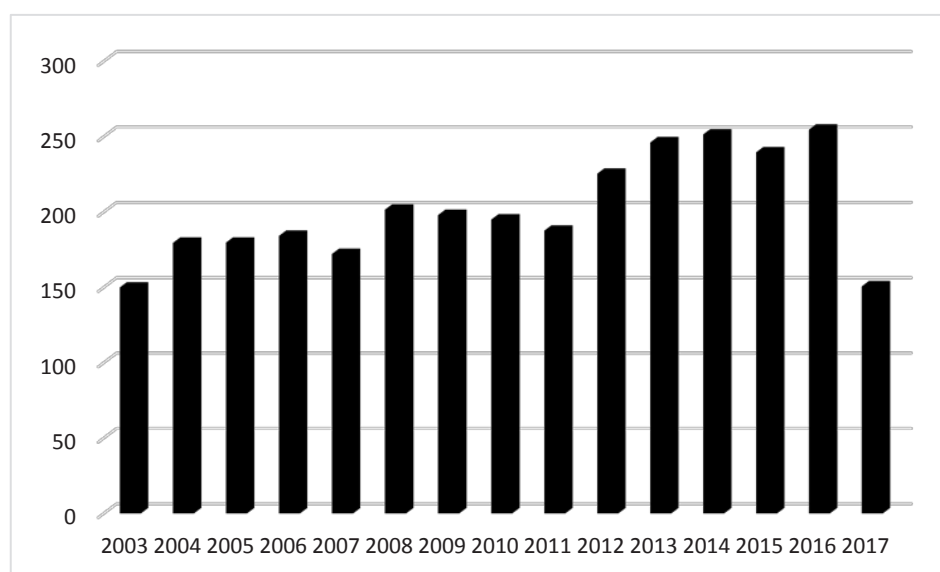
Surely, the effectiveness of agriculture is caused by many factors and characterized by instability and dependence on natural factors. Although, government support and investment are defined as very important factors for agriculture and bio-oriented agrarian economy in general.

Bio-oriented agrarian economy ought to be supported by private and public investment what will improve coherence between national, European, and global research and innovation.

Thereby we decided to make a prognosis of the bio-oriented agrarian economy investment in the EU countries and compare indicators with Ukrainian one.

Given analysis is prepared due to the BP Stat program. There were used the next methods: Brown's, Holt's, Box-Jenkins, and Olympus. According to our results, the Olympus method is the best one because determination coefficient is 1,000 and approximation error is 0,001. We are not going to show all the steps of calculation because it is not the subject of our investigation.

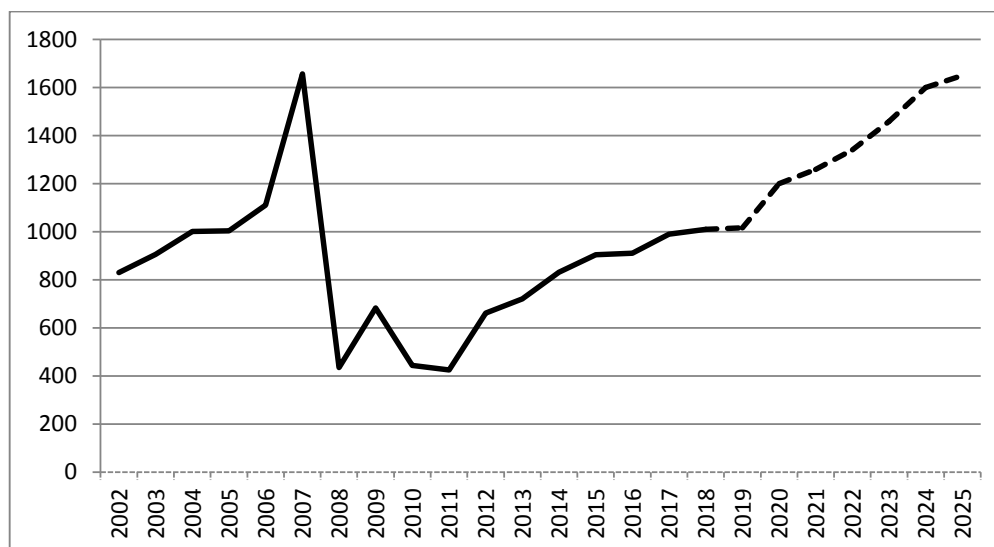
As we can see, the bio-oriented agrarian economy investment shows the positive dynamics from 2011 to 2025. In 2008, it is seen a dramatic fall from 1656 to



**Figure 2. The dynamics of the gross output of agricultural products in Ukraine, 2003–2017, billion hryvnias**

Source: own calculation based on data from ukrstat.gov.ua





**Figure 3. Prognosis model of bio-oriented agrarian economy investment in the EU countries to 2025, billion euro**

*Source: calculated by the author*

435 billion euro. This situation can be caused by the global financial crisis because in this period, all spheres suffered from a lack of finance. From 2011 we can see an increase in investment and hopefully in 2025 it is going to reach 1650 million euro.

There were proposed some recommendations to improve the bio-oriented agrarian economy investment in the EU:

- to increase the EU public investments in R&D related to the bio-oriented agrarian economy, with special efforts on food security, sustainable and green growth, smart use of limited resources;

- to promote sufficient national public spending on bio-oriented agrarian economy research and development;
- to strengthen synergies between the EU and national programs that support R&D relevant to the bio-oriented agrarian economy, through specific private-public partnering initiatives;

- to boost the bio-sciences knowledge base, related emerging technologies and biological research infrastructures, through relevant activities followed by Horizon 2020 "Excellent Science Base";

- to cooperate in the area of the bio-oriented agrarian economy, including entrepreneurship promotion activities;
- to establish close interactions between the relevant parts in Horizon 2020 and other EU programs in areas such as education, science, technology, and knowledge transfer;
- outline the main research and innovation concepts and priorities for bio-oriented agrarian economy sectors under Horizon 2020.

As we can see, the bio-oriented agrarian economy investment is strongly supported on the EU level. National governments cooperate in spheres of knowledge and technologies transfer, holding common

R&D, creating start-ups, spin-offs etc. Investment support has the strict vertical from the EU level to university's one. The bio-oriented agrarian economy is one of the most promising in the coming future and its start-ups can be very profitable.

## 5. Conclusion

During our investigation, we got such conclusions. Today in the 21st century, society faced many problems that have global character; among them are climate changes, food and feed security, air pollution and exhaustion of natural resources. The EU countries reacted very quickly and developed research and innovation program "Horizon 2020" to meet these challenges. In accordance with this program, some European countries developed their own strategies for the development of the bio-oriented agrarian economy.

As we defined, the bio-oriented agrarian economy is not a new phenomenon but rapid development it got after 2005 when it began to be used in the EC documents for sectors, which introduced and used biotechnologies very actively.

There were defined bio-oriented agrarian economy sectors according to the European Commission classification: food, agriculture, paper/pulp, forestry/wood industry, fisheries and aquaculture bio-chemicals and plastics, enzymes and biofuels.

It was developed the prognosis model of bio-oriented agrarian economy investment in the EU countries to 2025, which shows the positive dynamics from 2011 to 2025.

In our opinion, the successful bio-oriented agrarian economy needs an integrated policy direction with the next key areas:

investing the relevant research fields, both within each of the sectors and by encouraging inter-disciplinary investigations;  
 encouraging innovation to be sure that more of the knowledge developments can reach the commercialization stage;  
 making entrepreneurship within the bio-oriented agrarian economy a promising career option;

providing a skilled workforce by making the different sectors of the bio-oriented agrarian economy attractive career options through secondary and tertiary education;  
 developing an innovation-friendly regulatory framework, which balances both risks and advantages;  
 providing high-quality communication with the public embedded in R&D and innovation projects to ensure societal appreciation of research and innovation.

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# TRANSFORMATION OF METHODOLOGICAL MARKETING APPROACHES TO THE INVESTIGATION OF THE PROBLEM OF FARMING AGRICULTURAL ENTERPRISES IN THE GRAIN MARKET IN GLOBALIZATION CHALLENGES

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**Abstract.** *The purpose* of writing the article is to justify the methodological principles and recommendations for the functioning of agricultural enterprises-producers of grain in the target markets for its sale under the conditions of globalization challenges. The production and sale of grain traditionally remains the main focus of the specialization of domestic agricultural enterprises, the source of more than a significant share of their income, the formation and implementation of export potential of the agrarian sector of the national economy, the solution of a number of problematic issues of food security and ensuring the stable development of the subjects of the sphere of production of various sectoral belonging and orientation. At the same time, raising the economic efficiency of the main activities of agricultural enterprises remains a central problem, which in fact produces a complex, multi-faceted, and multi-level problem of the formation and functioning of mechanisms for the effective functioning of agricultural enterprises in the grain market. *Research methodology.* The theoretical and methodological basis of the research is the classical positions of economic theory, fundamental works, and scientific developments of domestic and foreign scientists on the effective functioning of agricultural enterprises in the grain market, the dialectic method of cognition, and the systematic approach to the study of social phenomena and processes that occur in the process of carrying out the main activity enterprises producing grain. In accordance with the goals and objectives of the article, such general scientific and special methods of economic research as monographic (in-depth study of the set tasks), abstract-logical (a theoretical generalization of the research results and formulation of conclusions and proposals) were used. Taken together, these methods form the methodological basis of the study. *Results.* After conducting the research, we decided that the study of the problem of the functioning of agricultural enterprises in the grain market is the study of methodological approaches to the evaluation of structural and dynamic trends of development and the state of the situation of target markets for the production of agricultural enterprises-producers of grain in the context of establishing systems supporting strategic and tactical and operational decisions in the production and commercial planes based on the system of integral indicators and individual indicators of the state of the targets. *Practical use.* The results of the research can be used at the state and regional levels of management in forecasting the change and the state of market equilibrium in the agrarian market of Ukraine and the conjuncture of the world and regional markets for agricultural products and food.

**Key words:** grain market, agricultural enterprises, globalization, indicators of grain market conditions, components of marketing mechanism in grain market, market capacity.

**JEL Classification:** J43, Q13

## 1. Introduction

The grain market is a unique complex economic system that covers the totality of economic relations between market players. According to objective laws, the economic mechanism of the market supports the

rotation of capital, in turn organizational – carries out the regulation of production.

Objects of the grain market are commodity, money and information flows, which connect market actors through market infrastructure. Interaction of grain

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market subjects among themselves and with subjects of other agrarian markets form a cyclic circular rotation of the market and ensure the production of grain products. The main subjects of the grain market are producers and consumers of grain resources.

The main principle of the formation and development of the grain market is the adaptation of the content, form, and structure of the grain market system, tools and mechanisms of the market and state regulation to the conditions of the global environment. Violations and ignoring of the links between both functional and organizational, levelling the laws of the system's development will lead to the crisis state of the industry, and in the future to the collapse of the entire agrarian sector.

The most important contradictions of the grain market are: market requirements and grain production opportunities, the structure of the commodity supply of grain and the range of demand for grain products, the cost of grain products and the price of grain sales, etc.

The grain market situation is a complex of certain factors of social, economic, globalization, and other characters that have a significant impact on the supply and demand of grain sales and its transition from the sphere of production to the sphere of sales and consumption of grain products and products of its processing.

Globalization is a comprehensive process that deals with the economy of each individual country in its direct connection with the world economy. In the modern world, an international agrarian food system or international agribusiness system has been formed, which is a diversified and multifunctional global complex that combines the production, storage, transportation, and distribution of food products on a global scale. Economic relations in this complex are formed on the basis of international division of labour and globalization of regional agrarian food markets.

## **2. Globalization factors for the formation of market conditions**

The main globalization factors shaping the grain market situation are:

- the driving factors of globalization: natural and climatic and economic-geographical differences, which predetermine the specialization of countries and cause development and deepening of interconnections between them; development of logistics systems; an increase in the openness of markets and international relations; acceleration of the pace of technological innovations and the invention of the market;
- inhibiting factors of globalization: state interference in the economy and protectionist policies; exchange rate fluctuations; political conflicts; religious restrictions;
- key factors of globalization: internationalization; ethics; entrepreneurship; business communication.

A comprehensive study of the grain market involves the collection, analysis, evaluation, and interpretation of data on the state, trends, and prospects of the development of the market as a whole and its individual elements, in particular, including its state of affairs. The market-oriented market analysis gives a general qualitative characteristic of its condition and determines the quantitative parameters of its demand and supply. In addition, a comprehensive study includes an analysis of the competitive environment, market infrastructure, and institutional structure of the market, an assessment of the optimal territorial placement of market actors, inter-industry and inter-territorial exchanges, as well as an assessment of the effectiveness of managerial decisions of the authorities in relation to the development of this market.

The research of scientific views has shown that there is no consensus on the group of indicators of the market situation. This situation complicates the analysis and forecasting of the market situation. After all, these factors in the calculation are conditional and relative under the influence of market conditions of the factors. We consider it expedient to allocate the following groups of volumetric economic indicators that characterize the market conditions of the grain: supply on the market; demand; the ratio of demand and supply, market conditions, business activity indicators, commercial market risks. It is these indicators that are important in determining the prospects of research and market development.

Transformation of the world community into a general, comprehensive system of socio-economic, financial, political, technological, cultural, and social ties and relationships leads to the emergence of new approaches to the economic foundations of the formation and functioning of product markets. The rapid pace of the development of such a transformation requires immediate reaction, as changes in world economic relations undeniably affect the development of the economy of an individual country. Of particular importance are the issues of adaptation of existing economic provisions in the formation and functioning of the grain market to the conditions of global integration since the importance of such strategic products cannot be overestimated. The population of the world is constantly growing; the problems of providing food are becoming priorities in conditions of uneven structure of productive forces and the social division of labour. Therefore, the scientific approach to solving these problems in the part of the study of the economic foundations of the formation and functioning of the grain market in the conditions of globalization is particularly relevant.

When studying the formation and functioning of the grain market, it should be noted that many scientists, agrarians, and economists have been studying it since Ukraine has been granted market economy status in view of the country's integration into the world trading



system and accession to the world trade organization. It is clear that such steps have changed the basis of the economy of grain production. The key, baseline criteria and indicators, of course, remain unchanged. However, they have undergone some transformation in connection with changes in the conditions of functioning and marketing policy of commodity producers, new approaches to the interpretation of the concept of the grain market and the foundations of its formation and development.

Indicators of market conditions are universal for the market of any product and they can be systematized depending on the level of research. Table 1 shows the main indicators of market conjuncture.

The legal basis of the formation and regulation of the grain market is based on the Law of Ukraine "On Grain and Grain Market in Ukraine", which defines the state policy on the development of the grain market as a priority sector of the economy of the agro-industrial complex of Ukraine and in accordance with Art. 1 p. 23 "The grain market is a system of commodity monetary relations that arises between its actors in the process of production, storage, trade, and use of grain on the basis of free competition, free choice of grain sales and price determination, as well as state control over its quality and storage" (Law of Ukraine "On Grain and Grain Market in Ukraine", 2002). This law determines the priority of the grain market by the state, and also Section III defines the directions of state regulation of the grain market.

In accordance with the Law of Ukraine "On Protection of Economic Competition", the market of goods (commodity market) is a sphere of turnover of goods (interchangeable goods), for which there are demand and supply within a certain time period and within a certain territory (Law of Ukraine "On Protection of Economic Competition", 2001).

The basis of the modern grain market is its production in such quantities that would ensure the food security of the state and the economic safety of commodity

producers. This issue was especially important in the context of globalization changes and world economic relations of our country. Integration into the world economy, development of foreign economic relations and functioning in the conditions of the world trade organization require an in-depth study of the problems of the functioning of grain producers as an open system in the external environment (Sakovska, 2011).

Due to the rapid pace of integration and globalization economic processes, the formation of the basis for the functioning of the grain market should outstrip the pace of emergence of threats and dangers associated with the entry into foreign markets (Kvitinska, 2008).

The Ministry of Agrarian Policy and Food of Ukraine, together with the National Academy of Agrarian Sciences of Ukraine, developed the Grain Ukraine-2015 Program, which outlines ways to increase grain production and outlines the technological, economic, and regulatory framework for solving the grain problem. Solving the tasks identified by the program contributed to increasing the role of our state in ensuring world food security and will outline the activities of grain producers, search for ways to ensure economic security in the conditions of globalization and expansion of world economic relations. The program outlines the agrarian policy regarding the development of the grain market, price policy, risk insurance, systems and mechanisms for regulating the incomes of commodity producers, export and import policy, and ensuring food security, measures to prevent the economic danger of commodity producers from the external and internal threats of the national market. Fortunately, in our opinion, the threats and the chain dependence of the processes of market reproduction have been formed, Nikishina O.V. (Table 2).

The new conditions of world economic relations and the functioning of world markets dictated the need for the formation of the national grain market to focus exclusively on the informational and informational

Table 1

**Indicators of market conjuncture**

Macroeconomic	Microeconomic
Gross Domestic Product	Indicators of production
Gross national product	Transition stocks of products
Indices of production by industry	Investment level
The state of the labour market	Sales volumes
The state of capital investments	Export volumes
Price level and consumer demand	Volume of domestic consumption
Internal turnover	Capacity
External commodity circulation	Price dynamics
Currency	Indicators of economic efficiency of production
Capital turnover (money supply, exchange rates, interest)	
The dynamics of taxation	
The dynamics of the debt level	
Inflation rate	

Source: Compiled by the author on the basis of the generalization of literary sources (Korzhevskaya, 2014)

Table 2

**Influence of external threats on the reproduction processes of the grain market of Ukraine**

<b>Uncontrolled growth of exports of environmentally friendly Ukrainian grain crops</b>	
1. Mono production of export-oriented crops. 2. The inadequacy of its own raw material base for enterprises in the processing industry.	3. Imports of raw materials (cereals and seeds) and finished products (pasta, groats, etc.). 4. Increasing the cost of processing products, reducing its competitiveness, strengthening the import dependence of the state.
<b>The dominance of foreign TNC among exporters of Ukrainian grain</b>	
1. Strengthening the price dependence of the agrarian sector on the grain export policy of the exporters, who realize the interests of their states. 2. Uneven export and world prices of Ukrainian grain.	3. Prevailing investments in the development of the port infrastructure, the decline of the grain processing sub-complex, soil degradation.
<b>The inefficiency of state support under WTO restrictions</b>	
1. The ineffective activity of the Agrarian Fund in the grain market. 2. Incorrect selection of priorities within the framework of financing the "yellow box" measures, lack of financing of "green" programs.	3. The inappropriateness of the existing methodological principles of state regulation to the principles of the WTO.

Source: compiled by the author on the basis of the generalization of literary sources (Nikishina, 2011)

analytical provision of economic security of grain producers. In turn, they are the basis of the proposal in the formation of the market, and the model of the functioning and development of producers directly determines the socio-economic status at the micro, meso, and macro levels. Information and analytical support, impartiality and reliability of information help to avoid criminal, illegal actions, to prevent risks of external and internal threats and loss of competitive positions due to the lack of timely information, to prepare and conduct measures in order to prevent possible negative influences.

In order to strengthen the use of the necessary information, accounting and analytical materials, it is expedient to use the benefits of the work of management accounting specialists who, in the field of agrarian formations, should participate in solving the tasks of strategic and tactical management.

Efficient use of computer technology for management accounting should be considered as an integral part of the overall problem of improving the enterprise management process and ensuring its economic security. An effective combination of accounting and analytical information and the newest models of its processing and use in the management system will significantly increase the overall level of decisions and will allow to adjust the production processes and allow the functioning of agricultural enterprises with powerful results, which will allow entering new markets. Therefore, in order to evaluate and apply business processes to grain producers, it is expedient to use reengineering as a process of modelling activities for maximizing profits by improving the quality of services, motivating staff, reducing costs through the introduction of information technology and the complete satisfaction of information users. reengineering, as a process of modelling activities to maximize profits by improving service quality, motivating staff, reducing costs through the introduction of information technology and the complete satisfaction of user information requests.

### 3. Indicators of the efficiency of economic relations in the grain market

The structure and efficiency of economic relations in the grain product subcomplex also have a decisive influence on the formation and functioning of the grain market. It includes primary and secondary processing technology, as opposed to other types of agricultural products, grain has better storage and transportation opportunities.

Major commodity producers of grain are large agricultural enterprises, but in modern conditions, their internal structure is constantly changing. Associations arise and operate, cooperatives are created, which in turn is an impetus for the development of industrial and social infrastructure, the mechanisms of preserving the labour potential of the village. Taking into account the influence of transformational changes, this direction of development has extremely high priority. Cereal subcomplex allows the development of related industries involved in the storage, transportation, processing of products. The established cooperation of all units (provision, production, service), the possibility of producing enterprises of different forms of ownership, assistance from the state, the functioning of the national grain market can improve the efficiency of the grain industry and strengthen the position of commodity producers in the direction of strengthening their economic security.

One of the fundamentals of grain market functioning in the conditions of expansion of world economic relations is the scientific and technical development in the direction of breeding and seed production, organic grain production, biotechnology using the raw material base of cereals, improvement of animal feeding rations in the direction of optimizing the use of the grain group in order to promote livestock development. In this direction, the actual improvement of the structure of fodder grain by production and regional direction remains. The priority direction of the development of

the grain economy is the restoration of production on irrigated lands and investments and state projects in this direction.

The generalization of the conducted research gives grounds to draw conclusions on the definition of the theoretical foundations for the formation and functioning of the grain market and an analysis of the understanding of its essence in view of globalization changes and world economic relations of Ukraine.

With the onset of the market transformation of the agrarian sector in the system of economic relations, there have been tangible structural changes. Constant price change, not matching market conditions, allows us to assert that there is no market mechanism for price regulation. Such processes negatively affect the activities of commodity producers, the definition of the market and social infrastructure, and also the formation of the purchasing power of the population.

The basis of the formation and functioning of the modern grain market is its production in such quantities that would ensure the food security of the state and the economic safety of commodity producers.

Organizational directions for the regulation of the grain market should be the creation and development of its infrastructure, the formation of the regulatory and legal framework and information and analytical support. Activation of the reproductive function of the grain market in the conditions of transformational changes in the economy and market globalization necessitates the reform of the existing regulatory mechanism in accordance with the priorities of the national grain policy. The main ones are support for the production of added value of goods, stimulation of export of finished products of processing of grain raw materials while simultaneously reducing the import of individual crops, maintaining the balance of cross-sectoral commodity and financial balances of the market, directing scientific developments in the direction of biotechnology development, increasing the area of irrigated agriculture, which is relevant in conditions of global warming and changes in climatic conditions, as well as the promotion of organic crop production (Lyshenko, 2018).

#### 4. Indicators of the communication and marketing structural component of the marketing mechanism of the grain market

The evaluation of the communication and marketing structural component of the marketing mechanism of the grain market is carried out using the following formulas:

1) the share of marketing expenses in the gross sales of grain products ( $Sms$ ),%, is expressed in terms of the ratio of gross sales of grain products to marketing costs and multiplied by 100%:

$$Sms = \frac{R}{MC} * 100\% \quad (1)$$

where  $Sms$  – share of marketing in gross sales,  $R$  – the amount of gross sales of grain products;  $MC$  – the amount of marketing expenses;

2) marketing capacity of costs  $Smc$  is expressed in terms of the ratio of marketing costs to the amount of gross sales of grain products:

$$Sms = \frac{MC}{R} * 100\% \quad (2)$$

3) marketing capacity of expenses in gross expenditures  $ms$  is expressed in terms of the ratio of the amount of marketing expenses to gross expenditures:

$$MCmc = \frac{MC}{DC}, \% \quad (3)$$

where  $DC$  – gross expenditures;

4) the profitability of marketing and marketing costs of grain products ( $Rms$ ) is expressed through the ratio of profit to the amount of marketing costs:

$$Rms = \frac{P}{MC}, \% \quad (4)$$

where  $P$  – profit (financial result) from the sale of grain products;

5) marketing capacity of net profit:

$$Rms = \frac{1}{Rms}, \% \quad (5)$$

6) the rate of increase in revenues from additional invested marketing costs ( $Grims$ ) is expressed by the ratio of interest rate dynamics of income growth to the percentage dynamics of marketing costs and is calculated by the formula:

$$Grims = \frac{\Delta In\%}{\Delta MC\%} \quad (6)$$

where  $\Delta In\%$  – Percentage of income growth;  $\Delta MC\%$  – Percentage of marketing costs;

7) the coefficient of growth of the increase in the volume of sales of grain products from increased costs ( $\Delta MC\%$ ) is expressed by the ratio of the growth rate of sales to the growth rate of marketing costs:

$$\Delta MC\% = \frac{\Delta S\%}{\Delta MC\%} \quad (7)$$

where  $\Delta S\%$  – the growth rate of sales;  $\Delta MC\%$  – the growth rate of marketing expenses;

8) The return on investment ( $ROI$ ) is calculated by the formula:

$$ROI = \frac{S - Mi}{Mi}, \% \quad (8)$$

where  $S$  – volumes of sales, the income of the agricultural enterprise,  $Mi$  – marketing investments;

9) profitability of marketing investments ( $ROMI$ ) is expressed through the ratio of income received as a result of marketing actions, to marketing investments:

$$ROMI = \frac{Sm}{Mi}, \% \quad (9)$$

where  $Sm$  – revenue generated as a result of marketing actions,  $Mi$  – marketing investments;

The communication priority coefficient ( $Kpi$ ) helps identify trends that are least developed and at



the same time most relevant, that is, those areas of communication activity that should be mentioned as a priority, for which the agricultural enterprise must first direct marketing efforts:

$$Kpi = \frac{Ofi}{Obi} * 100\% \quad (10)$$

where  $Ofi$  – actual evaluation of marketing efforts in the  $i$ -m direction, scores;  $Obi$  – desirable (necessary) evaluation of marketing efforts in the  $i$ -m direction, points.

If  $Kpi > 100\%$ , this means that marketing efforts in this direction should be weakened because the relevance is directly less than its activity.

If  $Kpi = 100\%$  is an ideal ratio, which indicates that the marketing efforts of the enterprise fully meet the need for them.

If  $Kpi < 100\%$ , this means that the direction needs to be intensified marketing efforts, that is, the actual direction is given insufficient attention to its use by the enterprise.

The evaluation of the effectiveness of the marketing management system, as a structural component of the marketing mechanism for the development of the agricultural enterprise of the grain sector, will be expressed by three main indicators:

1) the ratio of revenues from the sale of the  $i$ -th event to the expenses for the implementation of  $i$ -th measure:

$$Ri = \frac{Di}{MCI}, \quad (11)$$

where  $Di$  – income from the realization of the  $i$ -th event,  $MCI$  – expenses for the implementation of the  $i$ -th event;

2) the ratio of the absolute growth rate of income from the realization of the  $i$ -th event to the growth rate of expenditures for the implementation of the  $i$ -th measure:

$$\Delta Ri = \frac{\Delta Di}{\Delta MCI}, \quad (12)$$

3) the ratio of relative growth rates of income from the implementation of the  $i$ -th event to the growth rates of expenditure for the implementation of the  $i$ -th event:

$$\Delta Ri \% = \frac{\Delta Di \%}{\Delta MCI \%}, \quad (13)$$

Getting the most accurate data when evaluating the effectiveness of structural components of the marketing mechanism for the development of agricultural enterprises is possible only with attention to the synthesis of methods of qualitative and quantitative analysis. To this end, the study used integrated methods that allow a profound and qualitative assessment of the effectiveness of the marketing mechanism, identify the potential for improvement of certain indicators, which will help to adjust the activities of the agricultural enterprise in the context of strategic development.

One of the key characteristics of the grain market and an integral part of the analysis of the marketing activity of the enterprise is the capacity of the market. This

economic indicator allows you to analyse the actions of all market players (sellers and buyers) in a certain time period and formulate a program of actions for the future.

In particular, the study of the capacity of the grain market of food resources is used in determining the level of food security of the state. The assessment of the capacity of the grain market is an important stage in the compilation of actual and forecast balances of demand and supply of agricultural products and food markets. This indicator is widely used in the development of marketing strategy for agricultural and processing enterprises. In addition, it is used for an objective assessment of the situation and dynamics of changes in the market and, accordingly, the adoption of the only effective management decisions that will further affect the viability of a single product or enterprise and the country as a whole (Shpichak, Lupenko, Zhuk, 2013).

In the theory of question, in principle, there was a certain consensus on the definition of the basic categories underlying our research, such as: “market capacity” and “entrepreneurial motivation” (see Table 3). However, according to our belief, the institutional, which will give them the colour of interdisciplinarity, is definitely an aspect of novelty to a purely economic positioning.

We agree with the research of Pehov V. A. in part of the theoretical positions for the basic institutional constructs of theoretical and practical recognition of its content characteristics should be considered “capacity of the market” and “motivation of entrepreneurial activity”. Their ratio indicates their interdependence because the capacity of the market is actually the actual or potential volume of the sale of the goods, and the economic interest is the motivation of entrepreneurial acts (production, sales, etc.), in this case, in the grain market. This is a somewhat simplistic approach to the definition, but the logic of connections is precisely this, but their basis is the conjuncture – the balance of supply and demand.

The process of forming the motivation of entrepreneurship in the production of grain by agricultural enterprises, as well as other participants in the market of the same name (households, farms) is regulated by the institutional factors of the subjective (employee, entrepreneur) and objective (market, market law) order. However, they are all one way or another mediated by cost, its objective law, so in this case, we consider motivation through the prism of the cost and price as the all-embracing quintessential of imitation of motivations in the market system.

Among the empirical indicators – the definitions of the state of the grain market and the motivation of entrepreneurship, we selected the indicators of production, sales, costs, prices, incomes of consumers, which, in the relevant estimates, constitute a general picture of the national scale, outlining the foundations for proposals for the elimination of deficiencies.



Table 3

**Substantive characteristics of the conceptual apparatus of scientific institutionalization of market capacity**

Content	Author or Source
The possible volume of sales of goods (works, services) at a certain level of prices is calculated in quantitative (quantity of goods sold) and monetary value (the amount of money for the sold goods)	Shpichak O. M., Lupenko Yu. O., Zhuk V. M. etc. (2013). Capacity of the internal consumer market for agricultural products and food: <i>monograph</i> . K.: NSC IAE, 186 p. Shchich O. M., Bodnar O. V. (2013). Problems of the Capacity of the Internal Consumer Market for Agricultural Products and Food in Ukraine in the Context of the Purchasing Power of the Population. <i>Economy of the agroindustrial complex</i> . № 6. pp. 5-13.
Quantitative estimation of market volume in natural or cost indicators	Kobuta I. V. (2006). Features of agrarian policy of the European Union in the grain market. <i>Economy of agroindustrial complex</i> . № 5. pp. 110-118.
The potentially possible volume of sales of a particular product on the market during a specified period, which depends on demand for goods (work or service), price level, general market conditions, incomes, business activity	Novoselskaya L. I., Tsigush Yu. Yu. (2009). International experience in calculating the subsistence minimum. <i>Scientific Bulletin of NLTU of Ukraine</i> . Vip. 19.4. pp. 198-200.
The institutionalized balance of demand for goods, which, within the limits of certain market conditions and consumer incomes, provides the corresponding potential (volume) of realization	Pehov V. A. Formation of market capacity and motivation of entrepreneurship in grain production: theoretical and methodological aspects of essence. <i>Effective economy</i> . Mode of access: <a href="http://www.m.nayka.com.ua/?op=1&amp;j=efektyvna-ekonomika&amp;s=ua&amp;z=4338">http://www.m.nayka.com.ua/?op=1&amp;j=efektyvna-ekonomika&amp;s=ua&amp;z=4338</a>

We will note earlier, confirming the above-mentioned thesis that the issue of market capacity and the formation of the motivation of entrepreneurship in the production of grain in its practical implementation has a special institutional nature, since the question is not purely economic benefit, because grain is a social product – its presence is of globally-security nature. Therefore, the size of production is actually stable, especially for Ukraine.

We believe that the formation of market capacity and the motivation of entrepreneurship in grain production empirically position the trends-role parameters of its significance for the national economy since the grain economy initially defined both general and, to a large extent, the general economic effects of profitability, food security, etc. Grain production is a top priority because due to the institutional conditions that have developed today (population growth in the world, energy problems), grain demand is increasing and reserves for increasing its production in Ukraine are significant.

According to the calculations of scientists of the National Research Centre “Institute of Agrarian Economics”, the share of grain and leguminous crops in the structure of gross agricultural output of Ukraine is increasing. Thus, their share in 1990 was 18.9% (53.3 billion UAH), in 2000 – 18.0% (27.2 billion UAH), and in 2010 – 21.4% (41.6 billion UAH), in 2011 – 25.9% (60.5 billion UAH), in 2012 – 22.1% (49.4 billion UAH). This analyst indicates a fairly high capacity of the market and, in particular, a steadily growing motivation for entrepreneurs to produce grain.

The production of grain is extremely important for the domestic agro-economic complex of the industry, which has historically developed, due to the natural-economic, national-identical, and institutional conditions. Ukraine grows in the countryside, and the countryside has

always produced grain because it is the main “currency of success”, the product of agricultural labour – the most liquid in the territory of our state and beyond. The question is not simply the expediency of producing grain products but in the most effective economic order, which will provide growing effects.

The study of the problem of market capacity and the formation of entrepreneurial activity in the production of grain has established that these institutional studies are special in essence, significance, and positioning, they should be considered in the context of interdependence, but national identical attributes of economic existence (traditions of consumption, efficiency, desire to produce grain products etc.) show a number of differences, which are often difficult to adjust to the logic of the functioning of the market mechanism. Here we mainly draw attention to the traditions, because the Ukrainian peasant is an original bread-grower, for him the production of grain is an effect irrespective of the market situation. Concretely, we will also make proposals in solving existing problems, we believe that entrepreneurs are motivated in advance to develop this type of economic activity, and the market capacity can still be balanced by a broad state campaign for the promotion of grain products to the external market (Lyshenko, 2015).

According to the scheme of forecasting balances, which is presented in the Methodology for compiling forecast balances of demand and supply of food resources approved by the Ministry of Economy of Ukraine (Retrieved from: <http://me.kmu.gov.ua/uk/publish>, 2009), the assessment of the capacity of the grain market is carried out according to the following formula:

$$\text{Capacity} = \text{Change in stocks} + \text{Production} + \text{Imports} - \text{Exports} \quad (14)$$

Paskhaver B. Y., in his research (Paskhaver, Shubravska, Moldova, 2009), notes that the capacity of the grain market is shaped by the influence of such macroeconomic factors as the solvency of the population, the state of development of the agrarian sector, and the rationality of foreign economic activity.

Depending on the subject of the analysis, the author believes that it is necessary to determine the capacity of the market for individual products. The capacity of the market for a single product is determined by the formula:

$$MP_i = C_i \times LI_i \times H, \quad (15)$$

where: MRI – the capacity of the market of the *i*-th product, UAH;

$C_i$  – the consumption of the *i*-th product per person per year, kg;

These are the average annual consumer price of 1 kg of product, UAH;

$H$  – the number of population, persons

The normative capacity of the internal grain market is defined as the sum of the products of the rate of consumption of the population of a certain type of food and the average consumer price for this type of food. The calculation is made on the entire population of the country.

$$ERP = \sum (H_{cn} * C_{pn}) * H, \quad (16)$$

where: ERP – the capacity of the internal market of food, UAH;

$H_{cn}$  – the rate of consumption of the *n*-th type of food per capita, kg;

$C_{pn}$  – consumer price of the *n*-th type of food, UAH;

$H$  – average annual population, persons;

$n$  – the kind of food resources that form the capacity of the internal food market;

$c$  – the number of types of food resources that form the capacity of the internal food market.

If consumer prices for foodstuffs are used to calculate the normative volume of the food market, the range is specified in the set of approved by the Cabinet of Ministers of Ukraine Decree No. 656 “On Approval of Nutrition Sets, Sets of Non-Food Products and Service Sets for Major Social and Demographic Groups” (Retrieved from: <http://zakon1.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=656-2000-%EF>, 2000 ), in this case, the general formula of the market capacity will look like

$$ERP = \sum (P_{xn} * C_{ck}) * H, \quad (17)$$

where:  $P_{xk}$  – the volume of the *k*-th food product by one person of a certain sociodemographic group in a year, kg;

$C_{ck}$  – average consumer price of the *k*-th food product, indicated in the set, UAH;

$H$  – average annual population, persons;

$k$  – kind of food resources that form the capacity of the internal food market;

$d$  – the number of types of food resources that form the capacity of the internal food market.

The normative capacity of domestic agricultural markets is determined in the natural indices for each type of production. In particular, the capacity of the internal grain market is determined by the formula:

$$ER \text{ grains} = (N_s \text{ prz} + N_s \text{ fz}) / 1000 \times N + F_n + F_{pp} + V_{tr}, \quad (18)$$

where:  $N_s \text{ prz}$  – the standard of consumption of food grain per one person, kg;

$N_s \text{ fz}$  – norm of consumption of fodder grain per one person, kg;

$H$  – average annual population, thousand persons;

$F_n$  – normative volume of the seed fund, thousand tons;

$F_{pp}$  – the amount of grain used for processing of products for non-food purposes, thousand tons;

$V_{tr}$  – the amount of grain losses, thousand tons (Paskhaver, Shubravska, Moldova, 2009).

## 7. Conclusions

It is expedient to show the methodology of managing the efficiency of the activity of commodity producers in the grain market from three perspectives: through the clarification of the regularities and objective processes taking place in the grain market, consideration of these features within certain scientific concepts and methods, the creation of a rational model of the grain market; due to the identification of probable conflicts and risks for grain market players, giving priority to economic feasibility and increasing the efficiency of using market principles in view of compliance with legal norms and changes in the organizational and legal basis of the activities of enterprises participating in commercial processes in the market; because of the consideration of the results of the production activity of agricultural enterprises as a material and objective basis of the market, an organic combination of marketing research with the monitoring of the production and commercial potential of commodity producers.

It was established that the main globalization factors shaping the market situation of the domestic grain market are: driving factors of globalization (natural and climatic and economic-geographical differences, which predetermine the specialization of countries and cause development and deepening of interrelations between them, development of logistics systems, growth openness of markets and international relations, acceleration of technological innovations and withdrawal of inventions in the market); inhibiting factors of globalization (state interference in the economy and protection policies; fluctuations in exchange rates; political conflicts; religious restrictions; key factors of globalization: internationalization; ethics; entrepreneurship; business communications).

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## DYNAMICS OF AUSTRIAN FOREIGN DIRECT INVESTMENT AND THEIR INFLUENCE ON THE NATIONAL ECONOMY

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**Abstract.** The purpose of the paper is to analyse the dynamics of Austrian foreign direct investments (FDI) and its role in the development of the national economy. The subject of research is the main components of Austrian foreign direct investments 2005–2017 and their impact on the national economic development. *Methodology.* Methods of comparative and statistical analysis were used to study the dynamics, structure, and economic impact of Austria's FDI. Special attention was given to the dynamics of FDI inflows and outflows, accumulated investments, cross-border mergers and acquisitions, "Greenfield Investments", the impact of FDI on the balance of payments and international investment position of Austria. The method of mathematical modelling in economics, in particular, regression analysis, based on annual data for the period from 2005 to 2015, was applied to assess the relationship between the main components of foreign direct investments and the indicator of the country's economic growth – the gross domestic product (GDP) per capita. The following indicators were selected as independent variables: FDI liabilities, assets of FDI funds, as well as the balance of primary incomes. The dependent variable was the GDP per capita. It should be noted that such indicators as FDI assets and liabilities of FDI funds were not represented in the final model because of the high correlation between independent variables, and the relationship between GDP per capita and net foreign assets was insignificant. The assets of foreign direct investment funds have the greatest impact on the economy of the country, and the relationship between these indicators is direct. A slightly weaker relationship is observed between the balance of primary incomes and GDP per capita. The relationship between them is also direct. Liabilities of FDI have the least impact on the dependent variable in comparison with the other two. *Findings.* The growth of foreign direct investments of Austria, as a result of liberalization of the world and European economy, as a whole has a positive impact on its GDP. Thus, activities that are aimed at stimulating investments are fully justified and understandable. The paper determines important factors of Austria's investment activity and attractiveness, as well as the main factors that influence the dynamics of FDI. The most important among them are: the level of education, the internal coefficient of investment, political stability, the terms of trade, the state of the financial sector. The results of the analysis show that Austria has a high level of business activity; the government conducts activities to stimulate investment in R&D and in high-tech enterprises, to create new jobs, to protect the environment etc. The results of the study allow forecasting a gradual improvement in the balance of the country's primary incomes, which will contribute to the further growth of the current account surplus and will strengthen the positive influence of Austria on the development of the European and global financial systems. *Practical implications.* The results of the study will help to increase: the effectiveness of the investment policy of Austria to stimulate the country's economic growth; the international competitiveness of national companies on European and world markets; the level of stability of Austria's financial system to external shocks.

**Key words:** foreign direct investments (FDI), components of FDI, investment policy, balance of payments, development of national economy, Austria.

**JEL Classification:** E22, E27, F21, G18

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## 1. Introduction

Austria is a highly developed industrial country. Its geopolitical position between Western Europe (industrialized countries) and burgeoning markets of Central, Eastern, and South East Europe (CESEE) has provided a high degree of economic, social, political integration with EU countries and other countries CESEE, which are not EU members. Due to the external market access in Central and Eastern Europe, the Enlargement of the EU in 2004 and 2007 has consolidated Austria's investment attractiveness. However, the Enlargement of the EU has also strengthened investment positions of Austria's competitors. As a result, nowadays, Budapest, Prague, and Bratislava compete with Vienna for foreign investors.

Nowadays, Austria has created special favourable conditions to attract foreign investors. The priority sectors for investment in Austria are high-tech and innovative industries. There are four major types of incentives for investment projects of companies registered in Austria: regional incentives, incentives for small and medium-sized enterprises, technology incentives, and environmental incentives. The government of the country provides assistance as subsidies to entrepreneurs, who operate investment projects targeted at supporting the creation of new jobs. The most common way to support foreign investment is to ensure the bank's guarantee for the preferential loan, provided for the implementation of investment projects. In case of implementing high risky or very large investment projects, conditions for participation in the distribution of a company's profit or additional non-risky rewards can be discussed.

Along with the supportive programs, a very important role for Austria's investment attractiveness play political stability and administrative transparency, rule of law, business environment, tax legislation, the protection of investors' rights, the stability of legislation and etc. Bilateral agreements, mainly with less-developed countries, have also a great influence on investments attraction in Austria (U.S. State Department, 2015).

Austrian Business Agency is a special structure for enterprises and investments attraction, which organizes contacts with potential investors and informs the business environment about Austria as a business platform. In general, since the foundation of the Agency in 1982, nearly 49.803 new jobs have been created and investments in the amount of almost €7.25 bn have been attracted (Austrian Business Agency, 2018).

In addition to this Agency, Austrian Economic Chambers (WKO), whose membership is compulsory for all Austrian companies, also helps Austrian companies in investing abroad. There is a government structure "Austrian Business Agency", as well as similar departments in each of the nine federal constituencies (counties) which provide an informative business support and offer different stimulating measures.

Meanwhile, foreign investors should take into account that Austria saves the essential features of the national economic model, established after the Second World War. For many years, the state played a major role in the country's economy. However, the state's role has significantly reduced as a result of structural adjustment policies and the large-scale privatization of the state holding company Österreichische Industrieholding (ÖIAG).

## 2. Literature review

Foreign direct investments play an important role in the development of national economies. Therefore, different aspects of FDI movement are investigated by both academics and international and national specialized institutions (IMF, UNCTAD, ECB, EBA, OECD, etc.).

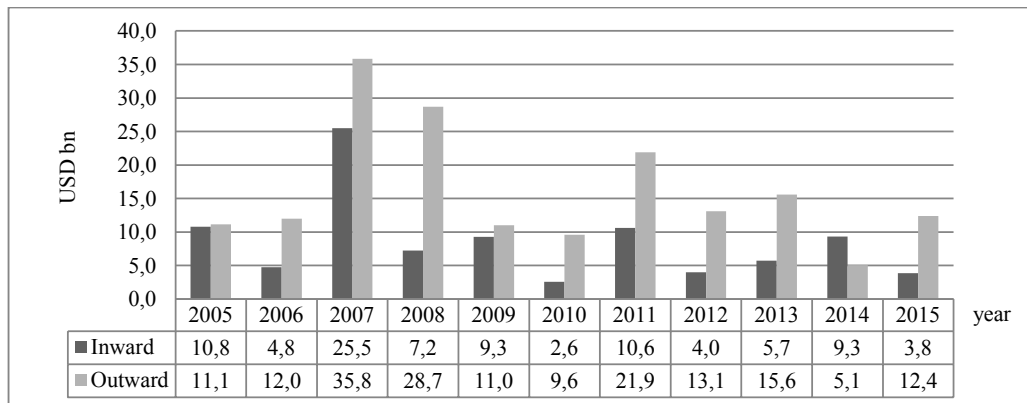
Most of the modern applied and theoretical researches of the FDI movement are dedicated to developing countries. However, the proper attention is not paid to the analysis of the dynamics and structure of FDI in developed countries, including Austria. Authors focus their attention on the impact of FDI on employment, remuneration in the context of globalization (Onaran Ozlem, 2008), European economic integration (Beer et al., 2017) and disintegration processes (Sydorova, Yakubovskiy, 2017), role of FDI in Austria's innovation potential (Lomachynska, Podgorna, 2018), assess the impact of FDI from Austria on the development of the economies of the recipient countries (Petraikos et al., 2000; Kurtovic et al., 2016; Yakubovskiy et al., 2018), analyse the impact of the global financial crisis on the dynamics of GDP and FDI (Simionescu, 2016). Based on these studies, it can be summarized that the growth of Austria's FDI as a result of the liberalization of the world and the European economy had a positive impact on its GDP; had a positive influence on the development of the service sector, but did not have a significant impact on the export-oriented trades of the real sector; had a negative impact on wages and employment in Austria; contributed to the growth of transitive economies and their effectiveness. The global financial crisis, the decline in GDP growth and FDI in the CESEE countries negatively affected the investment activity and profitability of Austria.

At the same time, the changes in the dynamics of the inflow and outflow of Austrian FDI in modern conditions, as well as their factors, are insufficiently covered.

The paper's aim is to investigate the dynamics of the main components of Austria's FDI in 2005-2015.

## 3. Dynamics of Austria's FDI and their main components

The data of Austria's volume of foreign direct investment show a declining tendency for the last years. Figure 1 demonstrates the dynamics of inward and



**Figure 1. FDI flows of Austria**

Source: compiled according to data (IMF, 2017)

outward of FDI in 2005-2015. During the pre-crisis period 2005-2007 inward of FDI increases and reaches \$13.7 bn in 2007, while the outward reaches \$19.7 bn. In the post-crisis period, FDI flows are rapidly declining and the minimal values are seen in 2010: the inward of FDI is \$2.6 bn, the outward is \$9.6 bn.

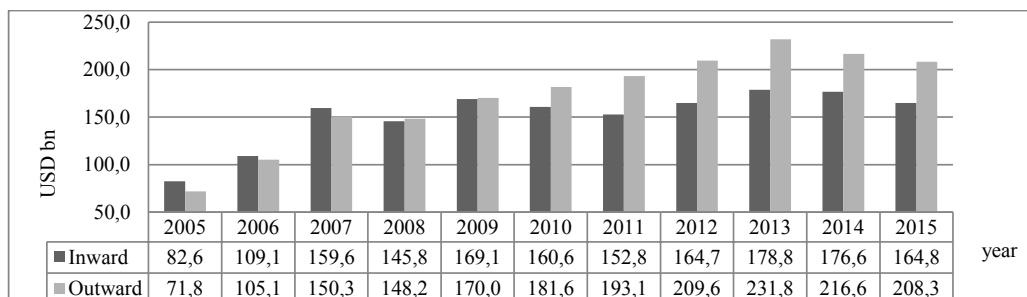
In spite of investment attractiveness, the dynamics of FDI in general shows that Austria is more a donor, rather than a recipient of foreign direct capital. Sharp changes in the dynamic of FDI can be observed only in 2014 when its outward has decreased by about three times, while the inward has gone up by more than 1,5 times. These changes can be explained by Austria's victory of "Eurovision" Song Contest in 2014. In terms of this contest, Austria as a winner held up this event in Vienna in 2015. The organization of such a type of event requires a large-scale preparation of the accompanying infrastructure, as well as a large capital investment on the eve (in 2014). In 2015, Austria's flows of FID have returned to its usual ratio, when the inflow is less than the outflow. Nevertheless, the inflow of FDI reduced to \$3.8 bn, outflow increased by \$12.4 bn. Comparing with 2013, both indicators have declined by nearly \$2 bn. This situation can be explained by European migration crisis at the beginning of 2015, which arose as a result

of the rapid increase in the flow of refugees and illegal migrants to the European Union from North Africa and the Middle East. Political and economic instability in Ukraine, low growth prospects in the countries of South-East Asia had also a negative impact on the dynamics of Austrian FDI in 2013-2014.

Considering the changes of the FDI stocks of Austria (Fig. 2), first of all, it should be noted that despite of their small volume compared to developed countries of Western Europe, such as Germany and Great Britain, their role in Austria's economic and their ratio to country's GDP are no less important.

For the period from 1995 to 2015, the inward FDI stocks of Austria raised up by nearly 9 times (from \$19 bn to \$164 bn), while Austria's foreign investments stocks in other countries almost by 20 times (from \$114 bn to \$208.3 bn). This also confirms that Austria is gradually strengthening the position of the investor country.

There is also the increase in the share of the FDI stocks of Austria in GDP. If in 1995 the volume of FDI stocks in Austria in its GDP was 85%, then from 2012 it exceeded by 40% and Austria's FDI stocks in other countries was 5% and 50% accordingly. This allows to state that the modern development of the Austrian economy largely depends on the movement of foreign direct investment.



**Figure 2. FDI stocks of Austria**

Source: compiled according to data (IMF, 2017)

Due to the territorial proximity, the absence of language, German companies are the leading investors of Austria's economy. As a result of the deepening of European integration in the last fifteen years, a significant share of investment is provided by the EU countries, primarily by Germany. Although, if earlier Germany accounted for more than 40% of FDI in Austria, nowadays the share of German investors does not reach even 25%. The Netherlands, Italy, Luxembourg, and Russia are also the leaders of investing in Austria.

The dynamics of cross-border mergers and acquisitions of companies (M&A) in Austria from 2005 to 2007 shows that M&A transactions have been conducted in the amount of \$3.9 bn, which is 11 times less than in Germany and 39 times that in the UK. There is a sharp increase in this indicator in 2014: the volume of the sales of Austrian companies in M&A amounted to \$3.07 bn, which corresponds to the trends of 2005–2007. In 2015, the volume of the sales of Austrian companies in M&A fell by 3, 5 times and reached only \$849 m. In the years of 2005–2015, the volume of the purchasing of Austrian companies in M&A is slightly higher than the amount of sales. This indicates the high activity of Austrian multinational companies. For three years from 2005 to 2007, the total value of transactions in M&A amounted to \$5.6 bn. In 2013, this indicator has increased significantly – up to \$10.7 bn. This also confirms that, unlike many other participants in the euro area, Austria quickly and successfully coped with the consequences of the global financial and economic crisis of 2008. However, in 2014 the amount of purchase transactions for mergers and acquisitions of companies decreased to \$345 m. Despite this sharp decline, the indicator began to recover in the next year and till the end of 2015, there were merger and acquisition transactions of companies amounting to \$4.8 bn.

The dynamics of Greenfield Investments (investments in the “empty lot”), investments, which aimed at the creation of a new enterprise, demonstrate high activity in Austria during 2005–2015. From 2005 to 2007, \$12.5 bn was invested in the “empty lot” projects by Austrian investors and a high figure has been maintained

for the past three years. In 2013, \$6.2 bn, \$5.1 bn in 2014, and \$5.7 bn in 2015 were invested in similar projects.

However, foreign investments in the “empty lot” projects in Austria for the whole analysed period is significantly less than in similar projects, which are invested by Austrian entrepreneurs. For the whole period of 2005-2007, only \$2.8 bn was invested in the “empty lot” projects. At the same time, for the last 3 years, this indicator has not changed significantly and remains at the level of \$1.1-\$1.8 bn.

For the growth of the “Greenfield Investment” in Austria, the government of the country offers foreign companies additional investment incentives, primarily within the framework of regional and innovation policies. Growing competition of the Central and Eastern Europe compels the Austrian government to reduce the tax burden for enterprises (IMF, 2017). The corporate tax rate is 25%, and by the estimation, it does not hinder to the development of foreign companies in Austria. In accordance with the Law on the Promotion of the Establishment of New Firms (Neugruendungs-Foerderungsgesetz), new companies are exempted from paying taxes when buying a land plot, a court fee for the registration of a firm in the commercial register and the land registry, and other fees. In addition, there is a federal agency for Investment Promotion “Austrian Business Agency” (Bellak Ch., 2010; Austrian Business Agency, 2018), as well as similar agencies in each of the nine subjects of the federation (lands) that provide business information support and offer other incentive measures.

Analysing the balance of payments in Austria, first of all, the main attention should be paid to the current account of Austria (see Figure 3).

During the period of 2005-2015, the balance of the current account is positive and has a fluctuant dynamics. If in 2005 it was \$6.2 bn, then in 2008 the maximum value was reached at \$19.3 bn. However, as a consequence of the global financial and economic crisis, at the beginning of 2009, the current account balance is rapidly decreasing – almost twice and equals \$10.2 bn. The next recession is observed in 2011–2012,

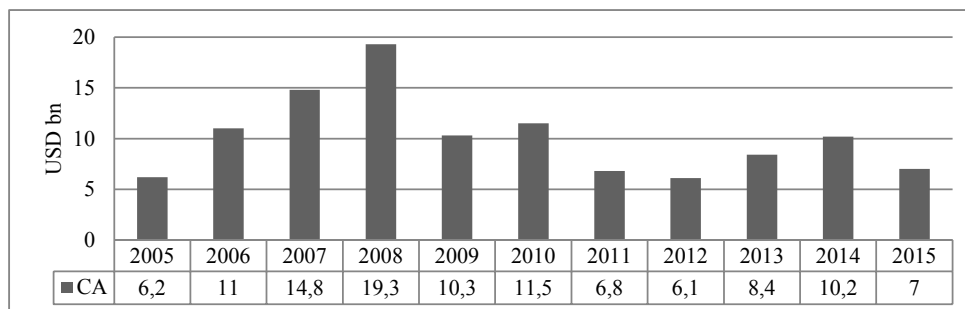
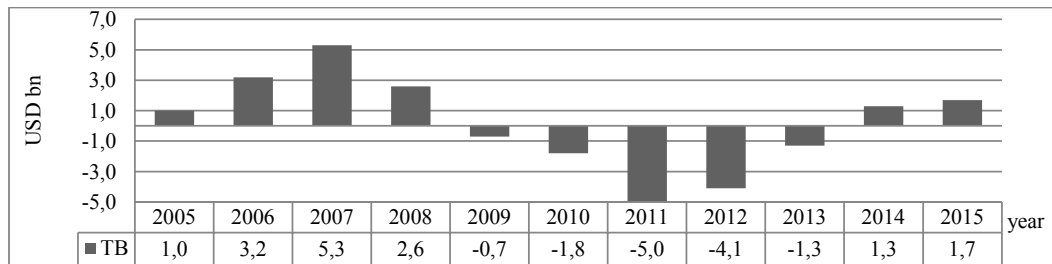


Figure 3. The net current account of Austria

Source: compiled according to data (IMF, 2017)



**Figure 4. Net trade balance of Austria, USD billion**

Source: compiled according to data (IMF, 2017)

which can be explained by the European debt crisis and, as a consequence, the decline in business activity of Austria. However, in general, the balance of current operations of Austria for the whole analysed period has a positive value.

One of the most significant components of Austria's current account is the trade balance (Figure 4). The Austrian economy highly depends on the foreign trade and is closely connected to the economy of other EU countries, especially Germany (33% of the trade turnover in 2015), Italy (6.2%), the USA (5.4%), Switzerland (5.5%).

The volume of foreign trade in Austria in 2015 reached \$232 bn, which is 2.6% more than in the previous year. The main export goods in Austria are chemical products (primarily pharmaceuticals), cars and their components, equipment and paper products. Austria mainly imports machinery and equipment, automobiles, chemicals, metal products, oil and oil products, food products. A slight increase in exports in 2015 is ensured by the countries of Northern and Southern Europe, Asia.

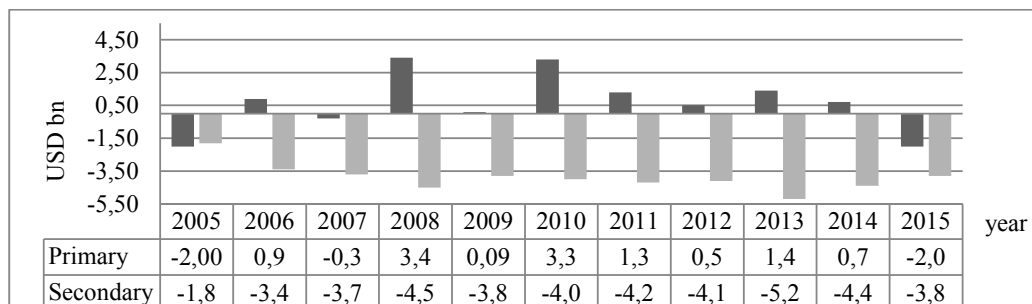
During the whole analysed period, the trade balance has both a negative and a positive value. A close correlation of the trade balance with the current account can be noted. The trade deficit in Austria can be explained by the consequences of the global financial and economic crisis, the debt crisis and uncertainty in the EU.

The balance of primary and secondary income has also a big impact on the Austrian balance of payments (see Figure 5). The primary income account reflects

the amount of investment income that must be paid and received for the temporary use of labour, financial resources or non-tangible non-financial assets (income from the use of natural resources by non-residents, etc.). These include: wages, income, taxes on production, income from property (interest, dividends, rent), etc.

The balance of primary income has unstable dynamics, changing several times from a negative value to a positive one. In 2007, the value of primary income was negative (-\$315 m), due to the growth in the number of labour migrants as a result of the EU enlargement, and, as a result, an increase in the Austrian economy's wages to non-resident employees. It is interesting that the high value of the indicator can be seen in 2008 while the balance of primary income increased from -\$315 m to \$3.4 bn. These changes are explained by the dynamics of income from investments, including receipts from financial assets owned by residents of Austria located abroad. From 2011 to 2013, the balance of primary income remains positive, and then in early 2015, it rapidly has a negative value. Such a situation is a result of an Austrian long-term policy aimed at attracting investments. However, due to the negative impact of the European debt crisis, Austria's long-term stability rating was downgraded from AAA to AA+ by the European Financial Stability Facility, which directly influenced Austria's investment attractiveness.

The balance of secondary income, as a balance of current transfers between residents and non-residents of Austria, throughout the whole period from



**Figure 5. Primary and secondary income of Austria, USD billion**

Source: compiled according to data (IMF, 2017)



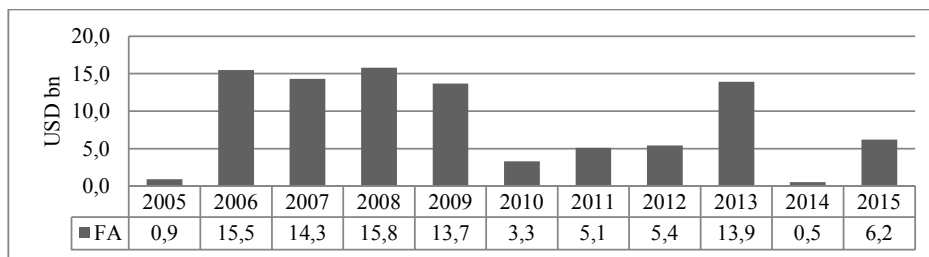


Figure 6. Net financial account of Austria

Source: compiled according to data (IMF, 2017)

2005 to 2015 demonstrates a negative value and varies from -\$1.8 bn to -\$5.2 bn. However, in the last 2013–2015, there is an increase in the secondary income indicator, which is a consequence of the reduction in the employment of foreign residents in the country.

The financial account is also a very important component of Austria’s balance of payments (Figure 6).

During the period of 2006-2009, the financial account of Austria had a stable position and fluctuated within the limits of \$13.7-\$15.5 bn. In 2010, this indicator went down by more than 4 times and reached \$3.3 bn, after which it gradually grew at \$5.44 bn in 2012. In 2013, there was a sharp increase by 2.5 times to \$13.9 bn.; in 2014 there was a rapid reduction by 28 times. However, in early 2015, this indicator rose again to \$6.2 bn.

Austria’s international investment position demonstrates the volume of external financial assets and liabilities of the economy at a certain period in time, which is formed as a result of external transactions estimated at current market value (at current market prices and exchange rates), as well as under the influence of other factors. The international investment position of Austria is shown in Figure 7.

Figure 7 presents financial assets belonging to Austrians abroad (assets) and non-residents in Austria (liabilities). From 2005 to 2012, the net international investment position of Austria was negative (liabilities exceeded assets with a difference of \$10 m to \$60 m), which indicates that Austria is a net debtor. From 2005 to

2007, both assets and liabilities increased by almost two: assets from \$651 m to \$1.136 m, and liabilities from \$714 m to \$1.176 m. From 2008 and by 2013, the volume of assets, both for Austrians abroad and for non-residents in Austria, remained within \$1-\$1.2 bn. In spite of the global financial and economic crisis and the European debt crisis, Austria’s investment activity (both donor and recipient) is stable. From 2013 to 2015, Austria’s assets began to exceed liabilities and the balance increased from \$5.8 m in 2013 up to \$8.9 m in 2014 and \$10.8 m in 2015. At the same time, the total volumes of both assets and liabilities decreased. Assets have decreased from \$1.2 bn to \$970.7 m, liabilities from \$ 1.2 bn to \$960 m. Thus, the net investment position indicates that Austria is a net creditor and confidently reinforces this position.

#### 4. Influence of the main components of foreign direct investments on Austria’s gross domestic product per capita

In order to determine the impact of the growth of Austria’s FDI on the economy as a whole, it is possible to construct a model describing the relationship between the main components of foreign direct investments and the indicator of the country’s economic growth – the gross domestic product. The following indicators were selected as independent variables: FDI liabilities, assets of FDI funds, as well as the balance of primary incomes.

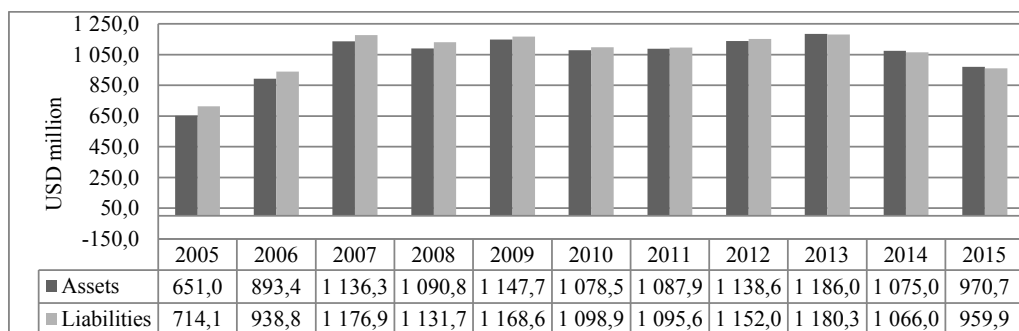


Figure 7. International investment position of Austria

Source: compiled according to data (IMF, 2017)

The dependent variable is GDP per capita. It should be noted that indicators such as FDI assets and liabilities of FDI funds were not represented in the model because of the high correlation between independent variables, and the relationship between GDP per capita and net foreign assets was insignificant. Thus, the imaginary model has the following form:

$$GDP = \beta_1 * FDI_i + \beta_2 * FDI_{iso} + \beta_3 * PIB,$$

where *GDP* – gross domestic product per capita, USD, *FDI<sub>i</sub>* – FDI liabilities, USD, bn., *FDI<sub>iso</sub>* – assets of FDI funds, USD, bn., *PIB* – primary income balance, USD, bn.

The model was estimated on the basis of statistical data for 2000-2017, the indicators were obtained from the UNCTAD statistical database (UNCTAD, 2018).

$$GDP = 0,372 * FDI_i + 0,755 * FDI_{iso} + 0,493 * PIB$$

(2,335\*\*) (4,706\*\*\*) (3,271\*\*\*)

$$R^2 = 0,823, F = 12,405.$$

This regression model indicates the existence of a significant relationship between the dependent and the variables. The greatest influence on the economy of the country is provided by the assets of foreign direct investment funds, and the connection is direct, i.e. with an increase in this indicator by 1 standard deviation, GDP per capita will increase by 0.755 standard deviations. This dependence is understandable because the economic development of Austria depends very much on the movement of foreign direct investment, namely the country is more a donor, rather than a recipient of FDI. And the existence of direct dependence is explained by the receipt of the benefits of the investing country as a result of reducing costs, obtaining tax benefits and subsidies, and a number of other advantages.

A slightly weaker relationship is observed between the balance of primary incomes and GDP per capita. With the growth of the independent variable by 1 st.d., the GDP per capita grows by 0.493 st.d. There is also a direct dependence. The balance of primary incomes itself has unstable dynamics, changing several times from a negative value to a positive one. And volatility is observed both in terms of income for wages and for investment. In general, the most frequent manifestation is the surplus of the balance of primary incomes, where investment income predominates.

The last indicator – liabilities of FDI – had the least impact on the dependent variable in comparison with the other two. Growth in FDI liabilities leads to an increase in GDP per capita by 0.372 standard deviations. An explanation why in this case the relationship is much weaker in comparison with assets is statistics. For the analysed period, the inward FDI stocks of Austria raised by almost 9 times, while Austria's foreign investments in other countries – almost by 20 times. The second proof of this is the dynamics of Greenfield Investments:

the value of foreign investments in the “empty lot” projects in Austria for the whole of the analysed period was four times less than was invested abroad by Austrian investors.

The following reasoning is an explanation of the existence of a direct relationship between variables. As it is known, in theory, the influence of FDI on the recipient country may be ambiguous or even negative. A number of factors that the country must have for a positive effect are connected with this. Among them: the level of education, the internal coefficient of investment, political stability, the terms of trade, the state of the financial sector. Thus, the country under consideration is characterized by administrative transparency, rule of law, business environment, tax legislation, the protection of the inventor's rights, the stability of legislation, political stability.

It should be noted that at the moment the government has taken a course to attract foreign direct investments. For this, supportive programs, regional incentives, incentives for small and medium-sized enterprises, technology incentives and environmental incentives are created. This policy is right for today for the further economic growth of Austria. Proof of this can be an analysis of the dynamics of the balance of payments. So, throughout the considered time the current account of the Austrian economy is in surplus, the financial account is also observed positive. Hence it follows that in order to maintain the surplus and the balance of payments itself, the balance of current operations over the financial balance must prevail. However, in practice, Austria's balance of payments indicator is volatile, in the last 2 years, there has been a deficit caused by the predominance of the financial account. In order to eliminate the deficit, an additional inflow of capital will be required.

So, after carrying out the research it can be found out that the growth of foreign direct investment of Austria as a result of liberalization of the world and European economy as a whole had a positive impact on its GDP. Activities that are aimed at stimulating investment, is fully justified and understandable.

## 5. Conclusions

Foreign direct investment plays an important role in the development of the national economy of Austria. Due to its geopolitical position, Austria for a long period of time had a high investment yield because of the activity in Central, Eastern, and South-Eastern Europe (CESSE). Despite this, Austria has a high level of business activity; the government conducts activities to stimulate investment in R&D and high-tech enterprises, creating jobs, protecting the environment and etc. The strengths of Austria remain political and macroeconomic stability, a developed financial system, attractive corporate taxation,

developed infrastructure, highly skilled labour, high productivity and international competitiveness, high quality of life, etc. At this stage, it's important to boost the efficiency of direct investment within the country, their positive impact on the dynamics of the real economy and GDP. The paper proves the increase of stability of Austria's financial system to external shocks. The main factor is a significant improvement in

the country's international investment position, which since 2013 has become positive. Thereby, it is possible to forecast a gradual improvement in the balance of the country's primary incomes, which will contribute to the further growth of the current and financial account surplus and will strengthen Austria's influence on the development of the European and global financial systems.

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# THE CONCEPT OF LEGITIMATE ECONOMIC INTEREST

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**Abstract.** *The purpose* of the article is to define the concept of legitimate economic interest. The desired result of scientific research is achieved through the following tasks: the study of theoretical representations in relation to economic interest and legitimate interest, the definition of the concept of legitimate economic interest. *The subject* of the study is the notion of legitimate economic interest. *The methodology* of the research is a set of general scientific and special methods of scientific knowledge, which using made possible to study economic interest and legitimate interest and made possible the emergence and disclosure of the concept of legitimate economic interest. *As a result* of the analysis of scientific views on the notion of economic interest, it is established that scientists do not include legal features, which confirm the legality and legitimacy of economic interest, in its content. The inclusion of legal features in the definition of economic interest causes the definition of the concept of legitimate economic interest. It is concluded that legitimate economic interest is reflected in the legislation and follows from its general meaning. It is a simple economic permit, which is guaranteed, to a certain extent, by state bodies, and is expressed in the economic aspirations and economic actions and relations of a person concerning the fact of using of a particular economic good on the basis of the implementation of economic choice, which result is to change the economic situation of the person. As well as, if necessary, this simple economic permit is expressed in seeking protection from the judicial authorities in order to satisfy their own economy's needs, which do not contradict the public interests, the Constitution and laws of Ukraine, justice, reasonableness, fullness, objectivity, equality, competitiveness and other principles of law. *The practical* value of scientific research is to reveal the content of an important means of meeting economic needs within the framework of legal regulation. *The originality* of the research is manifested in the fact that the article attempts to combine signs of economic interest and legitimate interest in defining the concept of legitimate economic interest. This approach provided for the disclosure of the person's economic aspirations in connection with the rules of law. The prospects for further development in the direction of the study of legitimate economic interest are determined, in particular, concerning the fact of its relation with economic law and peculiarities of realization.

**Key words:** economic interest, legitimate interest, legitimate economic interest, economic relations, needs, aspirations, norms.

**JEL Classification:** K10, K20

## 1. Introduction

Effective development of the economy involves qualitative legislative support for the implementation of economic relations. For the legitimate fulfilment of the needs of economic relations, legal means are provided, the use of which makes it possible to achieve the desired result in the economic sphere. Among the legislative means for the implementation of economic activities, there are generally recognized rights and responsibilities. They are enshrined in legal norms by definition of permissible, obligatory or prohibitive activity for regulation of interaction between the participants of

economic relations. However, these legal means do not cover all the aspirations of economic entities to meet their material desires. Therefore, the question arises about the development of other legislative instruments to ensure the implementation of economic relations. One such legal means is legitimate economic interest, which in its nature differs from economic rights and creates additional opportunities in relation to the implementation of different needs in the field of economic activity. In the bundle with this, the theoretical study of legitimate economic interest, in particular, in terms of clarifying its concept, may not be relevant.

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Questions about economic interest were investigated by various scholars in the field of economics. At the same time, scientists focused on the study of general aspects of economic interest, economists defined the concept of economic interest without taking into account the law, legislative component.

The methodology of the research is a set of general scientific (analysis, synthesis, induction, deduction, generalization) and special (comparative-economic, comparative-legal, formal-logical, system-structural) methods of scientific knowledge.

**The purpose of this article** is to define the concept of legitimate economic interest. In order to achieve this goal, the following tasks should be performed: to study theoretical representations regarding economic interest and legitimate interest; to define the notion of legitimate economic interest.

## 2. Investigation of the concept of economic interest

In economic literature, there are widespread views on the definition of the concept of economic interest. K. M. Matusevich writes that economic interests are the personified vital material and spiritual conditions of the existence of people, that is, the conscious economic needs of people. They are the source of motivation for socio-economic actions of people, the driving force behind social economic reproduction (Matusevich, 2014).

O. E. Babina and Yu. P. Lozova point out that the concept of "economic interest" is a complex category that defines motives and incentives for the actors of market relations, internal and external causes that give rise to economic interests, as well as the purpose of their realization (Babina, Lozova, 2013). O. M. Didenko somewhat develops this definition of economic interest by adding that the motives and incentives of the actors of market relations should be realistic, due to certain property relations and the principle of economic benefits (Didenko, 2013). These points of view on the concept of economic interest look very abstract since scientists use rather general terminology to disclose meaningful features to define this definition. In particular, the following features are unclear in terms of economic interest: spiritual conditions of being of people, the driving force of social economic reproduction, internal and external causes, the purpose of realization, real motives and incentives, etc.

In the theory of economics, in addition to the economic interest of a person, the notion of economic interests of the enterprise, economic interests of the state and national interests in the economic sphere are determined. In particular, in his work, T. V. Sak emphasizes the study of the economic interests of the enterprise, which defines as a system of values that is a consequence of existing needs in the field of economic activity, the achievement of which ensures

the achievement of the goals set at each stage of the company's lifecycle (Sak, 2014). The above definition of the economic interests of the enterprise, as well as the previous concepts of economic interest, are too general, without bringing clear, meaningful features. This makes it impossible to separate economic interest from other means of obtaining the necessary result in the course of realization of economic activity of the enterprise.

Ye. Y. Sibertsyeva distinguishes the category of "economic interests of the state" as an object of protection by the prosecutor in court, the content of which is disclosed through the aggregate of the needs and aspirations of the state represented by bodies of state power, local self-government, enterprises, institutions and organizations in obtaining from participation in economic relations certain values and blessings (Sibirtseva, 2013). Without criticizing the definition of the concept of the economic interests of the state, we are convinced that the issue of economic interest of a person who is not a representative, that is, a part of the state, becomes more relevant. Since the economic interests of an individual are not covered by economic rights and freedoms, they are aimed at satisfying economic needs. Regarding the economic interests of the state, their definition is undoubtedly an important aspect of the economic development of the state. At the same time, in itself the economic interests of the state do not create any optional opportunities for state bodies; the latter pursue economic interests through the exercise of certain powers, which include both rights and obligations.

S. P. Zavgorodnaya investigates national interests in the economic sphere, she proposes to understand the systematic and balanced set of economic needs of the person, society, and the state, which are the basis for the formation of national goals, the achievement of which guarantees the preservation and enhancement of national values, ensuring economic sovereignty and sustainable social and economic development (Zavgorodnaya, 2015). With regard to this definition, our position is similar to the previous concept of the economic interests of the enterprise, that is, the notion of national interests in the economic sphere is disclosed in a rather general form. However, such an approach can be conditioned by the fundamental nature of the very phrase of national interests in the economic sphere.

More meaningful concept of economic interests determines V. L. Smysova, who notes that they are the socio-economic attraction and direction of the subject to meet the needs of economic and social benefits, the content of which is revealed through its economic aspirations and economic interactions (actions, relationships, relations) on the basis of the mechanism of economic choice, which leads to a change in the initial economic/social status of the subject, his economic results, self-development and self-development (Smysova, 2018).

In general, agreeing with the above concepts of economic interests, we believe that some duplication in relation to the above features is an indication on the one hand to the direction of the subject to meet economic and social needs, and on the other – to economic aspirations. Also, the author unjustifiably blends the signs of economic and social interest, the meaningful features of which must be different.

In addition, all the analysed theoretical views on economic interest have a drawback of ignoring the legal basis, which is a statement of legality and legitimacy of economic interest. In this approach, economic aspirations and interactions may not be in line with legal norms, which may lead to the recognition of economic interests as unlawful.

To take into account in the content of the notion of economic interests the requirements of law and legality consider the concept of legitimate interest. Let's make a critical analysis of definitions of legitimate interest in order to distinguish its essential features and use the latter in the definition of economic interest.

### 3. Investigation of the concept of legitimate interest

T. O. Pikul writes that legitimate interest is legal permission, which, in contrast to subjective law, has the character of legal aspirations. However, legitimate interest can be considered a certain possibility, but in the majority of its social, actual, and not legal (Pikul, 2010). It is difficult for us to agree with the position of the scientist because legitimate interest is always a law (legal) opportunity for the participants of the legal relationship to meet their own needs. Despite the fact that legitimate interests are not explicitly defined in the legislation, they are conditioned by legal obligations, which are directly "formalized" by legal norms. Legal obligations, in particular, legal prohibitions, determine the legal limits of the legitimate interests of the participants in the legal relationship. In addition, the protection of legitimate interests is explicitly provided for by law. Therefore, one cannot but recognize the law (legal) nature of the possibilities, which are the legitimate interests of the participants in the legal relationship.

I. O. Lychenko observes that it is inappropriate to determine the meaning of "legitimate interest" as a permit or aspiration. In the process of formation of legitimate interest, desire or need is a process of awareness, analytical processing and psychological assessment from the person. Therefore, the very desire cannot explain the content of legitimate interest and perceived as an identical concept. The author also notes that legitimate interest is not a permission since the source of its occurrence is not only the will of the state but also the personal aspirations of the subject or the needs of the territorial community that exist objectively related to the very nature of the person, and their protection in some cases it can be manifested in

the form of self-defence. That is, the state permit for such interests is not the primary one. They are provided by the state and come into legal significance only in the case of significance for a person and society (Lychenko, 2011). We cannot agree with a scientist because the process of awareness, analytical treatment, and psychological assessment by a person of his desire is not an obstacle to the formulation of the notion of legitimate interest through the term "desire". The use of the latter involves taking into account the psychological attitude of the person to the realization of their own needs by obtaining certain benefits. In addition, legitimate interests are closely linked to normative law. Not prohibited by law, the desire of the participants in the legal relationship is the content of legitimate interests. In other words, it is not forbidden to always allow for aspirations. However, explicit legal permissions do not cover all the legitimate interests of the parties to the legal relationship. Legitimate interests are, first of all, general permits arising from the content of legal acts. Consequently, it is not a mistake to define the concept of "legitimate interest" as a legal decision, which is not directly specified in the law.

The most complete definition of legitimate interest was given by the theoretician A. V. Malko. The latter considers it as reflected in objective law or as a result of its general meaning, and to a certain extent guaranteed by the state of a simple legal permission expressed in the aspirations of the subject to use a particular social benefit, and also in some cases to seek protection to the competent authorities to meet their own needs, which do not contradict the public (Malko, 1999, Malko, 2000). A supporter of this position V. V. Subochev adds that the interests, for which the subject seeks to enjoy a particular social good and, in some cases, seek protection from the competent authorities, should not contradict the rules of law (Subochev, 2009).

In our view, the needs or interests to which the person seeks to be satisfied must comply not only with the norms of law but also with his principles. Therefore, a substantial addition to the signs of legitimate interest are indications contained in the content of the decision of the Constitutional Court of Ukraine, adopted in the case on the constitutional petition of 50 people's deputies of Ukraine regarding the official interpretation of certain provisions of part one of Article 4 of the Civil Procedural Code of Ukraine (a case concerning the protection of law interest). In this case, the Constitutional Court has ruled that the needs for satisfaction of which the person's aspiration to use a concrete material and/or immaterial good is directed must be consistent not only with public interests but also with the Constitution and laws of Ukraine, justice, integrity, reasonableness, and other general principles (Decision of the Constitutional Court of Ukraine, 2004).

Thus, the legitimate interest is reflected in the legislation and follows from its general meaning. It is guaranteed to a certain extent by the state bodies and

is expressed as a simple legal permission in the person's aspirations to use a concrete good and, if necessary, to seek protection from the judiciary in order to meet their own needs, which do not contradict the public interests, the Constitution and laws of Ukraine, justice, reasonableness, completeness, objectivity, equality, competitiveness, and other principles of law.

Taking into account the signs of the legitimate interest concept and the views on the definition of the content of economic interest described above, one can define the notion of legitimate economic interest.

#### 4. Conclusions

1. The analysis of theoretical ideas about the concept of economic interest shows that scientists do not include legal features, which confirm the legality and legitimacy of economic interest, in its content. The inclusion of legal features in the definition of economic interest causes the definition of the concept of legitimate economic interest.

2. Legitimate economic interest is reflected in the legislation and follows from its general meaning. It is a simple economic permit, which is guaranteed, to a certain extent, by state bodies, and is expressed in the economic aspirations and economic actions and relations of a person concerning the fact of using of a particular economic good on the basis of the implementation of economic choice, which result is to change the economic situation of the person. As well as, if necessary, this simple economic permit is expressed in seeking protection from the judicial authorities in order to satisfy their own economy's needs, which do not contradict the public interests, the Constitution and laws of Ukraine, justice, reasonableness, fullness, objectivity, equality, competitiveness, and other principles of law.

Prospects for further developments in this direction may be the following: determination of the ratio of legitimate economic interest and economic law; disclosure of peculiarities of legitimate economic interest realization.

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# IMPROVING THE METHOD APPROACH TO THE RATING EVALUATION OF EMPLOYEES AS PROFESSIONAL CAREER DEVELOPMENT

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**Abstract.** Theoretical and methodical aspects of rating performance appraisal of academic workers of higher educational institutions are the object of research. The purpose of the article is to study peculiarities of the functioning of institutions of higher education and to improve processes of rating assessment of employees as a part of the development of professional careers. Methodological basis of research consisted of scientific works of domestic and foreign scientists and leading specialists, statistical and analytical materials of state authorities. Results are obtained through the use of methods: statistical and economic – to determine the peculiarities and trends of the development of institutions of higher education in Ukraine; economics and mathematics – to study the impact of the main indicators of activity and performance of higher education institutions and purchasing power of the population on the total volume of gross domestic product; abstract-logical – for theoretical generalization and formulation of conclusions. The results of the conducted research testify to the necessity of introducing a set of measures for optimization of labour costs for scientific and pedagogical workers of higher education institutions without worsening the quality of provided educational services. It has been revealed that the lack of a sound methodological approach to employee rating and appropriate means of motivation for professional development can lead to the loss of existing intellectual potential and competitive positions of higher education institutions in the market for educational services in general. To maintain the existing intellectual potential justified the introduction of an organizational and economic system for optimizing labour costs, which should consist of the following five main stages: collecting information, processing information received using expert and econometric and mathematical models, calculating the predictive values of factors and productive indicator, development of measures and directions of optimization of labour costs, development of a system of planning career development of personnel. With the introduction of a rating assessment of the activities of academic workers and its attachment to the development of professional careers, it is necessary to avoid possible professional burnout due to overload. A further study of the mechanism of determining the optimal predictive model, taking into account the influence of the shadow sector on the official statistical indicators of the development of the economy and the educational sector, in particular, deserves further study.

**Key words:** academic workers, rating estimation, professional career, pay, coefficient of competence, multiple linear regression.

**JEL Classification:** M12, M54

## 1. Introduction

In today's operating conditions, the most important task of ensuring the effective operation of business entities of all forms of ownership is the permanent introduction of measures to optimize production costs without degrading the quality of made products, work performed, services rendered.

The absence of the necessary sources of financing for the development of the educational sector in the state and local budgets, reducing the purchasing power of the population and, consequently, reducing the number of potential students and listeners, and optimizing the costs of economic activity, also need domestic institutions of higher education.

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Taking into account that the largest share of the costs related to the functioning of higher education institutions is borne by the expenses of the payment of the work of pedagogical and scientific and pedagogical workers, one of the main directions of their optimization is the definition of a reasonable number of employees for the provision of quality educational services. At the same time, in order not to lose the accumulated intellectual potential, the top management of institutions of higher education should develop an effective system for optimizing labour costs taking into account the quality of educational services and the potential contingent of future students, students, postgraduates and doctoral students, with the simultaneous introduction of a phased system of career development for employees who effectively and in a timely manner fulfil the established functional responsibilities and are engaged in self-development within defined curricula and scientific international grants. The indicated determines the relevance of the topic of research, its purpose, and content.

The purpose of the article is to study peculiarities of the functioning of institutions of higher education and to improve processes of rating assessment of employees as a part of the development of professional careers.

The methodological basis of research consisted of scientific works of domestic and foreign scientists and leading specialists, statistical and analytical materials of state authorities. Results are obtained through the use of methods: statistical and economic – to determine the peculiarities and trends of the development of institutions of higher education in Ukraine; economics and mathematics – to study the impact of the main indicators of activity and performance of higher education institutions and purchasing power of the population on the total volume of gross domestic product; abstract-logical – for theoretical generalization and formulation of conclusions.

## 2. Literature review

Some aspects of the study of the labour activity of the population and the individualization of the processes of training and development of employees were investigated in analytical works of A. A. Derkach, V. H. Zazykyn & A. K. Markova (2000), V. T. Lozovetska (2015), H. Pivniak, O. Aziukovskyi, M. Trehub & A. Bardas (2017), S. O. Tsymbaliuk (2017), N. A. Tyukhtenko (2016). Improvement of the processes for managing the professional development of workers was dealt with by L. I. Beztesna & A. V. Pecheniuk (2016), O. Herasymenko (2003), B. A. Kaminskyi (2006), B. I. Mokin & Yu. V. Marymonchuk (2004), O. H. Obmok (2014), O. V. Skibitska (2004). Despite significant work, there remain problems that require additional scientific analysis, especially as regards the improvement of professional development processes,

based on the coordination of the interests of the institution of higher education and career strategies of the individual through the introduction of objective rating assessment.

## 3. Development of an organizational and economic system for the optimization of labour costs

Improvement of processes of professional career development of personnel, including academic workers of higher education institutions, is one of the most important elements for ensuring the effective operation and development of business entities of all forms of ownership. The lack of a well-founded system for assessing business activity and proper means of motivation at each stage of a scientific and pedagogical career can lead to the loss of incentives by subordinate employees to permanent self-improvement and qualitative and timely implementation of their assigned functional responsibilities. At the same time, in the conditions of the total lack of funds in the State Budget of Ukraine for the development of the educational sector, for the maintenance of the existing intellectual potential, the primary introduction of a substantiated organizational and economic system for optimizing labour costs is necessary.

The said system should have the following five main stages: collecting information, processing received information using expert and econometric and mathematical models, calculating predictive values of factors and the effective indicator, developing measures and directions for optimizing labour costs, developing a system for planning a career development (Figure 1).

## 4. Analysis of the performance indicators of higher education institutions

Using the knowledge and experience of the leading experts of the educational sector, local authorities, budgeting enterprises and organizations of Kherson (Kherson region, Ukraine), the influence of the main indicators of activity and efficiency of institutions of higher education and purchasing power of the population on the total volume of the gross domestic product was investigated. According to respondents' opinion, the following indicators have the greatest influence on the total gross domestic product: the average number of economically active population aged 15-70; number of graduates from higher education institutions; the number of persons who graduated from the postgraduate study; the number of people who have completed doctoral studies; real wage index. The necessary materials for further processing and determining the reliability and validity of building a forecast model of development in the dynamics of 2010-2017 years is reflected in Table 1.

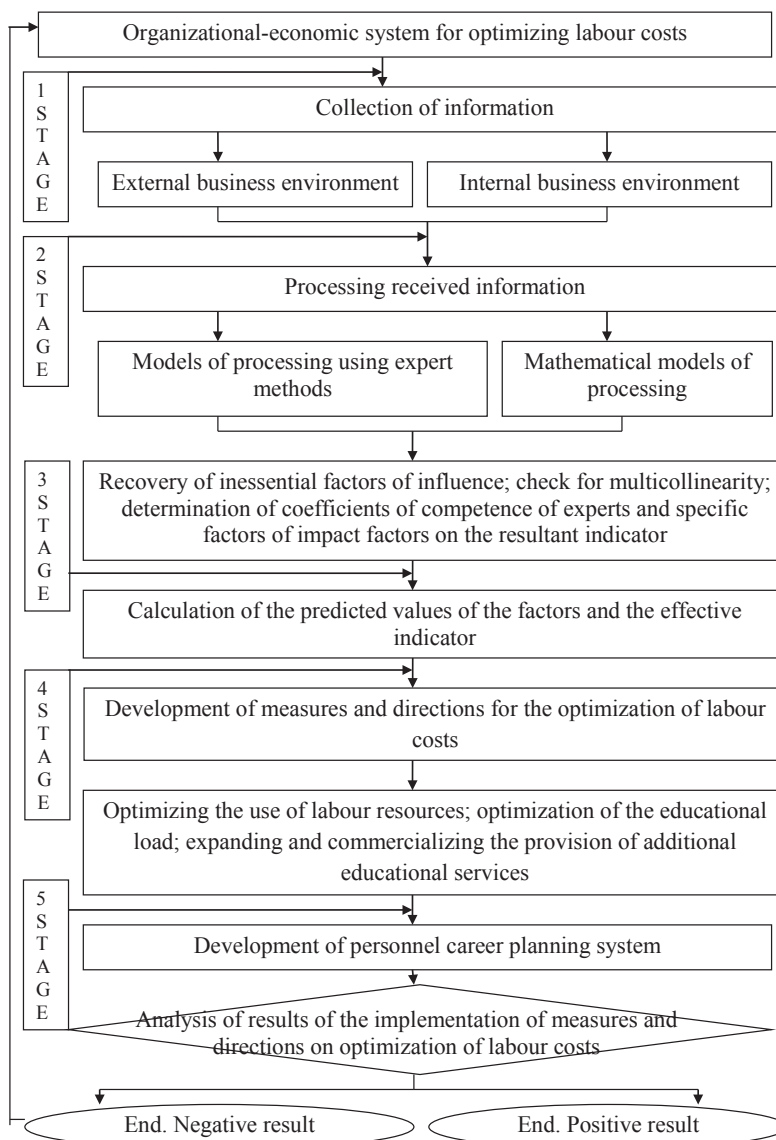


Figure 1. The organizational and economic system of optimization of labour costs

Source: developed by the authors

Table 1

**Necessary materials for further processing and determination of reliability and validity of construction of the forecast model of development in the dynamics of 2010-2017 years**

Years	Gross domestic product at constant prices in 2010, UAH million (Y)	The average number of economically active population aged 15-70, thousand persons (X <sub>1</sub> )	Number of graduates from institutions of higher education, persons (X <sub>2</sub> )	The number of persons who graduated from the postgraduate study, persons (X <sub>3</sub> )	The number of persons who completed doctoral studies, persons (X <sub>4</sub> )	Real wage index, % (X <sub>5</sub> )
2010	1079346	20894,1	636291	8092	450	110,2
2011	1138338	20893,0	609033	8350	483	108,7
2012	1141055	20851,2	595251	8292	418	114,4
2013	1140750	20824,6	560381	8075	566	108,2
2014	1066001	19920,9	484482	7597	524	93,5
2015	961821	18097,9	447418	7493	563	79,8
2016	985299	17955,1	386668	6703	551	109,0
2017	1009931	17854,4	421131	6087	543	119,1

Source: official site of the State Statistics Service of Ukraine

The formula was used for calculating the correlation coefficients; the following relationship was established between the performance indicator (Y) and the factors indicated:

-  $r_{yx1} = 0,9319$  – in accordance with the scale of the assessment of the relationship of variables, the relationship between Y and  $X_1$  is considered very high, and, therefore, the effect of this factor on the final result is significant and the figure indicated by the model should be included;

-  $r_{yx2} = 0,839$  – the connection between Y and  $X_2$  is considered high;

-  $r_{yx3} = 0,7648$  – the connection between Y and  $X_3$  is considered higher than average;

-  $r_{yx4} = -0,5691$  – the connection between Y and  $X_4$  is considered average;

-  $r_{yx5} = 0,4334$  – the connection between Y and  $X_5$  is considered lower than the average.

At the same time, calculations show that the growth of the  $X_4$  indicator (the number of people completing doctoral studies) has a negative impact on the overall performance Y (gross domestic product at constant prices in 2010). The above can be argued that in the current conditions of development of science in Ukraine, the defence of dissertation papers for obtaining a scientific degree of a doctor of sciences in most cases is a theoretical one without the possible introduction of the results obtained in the practice of domestic business entities of all forms of ownership. As a result, the growth rate of the wages of workers who successfully defended the dissertation far exceeds the rate of growth of their productivity and efficiency. In some cases, when in the dissertation papers on obtaining the scientific degree of the doctor of sciences highlight the actual issues for society and provide an effective mechanism for their solution, at the stage of preparation of the dissertation work there is "remittance" of doctoral students to foreign companies in order to ensure the further exportation of their intellectual potential abroad.

As regards the low level of influence of the index  $X_5$  (real salary index) on the performance indicator Y, this may be due to the conditions of the functioning of the domestic business. That is, an increase in the cost of labour costs may be related not to the increase in the quality of the performed functional responsibilities but to be the result of the introduction of mandatory programs for the protection of the socially unprotected population at the state level (the existence of a tax social benefit, a steady increase in the size of the subsistence minimum and minimum wages, etc.).

Also, one of the conditions for the feasibility of using this group of factors in further research is to verify the presence of multicollinearity. Using the formula to check the presence of multicollinearity between the factors, a significant correlation was found between the  $X_1$  indicator (average number of economically active population aged 15-70) and  $X_2$  (number of graduates

from higher education institutions). This is due to the fact that those who graduated from higher education institutions and do not plan to continue postgraduate and doctoral studies in the short and medium term are economically active and replenish the relevant labour market. At the same time, graduates of higher education institutions need to take into account the fact that in today's realities of the domestic labour market availability of a higher education diploma does not guarantee an individual free employment in the chosen specialty owing to the possible lack of correspondence between demand and supply in the labour market, as well as possible lack of relevance of knowledge gained conditions of intensive development of scientific and technological progress.

The calculations also revealed a low level of correlation between the real wage index and the number of persons who obtained the qualification level of a bachelor's, master's, and also a scientific degree of the candidate of sciences (doctor of philosophy), doctor of sciences. This is due to the unwarranted expectations of the indicated persons regarding the possible significant increase in their wages in the event of successful completion of the relevant training programs. Thus, in the conditions of employment outside of higher education institutions, the presence of a scientific degree of a candidate of sciences (doctor of philosophy) in the chosen direction of activity can additionally bring the individual only 5% of the size of the salary, doctor of sciences – 10%. On the other hand, in the case of employment in higher education institutions, the amount of allowances may amount to 15% and 25% respectively. However, in the context of reducing the number of potential students and students and the total lack of funds, the indicated allowance may not be charged for the payment of labour to scientific and pedagogical workers. It is also necessary to take into account that if there is a practical value of the prepared dissertation work and a high level of professionalism of a scientific figure in the chosen research direction, the level of his remuneration will be several times or even an order of magnitude higher than the average wage level in the industry. As a result, in order to minimize the cost of paying the single contribution to the Pension Fund of Ukraine (22% of salaries), personal income tax (18% of deductions from accrued wages), military salary (1.5%), trade union fees (1% in case of joining the primary trade union organization), a highly skilled worker indicated by the official payroll will receive a salary within the minimum legal level, in fact, several times or even an order of magnitude higher.

## 5. Prognostic trends in the development of the economy and the educational sector

In order to improve the quality and validity of the calculations on the impact of higher education quality indicators on the gross domestic product, taking into

account the existing link between the performance indicator and the proposed factors, multicollinearity, indicators “average number of economically active population aged 15-70 years” and “the real wage index” should be eliminated from the multiple linear regression. Consequently, the regression, according to the views of the experts and taking into account the results of the mathematical processing performed, should at least be as follows:

$$Y = A_0 + A_1 * X_1 + A_2 * X_2 + A_3 * X_3, \quad (1)$$

where Y – gross domestic product at constant prices in 2010, UAH million;

$X_1$  – the number of graduates from institutions of higher education, persons;

$X_2$  – the number of persons who graduated from the postgraduate study;

$X_3$  – the number of persons who have completed doctoral studies, persons.

$A_0, A_1, A_2, A_3$  – coefficients.

According to the data given in Table 1, the following function is received:

$$Y = 1242,46 + 0,8655 * X_1 + 27,3525 * X_2 + 797,63 * X_3$$

The calculations of the elasticity coefficients ( $E_{yx1} = 0,4205$ ,  $E_{yx2} = 0,1948$ ,  $E_{yx3} = 0,3835$ ) indicate that the greatest impact on the gross domestic product is the “number of graduates from higher education institutions”. Consequently, the leadership of institutions of higher education must first of all focus on ensuring the maximization of the quality of services rendered to this group of consumers. It is also necessary to take into account that the cost of studying on a budget form for the higher education “bachelor” (on average, about 35 thousand UAH per year) is estimated by state experts to be almost three times higher than the cost of training on a contractual basis. Introducing a phased increase in the cost of training on a contractual basis up to 35 thousand UAH per year at current prices, while simultaneously reducing the number of seats on the budget form of training can lead to a decrease in the demand for educational services of domestic higher education institutions and to increase the number of potential entrants and students who will go to obtain higher education abroad or to the leading central Ukrainian universities, reducing them most contingent of regional higher education institutions.

One can state that the fact that with the constant growth of the subsistence minimum and minimum wages, the expenses for labour remuneration of academic and service workers increased significantly during the last years. At the same time, the share of consolidated budget expenditures on higher education in the structure of total expenditures during 2010-2017 has significantly decreased. Thus, according to the results of 2017, their share amounted to 3.7%, which is respectively 0.5 pp and 2.9 pp less compared to 2016 and 2010. This indicates the urgent need to develop and implement measures to optimize the labour costs of scientific and pedagogical workers.

## 6. Development of measures and directions of optimization of labour costs

Today's realities in the development of the educational industry require top management of institutions of higher education, especially the regional level, the introduction of a mechanism to minimize labour costs by optimizing the number of pedagogical and scientific and pedagogical workers. When implementing these measures, the leadership of higher education institutions should first of all focus on the quality of services provided to applicants for higher education “bachelor” and “master”. At the same time, it is necessary to provide an optimal combination of mastering students and students with theoretical and practical skills from the chosen specialties. At the same time, the implemented complex of measures should not only preserve existing qualitative components of educational and scientific activities but also create an effective model of career development of personnel.

The development of a methodical approach to rating the activity of academic workers, which will allow taking due account of all qualitative and quantitative achievements of employees and the importance of each group of factors in the current conditions of development of the educational branch, is of paramount importance.

The organization of the preparation of processes for evaluating the activities of scientific and pedagogical workers should foresee the formation of a commission with the involvement of both leading figures from higher education institutions and specialists from state authorities, local self-government, public organizations, and leading business structures. Priority responsibilities of this commission should include the analysis of the national and regional labour market and the definition of the level of demand and requirements for the chosen specialty from potential employers; determination of the value and economic expediency of the results of scientific research carried out by academic workers in a certain area of research (participation in international grants, research projects under state orders, other projects for local contracts, obtaining foreign and domestic patents, etc.); realization of comparison of available qualitative characteristics of academic worker with requirements of the market to the level of training of specialists in the chosen specialty; transfer of qualitative results of academic workers into the overall quantitative scale of evaluation and identification of the most competitive workers in a certain segment of the educational services market, etc.

The main task of evaluating the activities of the staff is to establish indicators that can be characterized as general moments, which are equivalent to all employees of institutions of higher education, as well as norms of pedagogical and scientific activity for a particular workplace or position.



It is interesting to note that there is a Regulation on the rating assessment of the activities of the teaching staff, developed at the Kherson National Technical University (2016). According to this Regulation, the evaluation of the results of the activities of academic workers is carried out in two parts:

- constant activity (coefficient of weight is equal to 0.33), which characterizes the qualification potential of the teacher accumulated by him for all time of work;
- an active part (0,67) which takes into account professional competence, pedagogical skills, and scientific and creative activity of the teacher over the last five years.

On the example of the Faculty of Economics of the Kherson National Technical University, it was found that the average score for the teaching staff in terms of one person for the results of 2016-2017 amounted to 1174,68 points.

At the same time, if there is a scientific publication in the periodical, which is included in the scientific and metric databases Scopus or Web of Science Core Collection, a scientist and pedagogue will receive only 75 points for each publication, which is 6.4% of the average score in the calculation per person. This is despite the fact that the state executive authorities together with the top management of institutions of higher education try to establish a close connection between the number of allocated places on the budget form of training and the number of publications of academic workers in periodicals that are included in the scientometric databases Scopus or Web of Science Core Collection. As an example, in order to increase the scientific activity of subordinates, in accordance with the March 2016 Regulations on bonuses for publications in publications that are indexed in the international scientometric databases of the Web of Science Core Collection (other than the Emerging Sources Citation Index) and (or) Scopus (National University of Kyiv-Mohyla Academy, 2016), President of the National University of Kyiv-Mohyla Academy carries out a corresponding bonus of the university employees. The amount of the bonus is calculated for each publication separately, and when determining its size, account is taken: the number of publications by the employee in the publications included in the scientometric databases Scopus and Web of Science Core Collection (except Emerging Sources Citation Index); number of co-authors of publications; quartile magazine according to Scopus's scientometric databases and/or Web of Science.

Taking into account the specifics of the functioning of certain structural subdivisions of the Kherson National Technical University, the results of the conducted assessment can show fundamentally different values among the academic staff of individual departments, which, at the same time, may not be related to the quality of the provided

educational services and functional responsibilities that are performed. The above may arise due to the lack of opportunities at the state and regional level to publicize and test the results of research conducted. In order to eliminate these shortcomings in the system of evaluation and creation of a universal university rating, it is necessary to introduce a mechanism for the transfer of activity indicators within each structural subdivision into a single comparative coefficient and compare only the obtained values with the indicators of other units.

Also, in the developed Regulations on the rating assessment of the teaching staff, the level of practical and professional training of academic workers outside the institutions of higher education is almost ignored.

Therefore, in order to improve the quality and validity of the results, a working group is proposed for the development of the relevant Provision, which would include representatives of public authorities, non-governmental organizations, and leading business structures of the respective administrative-territorial unit. It is also necessary to introduce a substantiated methodology for determining the proportion of each of the areas of scientific and pedagogical activity by taking into account the coefficients of competence of each of the experts involved.

To calculate the coefficient of competence of experts, we propose the use of the following formula, developed in previous studies (Tyukhtenko, Makarenko, 2016):

$$C = \frac{\tilde{N}_1 + \tilde{N}_2 + \dots + \tilde{N}_n}{n}, \quad (2)$$

$C$  – coefficient of competence of experts;

$C_1$  – coefficient, which is assigned depending on the work experience (occupied position);

$C_2$  – coefficient, which is assigned depending on the existing level of education, scientific degree;

$C_n$  – coefficient, which is assigned depending on the  $n$ -factor;

$n$  – the number of factors on which the qualification level of experts is evaluated.

As an example, for conducting an evaluation of the activities of the academic staff of the Faculty of Economics and Management of the Kherson State University (Kherson, Kherson region, Ukraine), it is proposed to set up an expert commission, which will include: Deputy Director of the Department of Economic Development and Trade of the Kherson Regional State Administration – Head of the Department of Analytics, Planning and Information Compilation, Master's degree, two higher educations (Expert № 1); Head of the Department of Personnel Management of the Main Directorate of the State Fiscal Service of Ukraine in the Kherson region, the Autonomous Republic of Crimea and Sevastopol, Master's degree, and two higher educations (Expert № 2); Vice-Rector of Kherson State

University for Educational and Scientific-Pedagogical Affairs, Candidate of Economic Sciences, Associate Professor (Expert № 3); Dean of the Faculty of Economics and Management, Kherson State University, Doctor of Economics, Associate Professor (Expert № 4); Head of Kherson Regional Inter-Branch Council of Trade Unions, Master's degree, two higher educations (Expert № 5); Director of the leading industrial enterprise of "Amalteya" Ltd., Master's degree, two higher educations, Postgraduate Student of correspondence form of study in specialty 051 "Economics" (Expert № 6); Director of the leading industrial enterprise of the leather factory "Platan LTD", Master's degree, two higher educations (Expert № 7); Chairman of the Board of the Public Organization "Business Association "MY-KHERSONTSI", Master's degree (Expert № 8).

Given that each commission expert has a different level of education, experience and, as a consequence, different positions, it is proposed to calculate the competence ratios of commission members in the following way. To calculate the coefficient, which is assigned according to the existing level of education ( $K_1$ ), we propose to use the following scale of assessment: persons with the lowest degree of higher education "bachelor" receive 1 point. For all others, their score level of assessment will increase depending on the interval of study, that is: for those with a higher education level "specialist" – 2 points, "master" – 3 points, "candidate of sciences (Ph.D.)" – 6 points, "doctor of sciences" – 8 points. For individuals with two or more higher educations, there are postgraduate students or doctoral students plus one additional score.

In order to calculate the coefficient, which is assigned depending on the work experience (position held) ( $K_2$ ), it is proposed to take into account not only the experience of the work profile of the work group but also the scale of the managerial activity of the expert (the number of subordinates, the production capacity of the departmental subdivision and the subject of management in general, etc.).

Taking into account that among the main requirements for obtaining the academic title of associate professor and professor, there is the presence of the corresponding scientific degree and work experience, and also that the indicated qualitative components of an academic worker are taken into account in the subsequent career growth and are attributes of directly scientific and pedagogical activities, their additional consideration when evaluating the competence of experts is inappropriate.

Table 2 gives an example of the calculation of the competence coefficients of the experts of the proposed working group for the development of the Regulations on the rating assessment of the teaching staff.

Table 2

**Calculation of the coefficients of competence**

Expert	Mark	$K_1$	Mark	$K_2$	$\frac{\sum \dot{E}}{2}$
№ 1	4	$\frac{4}{38}$	4	$\frac{4}{31}$	0,117148
№ 2	4	$\frac{4}{38}$	3	$\frac{3}{31}$	0,101019
№ 3	6	$\frac{6}{38}$	5	$\frac{5}{31}$	0,159592
№ 4	8	$\frac{8}{38}$	2	$\frac{2}{31}$	0,137521
№ 5	4	$\frac{4}{38}$	5	$\frac{5}{31}$	0,133277
№ 6	5	$\frac{5}{38}$	6	$\frac{6}{31}$	0,162563
№ 7	4	$\frac{4}{38}$	4	$\frac{4}{31}$	0,117148
№ 8	3	$\frac{3}{38}$	2	$\frac{2}{31}$	0,071732
Amount	38	1	31	1	1

Source: developed by the authors

The example of determining the competencies of the experts in Table 2 allows taking into account the individual level of practical and scientific training of each of the respondents and reducing the level of error when using the intuitive group of methods.

At the next stage, it is necessary to define a range of indicators, which allow conducting an assessment of the effectiveness of the activities of scientific and pedagogical workers to build a relationship between the indicated indicators and the professional career of the individual. In our view, the key indicators by which evaluation of academic workers of institutions of higher education in economics and management can be divided into two groups are: qualitative (communication skills, leadership skills, persistence, timeliness of the executed decisions, complexity of functional duties, activity and initiative at work, etc.) and quantitative (work experience in the profile and in institutions of higher education, level of education, average academic load, participation in R&D, average duration of the course overseas internship; total volume of trained papers (in printed sheets) over the last five years: publications in periodicals included in Scopus science and metric databases or Web of Science Core Collection; publications in scientific journals included in the list of scientific journals Ukraine, or in a foreign peer-reviewed scientific publication, teaching and methodological works, monographs, abstracts, author's programs, etc.).

Taking into account that all groups of indicators are important in assessing the effectiveness of subordinate employees, the expert group established should determine the specific weight of the influence of each of the factors on the overall performance indicator, in this case, on the level of competitiveness of the academic worker. As an example, you can propose to use their rankings by each of the experts from greater to smaller in the following way:

Expert number 1: factor 1 > factor 2 = factor 3 > factor 4 = ... > factor n  
 Expert number 2: factor 4 > factor 3 = factor 1 > factor 2 = ... > factor n  
 .....  
 Expert number 8: factor 3 > factor 4 = factor 2 > factor 1 = ... > factor n

Using the calculated coefficient of competence and evaluating the score of each of the factors (depending on the determined range of fluctuations between factors), it is necessary to determine the relative importance of each of them for the level of competitiveness of the academic worker.

The next step is to conduct an individual assessment of academic workers for each of the identified factors. For a qualitative group of indicators, it is suggested to use point assessment using the following method: from 1 (not developed quality) to 10 (significantly improved quality).

The next step is to use a two-step technique, and this will allow all metrics to be translated into a single measurement scale. In the first stage, the rating assessment is carried out on the basis of the calculation of relative deviations of the indicators of each employee from the best values of such indicators of other employees of this area of research by the formula:

$$R_j = \frac{X_{\max} - X_{ij}}{X_{\max} - X_{\min}}, \tag{3}$$

$R_j$  – rating of a specific academic worker for each of the indicators that characterize a separate scientific and pedagogical component;

$X_{ij}$  – the value of the  $i$ -th  $j$ -th employee figure;

$X_{\max}$  – the maximum value of the  $i$ -th indicator;

$X_{\min}$  – the minimum value of the  $i$ -th indicator.

At the second stage, the overall rating of a particular employee is determined on all indicators, taking into account their specific weight of influence on the resultant factor, using the formula:

$$R_{cpj} = \sum R_j * q_{ij} \tag{4}$$

$q_i$  – the specific gravity of the influence of the  $i$ -th indicator in the aggregate of the indicators on which the calculation is performed.

The results of the calculation determine the place of a particular employee in the ranking of the selected group of indicators. The best one is a worker whose rating value is the lowest.

Table 3 provides an example of calculations of the values of the rating assessment of academic workers.

Also, with the introduction of a rating assessment of the activities of academic workers and its attachment to the development of professional careers, it is necessary to avoid possible professional burnout due to overload.

For managers of institutions of higher education, the permanent development and implementation of a set of measures to improve the management of time resources are also one of the main directions for increasing the efficiency of activities through the growth of labour productivity and more efficient use of existing productive assets.

### 7. Conclusions and recommendations for further research

The results of the conducted research testify to the necessity of introducing a set of measures for optimization of labour costs for academic workers of institutions of higher education without worsening the quality of provided educational services. To maintain the existing intellectual potential justified the introduction of an organizational and economic system for optimizing labour costs, which should consist of the following five main stages: collecting information,

Table 3

An example of calculations of the values of the rating assessment of academic workers

Academic worker	Work experience by profile, month	Coefficient	Experience in higher education institutions, m.	Coefficient	Education, points	Coefficient	.....	The overall ranking is based on the specific gravity of the factors	Place
№ 1	82	0	69	0,89	7	0,25	...	0,127	1
№ 2	0	1	131	0,565	6	0,5	...	0,282	4
№ 3	40	0,512	123	0,607	8	0	...	0,138	2
№ 4	0	1	239	0	6	0,5	...	0,225	3
№ 5	52	0,366	48	1	4	1	...	0,305	5
Specific gravity of factors	0,15		0,1		0,15		...		
	Max = 82		Max = 239		Max = 8		...		
	Min = 0		Min = 48		Min = 4		...		

Source: developed by the authors



processing information received using expert and econometric and mathematical models, calculating the predictive values of factors and productive indicator, development of measures and directions of optimization of labour costs, development of a system of planning career development of personnel. It has been revealed that the lack of a sound methodological approach to employee rating and appropriate means of motivation for professional development can lead to the loss of existing intellectual potential and competitive positions of higher education institutions in the market for educational services in general.

In order to improve the quality and validity of the results, a working group is proposed for the

development of the relevant Regulation, which would include representatives of public authorities, non-governmental organizations and leading business structures of the respective administrative-territorial unit. It is also necessary to introduce a substantiated methodology for determining the proportion of each of the areas of scientific and pedagogical activity by taking into account the coefficients of competence of each of the experts involved.

A further study of the mechanism of determining the optimal predictive model, taking into account the influence of the shadow sector on the official statistical indicators of the development of the economy and the educational sector, in particular, deserves further study.

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## ORGANIZED CRIME IN THE FINANCIAL SYSTEM: FOREIGN EXPERIENCE

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**Abstract.** *The aim of the article* is to analyse combating organized crime in the financial system of Ukraine and abroad; develop specific proposals to optimize the legislative provision of such activities on the basis of the study of positive foreign experience with a view to its further implementation into the relevant legal regulations of our state. *The subject of the study* is the interrogation of legal regulations of leading foreign countries that regulate the issue of combating organized crime in the financial sphere, the principles of the activities of these countries' respective organizations aimed at counteracting organized crime in the financial system, as well as state mechanisms for countering organized crime in the US financial system, European and other countries. *Methodology.* The study is based on general scientific and special-scientific methods and techniques of scientific knowledge. The dialectical method enabled to formulate the definition and determine the essence of the subjects in the system of combating crime, as well as mechanisms of anti-shadowing of the Ukrainian economy. The normative-dogmatic method enabled to interpret the content of legal regulations of domestic legislation that regulate the issue of organized crime in the financial system. The comparative legal method enabled to compare doctrinal approaches to the issue of organized crime in the financial system of Ukraine and abroad. The same method was used to analyse legislation of foreign countries regarding the issue under the study. Methods of analysis and synthesis enabled to study individual units of the institute of organized crime in the financial system. The sociological method was used to evaluate the results of the survey, conducted among employees of the National Police of Ukraine, on the need to take into account foreign experience in counteracting organized crime in the financial system. The method of legal modelling allowed making proposals regarding the improvement of the institute for combating organized crime in the financial system of Ukraine. *Practical implications.* The analysis of foreign experience of police activity, as well as special bodies and organizations, in combating organized crime in the financial system, carried out on the basis of a comparative legal study of principles, provided for in the international legal documents and their use in the police activities of democratic states, determined the expediency of their implementation in the police activities of the bodies of the National Police of Ukraine. *Relevance/originality.* The study proved that the legal basis for combating organized crime in the financial system of the examined states is the constitution and national laws, as well as specialized legal regulations, which define the status, rights and duties, the responsibility of employees of special subjects in combating organized crime in the financial system. In addition, in foreign countries, competencies are clearly distributed between national and special authorities to exclude duplication of powers. In view of the proved necessity of creating an effective system of counteraction to organized crime in the financial system of Ukraine, positive foreign experience implementation can become the driving force to strengthen the rule of law and legal order in our state.

**Key words:** foreign experience, organized crime, financial system, state security.

**JEL Classification:** F52, P43

### 1. Introduction

Ukraine declared its desire to enter the European Commonwealth of developed democracies, which have high standards of safety, well-being and standard of living of people, as well as the priority of human rights, the rule of law, and ensuring the inevitability of punishment

for those who committed a crime. Strengthening democratic institutions is impossible without reducing the negative effects of corruption and organized crime, which remain one of the greatest threats in our country today (Yevropeyskyi dosvid...).

Today, the state of the Ukrainian economy, transformations and processes that have taken place in the

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past, and especially in recent years, convincingly testify that the solution of the problems of socio-economic development has become strategic and global, has become one of the most important in the state. The overcoming of crisis phenomena, the struggle with the consequences of the global financial crisis, and the transition to sustainable economic growth require further elaboration of mechanisms for regulating the economy both at the state and at the regional level (Ruden). Legal instruments of a market economy began to be used extensively for the purpose of unlawful enrichment of certain segments of the population. As a result of the operation of the extensive network of fake business entities and their highly organized informal associations – converting centres annually suffer multimillion losses by the state, citizens, and legal entities. A fictitious enterprise appears as a tool for committing a whole range of mercenary crimes (tax evasion, smuggling, fraud with financial resources, etc.) (Hryhorovych, 2018). This situation is related to the fact that crime adapts to the transformations of the socio-economic structure of society and dynamically reacts to social and legal control in order to avoid it (Hryhorovych, 2018).

Therefore, economic crime is becoming an increasingly problematic, threatening phenomenon for Ukraine as an independent and young sovereign state. Existing long-standing imperfect economic relations are used by criminals to parasitize the body of a society, to secure significant own material revenues at the expense of non-payment of taxes, corruption, fraud with financial resources, legalization by means of “money laundering”, occupation of prohibited types of economic activity, direct encroachment on all forms of property, and committing other crimes of economic orientation. Certainly, such acts should not and do not remain without a proper response from the state; they oblige their law enforcement agencies to carry out an uncompromising struggle with them (Tokarchuk, 2013).

The problem of counteracting organized crime in the financial system by a specialized body is theoretically allegedly solved – scientific works on the international experience of the creation and functioning of the relevant specialized bodies are enough. At the same time, attention is drawn to the lack of a systematic analysis of the feasibility of establishing such a body in Ukraine, taking into account Ukrainian specificity. Insufficiently highlighted is the question of the place and role assigned to the State Bureau of Investigations among other law enforcement agencies, including pre-trial investigation bodies. The problem is also compounded by the weakness of the financial control system in Ukraine and the CIS countries, in which it is virtually impossible to establish the origin of cash, large amounts are in circulation in cash (Tokarchuk, 2013).

In this regard, the study of foreign experience in the fight against organized crime in the financial system is becoming especially urgent today, which led to the selection of the relevant topic.

A significant contribution to the study of the problem of counteraction to organized crime in the financial system was made by foreign and domestic scientists: V. Volynets, P. Grigorovich, O. Juga, S. Dmitrov, L. Dolia, S. Egorichev, A. Yezhov, Zh. Zhukovsky, M. Zhuravel, F. Zhuravka, Y. Kobko, V. V. Kovalenko, S. Kravchuk, L. V. Krivonos, I. Lapinsky, O. Litvinov, M. Martynov, V. Muntian, O. Onyshchuk, S. Onishchenko, I. Osyka, S. Pavlenko, A. Parshutin, L. Polovinsky, A. Repecka, V. Ruden, V. Sevruk, S. Shandruk, O. Tokarchuk, N. Chorna, R. Chornyi, O. Shostko, O. Yunin.

The purpose of the article is to analyse the counteraction of organized crime in the financial system in Ukraine and abroad, as well as to develop concrete proposals to optimize the legislative provision of such activities by special international law enforcement agencies in the fight against crimes committed in the financial system by organized groups and criminal organizations.

## 2. Presenting the main material

The financial sector claims to be the undisputed global leader in economic globalization. The volumes of financial transactions have increased significantly and now dozens of times greater than the volume of trade turnover. Under the conditions of financial globalization, the market orientation of banks has intensified; the influence of new participants in financial markets – pension, investment, hedge funds, insurance companies, brokerage firms and others – has increased. In the end, financial globalization has contributed to the emergence of new opportunities for banks and increased the risks in their activities (Valiutne rehuliuвання ta kontrol).

The main elements of the financial system are: national finances; local finance; finances of subjects of management of all forms of ownership; non-productive business finance; finances of the population; financial market; financial infrastructure.

Taking into account the main elements of the financial system in the current conditions of the functioning of the world economy, each country tries to achieve a high level of socio-economic development. As the processes of globalization give rise to increasing demands on the parameters of the national economy, Ukraine must develop a strategy for its development that can adequately reflect our state (Chorna, Chornyi, Shandruk; Yunin, Sevruk, Pavlenko, 2018) and counteract organized crime in the financial system.

Relevant radical socio-economic transformations that have taken place over the last decade have caused both positive and negative changes in modern Ukrainian society (Pavlenko, Sevruk, Kobko, 2017), which promotes the introduction of foreign experience in combating organized crime in the financial system at all levels by state and law enforcement agencies of Ukraine.

The analysis of the main approaches to the definition of mechanisms for the shadowing of the Ukrainian economy

provides grounds for arguing that the main mechanisms, according to scientists, are economic (improving the tax system, reforming the national financial control system, stimulating investment processes, creating favourable conditions for entrepreneurship development, fighting corruption, etc.) It is necessary to agree with the opinion of S. O. Pavlenko that corrupted ties, which are closely regulated in the legislative, executive, and judicial authorities, lead to the establishment of their dependence on criminal structures, which ensures the adoption of necessary decisions for them, in violation of current legislation or existing social norms (Pavlenko, 2016).

Correctly, in our opinion in this regard, O. Onyshchuk notes: the effectiveness of measures to combat crime largely depends on achieving their uniformity within a coherent and consistent unified European policy. This condition is becoming more and more necessary in the face of such phenomena as organized crime, which is often international in nature, in the face of which national systems may prove ineffective. In modern Europe, where the boundaries between countries disappear, one cannot but consider the police and its powers in the international perspective. The problem is how effective the police are in the fight against crime, which increasingly crosses the state borders, including organized crime (Onyshchuk, 2011).

The current organized crime in the financial system not only poses a danger to the national interests of individual states but also represents a direct threat to international security, since it has become transnational in nature. First of all, it concerns countries with an unstable socio-political and economic situation that are at the stage of economic and political transformation, which includes Ukraine (Pohoretskyi, 2007; Pavlenko, 2017).

The leaders of organized criminal groups are paying particular attention to searching and establishing connections among corrupt officials engaged in law enforcement, regulatory activities in the economic sphere, judges, local authorities, and other officials competent to make important for organized crime solutions. This contributes to the increase in the number of corrupt officials who hold a responsible position. It should also be taken into account that corruption is characterized by a high level of latency (Dzhuzha, 2007; Pavlenko, 2013).

In the course of the research, during the questioning of the bodies of the National Police of Ukraine, it was established that 91% of our state should take into account foreign experience in combating organized crime in the financial system. Also, at this poll of respondents, the question was asked: the experience of foreign countries you would have taken for the implementation of the bodies of the National Police of Ukraine, which received the following answer: the United States – 21%; Great Britain – 19%; Poland – 15%; Switzerland – 13%, Italy – 11%, France – 11% and 10% fell on the experience of other countries.

Therefore, taking into account the survey conducted, we will analyse the experience of the abovementioned countries, since practical workers are interested in exactly

which entities carry out counteraction to organized crime in the financial system and regulate such activity by legal acts. Taking into account the above, we will provide reasoned conclusions regarding the implementation of positive foreign experience for Ukraine.

Consequently, the actors of counteraction to crime form a holistic in a functional and organizational relation system, connected by the common purpose and management in the field of counteracting crime. The complexity of this system is due, on the one hand, to the multifaceted tasks of ensuring security, prevention, termination, disclosure, and investigation of crimes and, on the other hand, the division of tasks between subjects of different levels, which is conditioned by the hierarchical construction of the system. This system is a complex social organization because the groups of homogeneous organs entering into it form relatively independent organizational formations that function on the basis of identical laws. Each of these formations is a subsystem of a larger system and at the same time consists of its subsystems (Lytvynov, 2015; Sevruk, 2017).

It should be noted that one of the most effective instruments of shadowing in many countries of the world is, first of all, systems and mechanisms for financial control over proceeds of illegal origin. For example: a) in Italy, a government decree introduced a ban on cash payments for large sums; b) in Germany, a mandatory declaration of settlements with non-residents has been introduced; c) in Japan – mandatory financial monitoring (financial institutions are obliged to notify authorized public authorities about major financial transactions). In addition, in Germany, reporting of suspicious transactions to financial monitoring bodies should not only banks and financial institutions but also lawyers, auditors (Muntian, 1999; *The Financial Times*, 2011; WEU Council of Ministers, 1995; Onyshchenko, Lapinskyi, 2013).

So moving on to the coverage of the tasks, we will first analyse international special bodies and organizations that combat organized crime in the financial system. Today, there are many special law enforcement agencies, but we consider it necessary to distinguish between the three most effective ones that combat organized crime in the financial system.

Such international law enforcement organizations are primarily the International Criminal Police Commission (Interpol), the European Police Office (Europol), the Office for the Coordination of the Fight against Organized Crime and Other Dangerous Types of Crime on the Territory of CIS member-states (OCFAOC).

The existence of such structures can be defined as one of the organized responses of the world community to the illegal activities of such groups. At the regional level, the most developed such cooperation in Europe is the European Police Office (Europol) and the CIS countries – the Office for the Coordination of the Fight against Organized Crime and Other Dangerous Types of Crime on the Territory of CIS member-states



(OCFAOC), in other geopolitical regions issue the creation of such organizations remains open. However, despite existing international acts of various levels and the work of international law enforcement organizations, the problem of combating transnational organized crime remains a worldwide issue (Etnicheskaia orhanyzovannaia prestupnost; Sevruk, 2018).

Europol is currently coordinating the work of the police services of all 28 European Union member states. Unlike national police forces, Europol does not have its own investigative bodies. Europol works closely with law enforcement agencies in 28 EU Member States and other non-EU partner countries and countries such as Australia, Canada, the United States, and Norway (Yevropol). Also, Europol has a relationship with the EU member states and with organizations that interact with Europol on the basis of cooperation agreements: Albania, Australia, Canada, Colombia, Iceland, Norway, Switzerland, Interpol and US law enforcement agencies: Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Drug Enforcement Administration (DEA), United States Secret Service (USSS); Federal Bureau of Investigation (FBI); Immigration and Customs Legislation (ICE), and the Internal Revenue Service (IRS). This network has secured communication channels provided by Europol. In addition, Europol has two liaison officers deployed to Washington DC (USA) and Interpol Headquarters in Lyon, France (Yevropol).

The prospects for Ukraine's cooperation with Eurojust, the collective body of the EU, which aims to assist member states in the investigation of crimes and accelerate the coordination of the work of the competent authorities (those performing investigative functions), should also be taken into account. For Ukraine, it is important that Eurojust, for the fulfilment of its tasks, is authorized to conclude agreements and establish cooperation with third countries that are not EU members. Taking into account that the assistance and support of Eurojust in the criminal prosecution of criminals, members of organized communities, which it provides at the request of the countries, promotes the eventual disposing of organized groups and criminal organizations, the signing of the relevant international agreement with this organization is of the utmost importance. Moreover, the EU working bodies urge States to expand operational cooperation between the competent authorities, especially within the framework of bilateral and multilateral mechanisms and agreements (Further).

It is these aspects of the prevention of organized crime in the financial system, in particular, the transnational nature, reflected in the United Nations Convention against Transnational Organized Crime, which defines the following directions for combating organized crime in the financial system of the world:

The first area includes strategies to restrict the possibilities of committing criminal activity by reducing the existing or future opportunities for organized crime groups to operate on legitimate markets with the use of

proceeds of crime through legislative, administrative, and other measures (paragraph 2, Article 2 of the Convention) (Konventsia OON).

The second direction within the framework of crime prevention strategies is the need to reduce the level of vulnerability of the lawful economy in order to prevent the possible penetration of organized criminal organizations into it. Organized crime seeks to penetrate the lawful economy for a number of reasons, for example, in order to: a) legalize and invest the proceeds of crime; b) acquire respectability and social rehabilitation for "their" people – members of organized communities; c) gain control over the territory in which criminal groups carry out their operations to obtain maximum economic and political benefits and minimize the risk of detention, arrest, and conviction (referred to as "law-enforcement risk") (Repetskaia, 2001).

In implementing this strategic direction, it must be taken into account that the success of its implementation provides for the optimal combination of regulation and deregulation measures.

In 2004, the Council of Europe (within the framework of the Octopus program) published the "Review of the Model Case of Organized Crime (BPS)" prepared by the Group of Specialists on Criminal Law and Criminological Aspects of Organized Crime (PC-S-CO) (Aromaa, 2006).

Eight most effective strategies for the impact of organized crime (from the perspective of experts) that were implemented in different countries were selected. They are: the protection of witnesses, the transfer of the burden of proof of the legal origin of the property subject to confiscation, the offender (Shostko, 2007), listening to communication and electronic surveillance, analysis of crime through the study of its patterns and trends, international cooperation, criminalization of participation in an organized group in the material legislation, cooperation in the field of combating human trafficking, precautionary measures (so-called administrative approach (Shostko, 2008)).

Recognizing the high degree of harm caused by economic crimes to society and the world financial system, the Police Directorate of the General Secretariat of Interpol formed a department for combating financial and economic crime, which also includes a working group of the POPAC specializing in the control of income received as a result of criminal activity. The research of Flatwash Group is aimed at detecting suspicious financial transactions and money, property and property acquired in a criminal way, as well as in the CIS countries (Martynov, 2010). In some states, financial intelligence units have been formed that are integrated into the single Egmond network, which aims to intensify the exchange of information on economic crimes and the creation of a single international database of such crimes. The main attention is paid to crimes in the field of money laundering (Tokarchuk, 2013).



Given the urgency of the problems associated with money laundering, the G20 Summit in Paris in 1989 created the Financial Action Task Force (FATF).

The FATF is an intergovernmental body that develops a policy to combat the legalization of proceeds from crime and promotes its implementation at the national and international levels. The FATF consists of 29 participating countries: Australia, Austria, Argentina, Belgium, Brazil, the United Kingdom, Greece, Denmark, Ireland, Iceland, Spain, Italy, Canada, Hong Kong (China), Luxembourg, Mexico, the Netherlands, Germany, New Zealand, Norway, Portugal, Singapore, the United States of America, Turkey, Finland, France, Switzerland, Sweden, and Japan and two regional organizations: the European Commission and the Gulf Cooperation Council. The FATF cooperates with other international organizations working in this area, such as the United Nations Office on Drugs and Crime, the Council of Europe, the Asia-Pacific Group Against Money Laundering, and the Caribbean Financial Action Task Force. The FATF Secretariat is located in the Organization for Economic Cooperation and Development (OECD) (Dolia, 2001).

The main task of the FATF is to ensure that all financial centres adopt the international standards in the area of prevention, detection, and prosecution of money laundering. To accomplish this task, FATF has developed Forty Recommendations, which are international standards and constitute the basic structure of anti-money laundering measures to be applied at the global level. Forty recommendations define the general principles of action that should be reflected in the national legislation of the countries on the following issues: criminal liability, the administration of justice, the application of administrative and civil enforcement measures, the functioning of the financial system, issues of international cooperation, etc. They emphasize the need to strengthen national legal actions aimed at the counteraction to money laundering, to increase the role of the financial and banking system in this matter, and to expand international cooperation. Although recommendations are not an international binding convention, many countries have committed themselves to state regulation of the fight against money laundering.

The FATF focuses on analysing global financial flows, banking and financial systems and money laundering practices, trying to identify weaknesses in combating this phenomenon. The said body continuously monitors and analyses how the FATF member countries are faced with money laundering and processes to bring FATF legislation into line with the laws of certain countries that have expressed their support for the global effort to combat money laundering (Kryvonos, 2014).

In the case of negative findings from the results of this analysis, the FATF has the right to apply certain measures of influence that can be expressed in the country's alert, making the country a "blacklist" (the list of non-FATF countering countries), as long as to apply

recommendations on limiting cooperation with offending countries. The consequence of such sanctions may be restrictions and termination of settlements, blocking funds on correspondent accounts of banks and accounts of enterprises, closing these accounts etc. (Cabinet of Ministers of Ukraine and the National Bank of Ukraine).

In addition to the above-mentioned bodies, such as Interpol, Europol, OCFAOC, Eurojust, FATF, UN, there are also other special international organizations that coordinate work in the field of prevention and counteraction of organized crime in the financial system. Such organizations are today:

1. Egmont Group (Egmont Financial Intelligence Unit)
2. MONEYVAL – Committee of Experts on the Evaluation of Anti-Money Laundering Measures and the Financing of Terrorism.
3. Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG).
4. Basel Committee (Committee on Regulation and Supervision of Banking).
5. The Wolfsberg Group is an interbank association.
6. International Monetary Fund.
7. World Bank.
8. European Bank for Reconstruction and Development.

Consequently, after analysing the above-mentioned special bodies and organizations for combating organized crime in the financial system, one should consider the direct positive experience of the states, which effectively counteract this day.

First of all, one such state is the United States.

Professor of Chicago-Kent College of Law Philip N. Hablutzel has analysed the development of current US legislation in the area of counteraction to money laundering, including amendments made to American legislation after the events of September 11, 2001. In particular, the legal definition of the legalization of criminal proceeds was expanded, and now the crime is recognized as conducting the operation itself with funds of doubtful origin, regardless of the fact of proving a predicate crime. The criminal responsibility for the legalization of criminal "profits in the United States is established both at federal level and in each individual state, including the so-called "structuring" – the distribution of a large amount of money for small amounts in order to avoid checks by the government, which is regarded as deceit in order to hide the Riley transaction. It also expanded significantly the list of financial and non-financial institutions, which are obliged to report to public authorities about dubious financial transactions; and imposed a duty for lawyers and auditors to report suspicious financial and property transactions of their clients. Violations of these requirements impose strict civil and criminal liability, one of the types of punishment of which is a fine in the amount that can twice exceed the amount of suspicious transaction (Osyka, 2003).

For example, in the United States, special FBI units (FBI SWATs) are used to fight organized crime (gangs, syndicates, mafia) – assault groups with special army armaments that exist in each of the 56 regional branches of the FBI and use a special tactic to neutralize criminals during special operations, in which skills and abilities are beyond the reach of ordinary policemen (Volynets, 2014).

The US experience in combating legalization (laundering) of criminal profits proves the following. In the United States, the legal definition of the legalization of criminal proceeds was expanded, and now the crime is recognized as conducting the operation itself with funds of doubtful origin, regardless of the fact of proving a predicate crime. Criminal liability for the legalization of criminal proceeds in the United States is established both at the federal level and in each individual state. A separate responsibility for the establishment and for the so-called “structuring” – the distribution of a large amount of money for small amounts in order to avoid checks by the government. Such activity is regarded as misleading in order to conceal suspicious transactions (Polovynskyi, 2008).

Since the legalization of criminal proceeds consists in the implementation of any cash operations, countering the legalization is, first of all, in tracking cash flows and cashless funds. One of the most effective ways of tracking cash flow is monitoring payments. Today, in the United States, two of the most common forms of settlement are working – with checks and credit cards. Both forms of settlements are through the system of the federal reserve and the central bank, which monitor the payments with the use of checks and credit cards. The American strategy to combat money laundering cannot be called rational and rational. Despite legislative innovations, we cannot say that the federal government has managed to prosecute all illegal transactions with the money of dubious origin. In addition, the issue of interaction between law enforcement and controlling bodies is not resolved. Thus, in the strategy of the American government to combat the legalization of criminal proceeds, 10-12 different federal agencies are responsible for different directions of its implementation, and the mechanism of their cooperation is not developed (Zhuravel, 2010; Tokarchuk, 2013).

But after September 11, 2001, this law has expired, and informing banks of clients, including individuals, about the information provided to law enforcement authorities on their request, is prosecuted by criminal law. The jurisprudence goes the same way. According to the latest US Supreme Court decision, bank account information is not the information covered by the rules for the non-disclosure of private data in accordance with the 4th Amendment to the US Constitution, which cleans the privacy of a person from third-party interference. Now banks are obliged to provide law enforcement authorities with any information about their clients on the requirements of law enforcement agencies (Osyka, 2003).

The strategy of the American government to combat the legalization of criminal proceeds has also changed.

Today, it aims at combating the financing of terrorism and depriving the financial foundation of organized criminal groups. If earlier law enforcement agencies have tracked the sources of doubtful income, now focus is on the sources of their use. Recent studies conducted in the United States show that even money that has been obtained quite legitimately can be used for criminal purposes. This is especially true of the activities of various deaneries and religious organizations that collect donations and spend them on organizing terrorist acts or other criminal activities. This form of activity is very attractive to terrorists and criminals since it plays the role of a fairly effective cover. Considerable attention was paid to the detection and confiscation of hidden funds obtained as a result of criminal or terrorist activities, the prevention of the legalization of criminal proceeds and predicate crimes – the source of criminal proceeds.

Attention is also paid to the study of criminal statistics, in particular, regarding the financial analysis of legalization operations to find out the actual size of profits of specialists in the economy who advise offenders, which unofficially amounts to 4, 8 or 12% of the amount to be legalized. Today, such statistics are expressed by the amount of confiscated property and the number of persons convicted for this crime. So, in 2001, 639 moles were confiscated and in the fiscal year 2001–2002, nearly 1,000 people were prosecuted, only 50 of which were sentenced to more than 3 years' imprisonment. Professor Hablutzel called the exchange of operational information an important element in counteracting the legalization (laundering) of criminal profits. Even after the events of September 11, 2001, the United States, even the traditional rivals of the FBI and (RU) began to actively exchange data, but at the international level, this problem remains acute. Negative factors still lack trust in the agencies of individual countries and warnings about deliberate misinformation and misuse of the information received. For the development of international cooperation in this area, the Centre for the Investigation of Financial Crime, the tasks of which is to establish ties with law enforcement agencies of different states and organise information interchange with them by signing relevant international agreements and amendments to domestic legislation (Osyka, 2003).

In the UK, the first anti-money laundering provisions were contained in those related to illicit drug trafficking (1986). In 1990, this country became the first European state to ratify the Council of Europe Convention on Laundering, Search, Seizure and Confiscation of the Proceeds from Crime (Strasbourg Convention) (Yehorycheva, 2014).

For example, in the United Kingdom, individual elements of the currency control system continue to be used. Yes, there are restrictions on the circulation of currency values, control over foreign currency investment, the fight against the legalization of proceeds of crime, which involves the Joint Working Group and

the National Bank of the United Kingdom for Financial Investigations are being actively pursued.

According to the UK's experience in combating the legalization of criminal proceeds, each bank has an authorized employee responsible for complying with the requirements of banking legislation in the area of combating the legalization of criminal proceeds. Each year an authorized employee must undergo retraining on new legislation, means, and methods of counteraction in this area. A bank employee who has not taken appropriate anti-money laundering measures is liable for criminal law (Kravchuk, 2010).

In the UK, a new form of work with informants was introduced. From now on, all information related to money laundering is sent to a centralized authority. The payment for the services of informants was assumed by banks – 75% and the Ministry of Internal Affairs – 25%. This should help increase the effectiveness of combating the legalization of criminal proceeds (Tokarchuk, 2013).

According to Polish experience, in Poland in the area of combating legalization (laundering) of criminal proceeds, the legal basis is the Law "On Tax Control" and the Law "On Counteraction to the Legalization of Dirty Money", the relevant provisions of the Criminal and Currency Codes. The Law "On Tax Control" in the structure of the Ministry of Finance created the Bureau. In accordance with the Law "On Counteraction to the Legalization of Dirty Money", the Department of Finance established the Financial Information Department and entered the post of General Inspector of Financial Information, which has the status of Deputy Minister. Thus, today in the structure of the Ministry of Finance of Poland, in parallel, there are two departments: the Department of Financial Information and the Bureau of Tax Control (Zhukovska, 2008).

On July 27, 2002, a new law "On Foreign Currency" was issued in Poland, which regulates the execution of foreign exchange transactions. This law abolished all restrictions on the movement of funds between Poland and the EU countries. At the same time, the law provides for some restrictions regarding the movement of funds from non-EU countries. Currency restrictions can be removed by obtaining currency permits that are of two types: general and private. The general currency permits are issued by the Ministry of Finance, and private ones are the National Bank of Poland. The main measure of currency regulation was the transition to a flexible exchange rate and the introduction of the "free-swimming" regime in 2000. Thus, the government and the National Bank of Poland were able to solve the problem of the impossibility of combining three goals, namely: stability of the exchange rate, capital mobility, and monetary autonomy (Zhuravka, 2008).

In the structure of the Ministry of Finance, the Taxation Bureau was established, which started its activity in 1998, and after the introduction of amendments to the Law on Tax Control of June 7, 2002, the scope and functions

of the Bureau were significantly expanded through a combination of tax and customs control functions. Related staff members of the Bureau were provided with appropriate police rights, close to carrying out operational and investigative measures (Osyka, 2003).

The tax office has a vertical structure with the Main Office in Warsaw, tax offices in 16 voivodships and prefectures of tax records in the counties. At present, the Bureau employs over 350 people throughout Poland. The responsibilities of the Bureau include: counteracting violations of current legislation in the field of external and internal commodity circulation; detection of violations and crimes in the field of management of public funds and funds derived from the European Union and international financial organizations (after the accession of Poland to the European Union income from various organizations began, at the same time, there were cases of non-economic spending, embezzlement, and other means of theft of these funds); prevention of corruption of public servants of the Ministry of Finance; control over declarations of income and property status of civil servants, including employees of structural subdivisions of the Ministry of Finance; the disclosure of crimes that encroach upon Polish national culture, archival resources and intellectual property; detection of property obtained by criminal means and that which is subject to confiscation; revealing mechanisms for transporting money into the territory of Poland, which are derived from crimes; conducting analytical work on these types of crimes (Tokarchuk, 2013).

But, according to Polish experts, even the best domestic laws in the area of counteraction to legalization cannot be sufficiently effective without international cooperation since criminals are very rarely confined to the territory of one state, causing problems of a jurisdictional and organizational nature. Therefore, the domestic legislation of the states should be adapted to the needs of international cooperation, that is, to have common features. First, on the system of legal aid, as well as the exchange of information between the police, customs, and tax services. Thus, the Ministry of Internal Affairs of Ukraine and Poland have an agreement on mutual assistance, and in August 2001 a Protocol was signed on the cooperation between the Main Commandant of Police of Poland and the Ministry of Internal Affairs of Ukraine, which specified the persons responsible for separate areas of crime control, including for counteraction to legalization of money. The experience of solving current issues of operational work under the Protocol has shown excellent effectiveness of direct contacts between law enforcement officers of different states. Secondly, it is necessary to create an effective and harmonious system of extradition of criminals and property belonging to them; thirdly – to establish free access to information and documents in the territory of other states through the conclusion of bilateral agreements on the basis of reciprocity (Osyka, 2003).



In Switzerland, since 1990, articles on money laundering have been introduced into the Criminal Code, which provide for maximum sentences for this crime in the form of deprivation of liberty for a term up to three years, in serious cases – up to five years together with payment of a significant amount of monetary. In 1997, the Federal Law on Money Laundering was adopted (in other words, the Anti-Money Laundering Act), which forms a part of the legislation regulating the activities of financial intermediaries. It established the main obligations of financial institutions to counteract the legalization of criminal incomes and gave supervisors the right to elaborate detailed rules for the banking and non-bank financial market sectors. In general, this regulation envisages strengthening control over banks and other financial intermediaries, their obligation (and not the right, as was recorded in 1994) to report suspicious transactions, to conduct customer identification, and therefore means a significant restriction of banking secrecy, the law of which was adopted in 1934 (Yehorycheva, 2014).

In accordance with the requirements of the law, before establishing business relations with clients, financial institutions should identify them on the basis of valid documents, as well as identify the real beneficiaries. They also have the duty to find out the economic background and purpose of conducting unusual and suspicious transactions, to demand necessary documents from clients and to store them for ten years. The Money Laundering Reporting Office Switzerland (MROS), a federal police service, has also been set up under the Anti-Money Laundering Act. When communicating to this body about transactions for which there is a solid suspicion of their connection with money laundering or terrorist financing, financial intermediaries are obliged to “freeze” the relevant assets for a period of up to five days, while they are exempted from disclosure responsibility secrets and the consequences of such actions (Yehorycheva, 2014).

In 1995, the Italian Currency Office created a special department to combat the prevention of the use of financial institutions to launder criminal proceeds (Kolesnikov, 1999). Italy's current legislation obliges banks and other intermediary institutions to maintain detailed documentation on resident currency transactions in order to avoid attempts to launder money. Gamma-Vassali law (1990) criminalized the operation of “laundering” and for the first time in the world practice has defined the concept of “criminal organization of the mafia type.” The Italian Criminal Code provides for sentences of 7 to 12 years' imprisonment and fines. The punishment can be increased if the same actions are committed by officials while using their official position. As a result of legislative changes in 1990, the state is obliged to monitor the detection and termination of attempts to legalize criminal money. The monitoring system assumes that the transfer of any amount abroad is accompanied by the simultaneous declaration of income (Kryvonos, 2014).

In France, *Traitement du Renseignement et Action contre les Circuits FINANCIERS clandestins (TRACFIN)*, FIU of the Ministry of Economy, Finance and Industry of France, which operates the Information Clearinghouse, is a central organ of the system for combating and preventing the legalization of criminal incomes and combating the financing of terrorism. TRACFIN (TRACFIN) is the body to which information about the accounts opened in banks of individuals and legal entities is provided. The French law does not contain requirements to provide information on financial transactions in the event that the amount of the financial transaction exceeds a certain limit. Signs for providing financial data monitoring entities to TRACFIN on financial transactions are motivated by the suspicion that it is being carried out in order to legalize criminal proceeds, namely, funds that can relate to: organized crime, drug trafficking, financing terrorism, and corruption. Particular attention is required for financial transactions worth more than 15 thousand euros if they are intricate or have no economic sense. Crimes related to legalization (laundering) of funds are punishable by imprisonment for a term of 8 years and a monetary fine (Kovalenko, Dmytrov, Yezhov, 2007).

So, after analysing the effective experience of the United States, Great Britain, Poland, Switzerland, Italy, and France in combating organized crime in the financial system, we consider it necessary to distinguish, in our opinion, interesting provisions concerning the subject matter and other states such as Spain, Ireland, Cyprus, Greece, Austria, Belgium, Japan, Hong Kong.

In Spain, the Criminal Code (Article 301) refers money laundering to a section on bribes and similar offenses. It includes all serious crimes with a term of imprisonment of more than three years. The Money Laundering Act includes combating income from organized crime, terrorism, drug trafficking.

In Ireland, the Criminal Law Act of 1994 obliges all financial institutions to require new clients who will carry out large transactions, documentary evidence of the origin of money.

The Cyprus Banking strategy is based on the “know your client” principle and seeks to identify individuals who have several trust accounts that are not compatible with their business form, or accounts receivable from a large number of different private recipients, as well as those customers who try to open an account for a large sum even on disadvantageous conditions. According to this strategy, bankers should know the origin of funds, the history of all accounts opened in the bank, the frequency of customer appeals to the bank.

The legislation of Greece provides for the identification of clients in the case of contracts, opening accounts, hiring safes, lending on bail; at the same time, identification does not require insurance operations for insignificant amounts and terms and related to pension insurance.

In Austria, the only one in the European Union that allowed anonymous bank accounts to be issued, a FATF



program has been developed to phase out them. In particular, the Austrian Criminal Code declares the crime of laundering all assets derived from the commission of serious crimes involving imprisonment for a term of more than three years.

The Belgian financial authorities, strictly controlling the movement of money, must check all transactions worth more than 10 thousand euros. The Special Money Laundering Act of January 11, 1993, includes terrorism, organized crime, drug trafficking, weapons, the use of underground labour, trafficking in human beings, prostitution, the illegal use of hormones in animals, human trafficking, serious and organized tax fraud that violates financial interests. The European Community, corruption, untypical investments, false bankruptcy. In accordance with the royal decree of June 11, 1993, a special structure – the Financial Information Sector (CTIF) – was created under the auspices of the Ministries of Finance and Justice. This body analyses, with the involvement of relevant experts, the declarations of banks, exchanges, and other financial institutions about suspicious transactions, uses information from police, customs and other government agencies (Kryvonos, 2014).

Until recently, only legislation on the laundering of illicit drug trafficking was settled in Japan's legislation. These issues were regulated by the Law on Special Exceptions to the Law on the Control of Narcotic Drugs and Psychotropic Substances (1991), which has been abbreviated as the Law on Drugs. In 1998, its provisions were implemented to the Basic Principles of Supervision over Financial Institutions, developed by the Financial Supervision Agency established in the same year (since 2000 – Financial Services Agency). Simultaneously, an amendment to the Law on currency exchange and foreign trade ordered banks and currency exchange operators perform in some cases identification of customers but did not provide any responsibility for non-compliance. The adopted in 1999 the Law against Organized Crime in Japan was expanded range of offenses relating to money laundering and later those provisions were included in the Supervisory Framework (Yehorycheva, 2014).

In Hong Kong, it has long been considered the most corrupt financial capital of the world in 1973 created an independent commission to combat corruption, subordinate to the Governor of Hong Kong, which assigns each person the commission investigating the post (Parshutin, 2015).

Therefore, it can be argued that the current system of measures to combat organized crime in the financial system is based on the following basic principles:

- a minimum amount of financial transaction over which all transactions of a certain type to be registered designated law institutions and individuals to further test possible – usually a sum of 10 thousand USD;
- developed and introduced into the action list of features that allow you to determine whether or related financial transaction carried out among those held for money laundering or terrorist financing;

- responsibility for informing law enforcement or regulatory agencies regarding suspicious transactions imposed on certain subjects through which financial transactions are conducted;

- governments provide one of the executive power to coordinate the activities of all law enforcement and regulatory agencies in combating the legalization of proceeds and terrorist financing, acquiring the status of FIU (Yehorycheva, 2014).

Almost all countries have created special organizations dealing with money laundering. In the United States, this is the Department for Fighting Financial Crimes, created under the US Department of the Treasury; in Japan – the Financial Analysis Centre, the Financial Intelligence Office of Japan, in Greece – the Special Anti-Money Laundering Board, in Argentina – the Financial Information Committee, in Brazil – the Financial Supervisory Authority. In Mexico, there are two special organizations – the Directorate General for Transaction Investigation and the Anti-Money Laundering Agency. The problem of money laundering in financial institutions in Belgium is the Ministry of Finance and Justice created the Financial Information Sector, which analyses suspicious transactions, as well as reports from police, customs, and other government agencies and, if necessary, checks the information suspend suspicious transactions (Kryvonos, 2014).

In conclusion, it should be noted that the counteraction to organized crime in the financial system requires special attention and special approaches, as scientists who develop methodological recommendations and practical workers who use them during detection, termination, and prevention (Sevruk, 2016).

An analysis of the foreign experience of police activity, as well as special organs and organizations on combating organized crime in the financial system, namely, on the basis of a comparative legal analysis of the principles defined in international legal instruments and their use in the police activities of democratic states, determined the feasibility of their implementation in the police activities of the bodies of the National Police of Ukraine.

This will allow departing from the standards of the Soviet law enforcement system and updating the approaches to combating organized crime in the financial system in Ukraine due to the necessity of using the foreign experience of law enforcement bodies and the implementation of the international legal framework taking into account national interests and peculiarities of domestic experience.

Currently, a number of issues exist in the practical activities of this direction. So, given the results of the survey respondents determined that the state of scientific elaboration combating organized crime in the financial sector needs to be improved by identifying conceptual-categorical apparatus of organized crime in the financial sector (72%), the study of organized crime in the financial sector as a criminological phenomenon

(68%), others (63%). The most important thing for Ukraine in this context is the study of the foreign experience of foreign countries that have succeeded in this area – 87% of respondents (Androsovykh, 2018). From this line, we consider it necessary to highlight the position of S. Pavlenko that a society raised in a low moral environment cannot effectively counter organized crime in the financial system. Therefore, the priority measures of state policy should be the education of moral qualities of the individual (Pavlenko, 2015).

Of course, in the current economic situation in Ukraine, we cannot adopt all the positive foreign experience in combating organized crime in the financial system, but the study of its individual components and their implementation in practice of law enforcement bodies of Ukraine will improve performance when combating organized crime in the financial system.

### 3. Conclusion

Summing up the above, there is the question of the need to create an effective system for combating organized crime in the financial system in Ukraine. Therefore, the use of foreign experience of state mechanisms for the prevention and counteraction of organized crime in the financial system allows formulating a complex of effective national levers of state regulatory influence on counteracting this type of crime.

The problem of organized crime in the financial system has become international in recent years. At the same time, the international community recognizes that organized crime in the financial system has become a global threat to economic security, which is why states are required to adopt agreed measures to combat this socially dangerous activity, both at the national and international levels.

Therefore, it is necessary to agree on this issue V. Sevruck, the proposed system should have interstate status and concentrate information on all law enforcement agencies and special international law enforcement agencies (Interpol, Europol, PCSCO, Eurojust, FATF, Egmont Group, MONEYVAL, Eurasian Group on Combating Money Laundering and Financing of Terrorism (EAG), Basel Committee (Banking Regulatory and Supervisory Committee), the Wolfsberg Group, the International Monetary Fund, the World Bank, the European Bank for Reconstruction and Development). Such a system will create some work to overcome this phenomenon on a global scale, for those who commit counteraction to organized crime in the financial system – prerequisites for international cooperation on counteraction in this whole (Sevruck, 2017).

It should be noted that our analysis of foreign experience in the fight against organized crime in the financial system of the United States, European, and other states allows you to highlight a number of points that characterize the above aspects of such a counteraction: the legal basis of these states are the constitution and national laws, as well as specialized legal acts, which defines the status, rights and responsibilities, the responsibility of employees of special actors to counter organized crime in the financial system. Also, in foreign countries, there is a clear division of competences between national and special authorities, which excludes duplication of powers.

Taking into account the above, it should be noted that the implementation of positive foreign experience regarding the practice of counteracting organized crime in the financial system of the activity of law-enforcement bodies in the current state-legal reality of Ukraine may be a positive driving force for strengthening the rule of law and law in the Ukrainian territory.

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## THE EU STRATEGY FOR THE DANUBE REGION AS AN INCLUSIVE FORM OF CROSS-BORDER ECONOMY

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**Abstract.** The article considers the process of creation and features of activities of various types of transborder formations peculiar for the European Union. Today the cooperation within Euroregions becomes more and more widespread practice both in the EU and among the regions of countries-participants of the Union and those ones neighbouring to the EU, including Ukraine. *The problem* of modernization of the EU regional policy in the context of the intensification of globalization processes is touched upon. The influence of global factors and changes in the EU regional policy on the transformation of Ukrainian regional policy is determined. In the context of the development of the regional policy of Ukraine, problems of economic development and well-being of citizens in Ukrainian regions are identified; development directions for the cooperation of Ukraine and the EU in this area are established. *The purpose* of the article is to consider issues of cross-border economy, cross-border region, classify them, define features of Euroregion and, based on the analysis conducted, consider imperatives and problems related to the development and introduction of the Danube Strategy and identify the place and opportunities of Ukraine in this association. The macro-regional approach to solving the tasks of the integration policy of the European Union chosen by the European Union Committee allows uniting the territories according to the principle of their mutual supplementation, reducing the barriers of national borders and creating new opportunities for cross-border regions. The Danube Strategy, despite the common principles and methodologies for the formation of Euroregions, has obvious features. Firstly, the region is characterized by deep imbalances both between countries and within countries themselves. Secondly, the Strategy is an example of a multidisciplinary approach to territorial planning in the region and has a pronounced ecological character, and environmental problems are solved in the search for a compromise with the tasks of socio-economic development. Thirdly, being the internal strategy of the European Union, however, has a significant external dimension, the incorporation of which can be quite a challenge. There are four main directions for the regional development in the Danube Strategy (so-called "pillars": association, ecology, well-being, strengthening). For each direction, priority areas are designated that are supervised by the coordinating countries. Conceptually, the EUSDR is a continuation of the Europe-2020 strategic document of the EU and proclaims the achievement of the region of "smart, sustainable and inclusive development" as its main objectives. At the same time, a kind of paradox is that the Danube strategy aimed at levelling social, economic, institutional gaps in the region generates them by the very principles of its existence. It is hard to imagine that unequal countries, getting too different funding, will be able to equalize their capabilities at the finish. The strategy will help realize the EU's obvious desire to transform the Danube into an internal transport artery with a highly developed infrastructure and improved cargo traffic, which will allow connecting the North Sea with the Black and Azov seas, placing the transportation of resources of Caspian region and Asia under control of European structures. The creation and activity of cross-border regions make a significant contribution both to the strengthening of political and economic integration within the EU and to the development of cooperation between the member countries of the Union and neighbouring states.

**Key words:** European Union, cross-border associations, Euroregions, Danube region, integration, macro-regional approach.

**JEL Classification:** R11, R38, R50, L51, F60

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## 1. Introduction

At present, in Europe and in other parts of the world, the phenomenon of cross-border cooperation of regions is becoming increasingly popular. In practical terms, such cooperation is realized through the creation of cross-border associations of administrative-territorial units (regions) of various states. Regions of the EU countries have especially rich experience in this field due to both historical background and modern practice of political and economic integration.

Most researchers consider a cross-border region as a special limited space that unites administrative-territorial units, communities or groups of people of different states that enter into different relationships with each other. There are also definitions, the reference point of which is the concept of cross-border cooperation.

The EU regional policy was formed and implemented under the influence of globalization factors, a complication of the interrelation of “regionalism – globalism”, transnationalization of the economy, features of the modern regionalization of the global market, formation of a new model of spatial architectonics of the world market.

The European Union, the result of these influences, as well as the European market, is an example of a regional-centrist model of development, which initially united countries with developed market economies, gradually expanding the market and joining countries with medium and low levels of development. At the same time, the European Union is viewed as an experience of structuring transnational space (Malishevskiy N., 2016). This is due to the fact that in the last two decades in the European Union, two parallel processes took place: formal regionalization, within the framework of the administrative-territorial structure; informal regionalization, which is carried out as a result of the transformation of the global space, the formation of the poles of economic growth, the allocation of regional markets. As a result, three types of regional economic systems have emerged in the EU: a) formal, unified; b) functional (concentrated around the focal centre – a large company, a shopping centre, a research centre); c) perceptual (determined by the human attitude to the territories) (Kodric, 2011).

The “Europe of the Regions” – “Europe of the Market” discussion ended with the adoption of the EU regional policy oriented towards administrative-territorial regionalization, promoting the socio-economic convergence of countries and regions, that is, equalizing territorial disparities by supporting non-competitive regions.

Its main areas were identified:

- promoting the restructuring and development of depressed areas (problem regions) (where the level of GDP per capita over the past 3 years is <75% of the average – Greece, Ireland, Eastern regions of Germany, etc.);

- providing financial assistance to regions where is stagnation of the industry (old industrial regions);
- combating long-term unemployment, support for employment initiatives;
- financing the development of agricultural areas and accelerating the restructuring of agriculture;
- assistance to underpopulated regions, where the population density is no more than 8 people per 1 sq.km (Sweden, Finland);
- reduction of differentiation in the levels of economic development of countries – new EU members (countries of Central and Eastern Europe).

To facilitate the statistical analysis of backward regions, the Unified Classification System was developed – NUTS (Nomenclature of Territorial Units for Statistics). Regional policy is the second largest expense item in the EU budget after the Common Agricultural Policy and a no less significant area of activity for the European Union (Kuzmin, 2014).

## 2. The methodology of research

A number of works by foreign and domestic scholars are devoted to issues of regional development in the EU countries and Ukraine, in particular, Jacques Miller, D. Bil, G. Marcou, P. Hildreth, I. Hladii, V. Chuzhikov, N. Mikula, A. Mokii, O. Reut, M. Ombrebalskyi, M. Dolishnii, L. Prokopenko, and others. Despite consideration of the problems of the regions, the formation of regional policies in the EU and Ukraine, mega-regional contradictions within the framework of the common European economic space, the economic literature does not pay enough attention to assessing the challenges generated by modern processes in the global environment, diagnosing regional development risks in Ukraine, which actualizes the proposed topic for scientific inquiry.

The interaction of regional authorities with EU institutions and bodies is organized in different ways. It takes place indirectly and directly, during the planning and implementation of the EU regional policy – through the Committee of the Regions, during the Cohesion Forum held annually by the European Commission, in the framework of the activities of the Brussels offices of the regions. Established in 1994, the Committee of the Regions, a special advisory body consisting of representatives of local and regional authorities of member states, replaced the Advisory Board of regional and local authorities established by the European Commission in 1988, whose task was to advise on the formulation and implementation of regional policy. The Committee of the Regions, basing its activities on the principles of subsidiarity, maximum approximation to the interests and needs of EU citizens, as well as partnerships of different management levels in the process of making pan-European decisions, to a certain extent, coordinates work in the field of regional policy (Brinkhoff, Gabbe, Martinos, 2012).

The change of institutional architectonics of the EU Regional Policy was influenced by the Treaty of Lisbon. The latter did not recognize the Committee of the Regions as one of the elements of the EU institutional mechanism. At the same time, the Committee was able to appeal to the Court of Justice of the European Union in order to protect its prerogatives in case of violation of the principle of subsidiarity (Communication from the Commission to the European Parliament, 2010).

Most researchers consider a cross-border region as a special limited space that unites administrative-territorial units, communities or groups of people of different states that enter into different relationships with each other. There are also definitions, the reference point of which is the concept of cross-border cooperation. For example, the interpretation of M. Perkmann, who characterizes a cross-border region as a single territorial unit, consisting of areas whose authorities participate in cross-border cooperation programs (Perkmann, 2013).

Thus, a cross-border region is not only a space in the physical sense but also a social unit with its potential, formed on the basis of certain agreements. Formation of a cross-border region can rely on cultural or ethnic ties of adjacent territories, a common historical heritage or a community of interests (political and socio-economic). It is believed that the most cohesive transboundary regions are based on a combination of all three of the above factors.

In general, the formation of cross-border associations is based on the desire of neighbouring territories to achieve strategic partnership, resulting in the formation of relatively small regions, the level of integration in which may even exceed the degree of interdependence between the participating territories and other regions of the state to which they belong. Often, cross-border formations have not only their own government bodies but also a representative office in Brussels. The main goal of creating cross-border formations is the formation of a unified structure for coordinated problem solving and the achievement of tasks set by the participating regions. All transboundary associations can be very conditionally divided into two large groups, although they can vary considerably in their goals, competences, and capabilities.

The first group: Euroregions and similar structures. The Euroregion can be defined as a territory that includes border administrative divisions of at least two neighbouring countries, the area of the Euroregion is crossed by at least one state border. Researcher V. A. Shaliamin notes that "the Euroregion, on the one hand, can be defined as a geographically limited part of the border area, which is formed from territorial-administrative units on both sides of the border, united by common interests in developing the economy, protecting nature, preserving culture, and intensifying scientific exchanges. On the other hand, the Euroregion is a kind of umbrella project, within which bilateral and multilateral specific sectoral projects are implemented" (Merkulova, 2014).

Although these entities are not identical in legal status and organization, they have many common features: they operate on a permanent basis, and not temporarily for the implementation of certain projects; have a separate identity from the participants; have their own administrative, technical, and financial resources; have their own decision-making system; unite two or more administrative divisions that are parts of different states (besides, non-governmental organizations such as trade unions, chambers of commerce etc. also can participate); cooperate at the regional and not at the state level; have their own management bodies and structures; develop many areas of cooperation, where traditionally a lot of attention is paid not only to the economic aspect but also to socio-cultural issues (cooperation in health care, culture, science, environmental protection, etc.).

At the same time, depending on the wish of the founding parties, the Euroregion may or may not be a legal entity (Eurostat regional yearbook 2012).

The second group: Working communities. They are also permanent formations, however, unlike Euroregions, they do not have their own identity, their own decision-making process and powers separate from the powers of their members. They are largely dependent on the states, under the jurisdiction of which are the units belonging to the community. Compared to Euroregions, the range of tasks of working communities is significantly narrower: their activities are mainly focused on solving problems that are relevant for all participants and not related to the existence of a common border. The most common areas of cooperation are consultations, information sharing, and cultural projects (more rarely – economic cooperation). These structures unite a large number of member countries and large territories, while Euroregions have a small area of coverage (Brinkhoff, Gabbe, Martinos, 2012).

In practice, cross-border formations may include not only regional and local authorities but also chambers of commerce, regional business associations, and other interested organizations (Perkmann, 2013).

Cross-border formations can be attributed to a variety of political networks, which should meet the following conditions for the successful functioning and fulfilment of the tasks set.

Firstly, the presence of a "leader" – a person or structure that deals with all organizational issues, organizes necessary meetings and conferences, prepares an agenda, disseminates information about cross-border education activities, seeks support for projects by relevant government agencies and financial funds, attracts new participants, monitors the timely and accurate fulfilment of obligations by all members of the cross-border formation.

Secondly, the ability to benefit all interested parties is to create a situation where it is more beneficial for potential participants in a cross-border formation to participate in a cross-border project than not to participate in it.

Thirdly, the ability to attract actors and resources – participation in any common project involves the investment by participants of one or another of their resources in the common cause. Very much depends on the willingness of interested parties to invest their resources.

Fourthly, limiting costs – participation in cross-border projects involves not only benefits but also certain costs, which are often proportional to the equity contribution. Coordinators of cross-border projects try to prevent the situation of a zero-sum game, as this can lead to frustration and the exit of the losing participants from the project. If the costs become too large for all participants, then the project ceases to exist.

Fifthly, enforcement of fulfilment of commitments – the leadership of cross-border formations should be able to make the participants to clearly fulfil their commitments. This can be done through informal arrangements or by more formal means, such as concluding conventions, contracts, setting up a supervisory committee, etc. (Malishevskiy, 2016).

Speaking about the success criteria of a cross-border association, it is important to take into account not only the immediate result expressed in material achievements (economic benefits, building infrastructure, etc.) but also the effect of such actions as adjustment of cooperation mechanisms among the regions of different countries, organization of the communication process, developing an algorithm for solving problems and making joint decisions, creating conditions for the development of regional innovations, etc. It is necessary to take into account the reserve that is being created for the implementation of future projects in the framework of possibly other interregional groups (Martunyuk, 2015).

The attention of the supranational level to the cross-border regions increased with the development of the regional community policy. The reform of structural funds, the concepts of levelling and identifying the endogenous potential of the regions have led to the intensification of cross-border cooperation. Of course, this is not only the merit of the EEC but the growth of Euroregions stimulated financial support, and that in turn caused the growth of Euroregions in the territories mastered by the EU. The insufficiency and imperfections of the model of cross-border cooperation led to the emergence in 2006 of a new instrument for regulating cross-border cooperation in the context of European integration – the creation of the European Grouping for Territorial Cooperation – EGTC. This instrument of the regional policy of the European Union was created to “strengthen and create better conditions for cross-border cooperation” among EU countries (Malishevskiy, 2016).

The European Grouping for Territorial Cooperation (EGTC) is designed to complement the cross-national level of Euroregions and potential applicants. It was created as a stable legal structure with an autonomous legal personality that exists within the legal framework

of member states, but the EGTC necessarily includes representatives of regional authorities, which contributes to the deepening of cross-border cooperation and creates conditions for building a more flexible management system. In the framework of current trends, this form is considered the most optimal form of interaction between the partner countries.

### 3. Results and discussion

The macro-regional approach to solving the problems of the integration policy of the European Union chosen by the EU Committee in Brussels allows uniting the territories according to the principle of their mutual supplementation, reducing the “barriers” of national borders and creating new opportunities for cross-border regions.

The European Union Strategy for the Danube Region (EUSDR) (Communication from the Commission to the European Parliament, 2010) became the second macro-regional strategy in the framework of the implementation of the EU regional policy, the model for which was launched in June 2009.

The Danube region is a functional area defined by its own river basin. Collaborating organizations, such as the Danube Commission and the International Commission for the Protection of the Danube River, deal with specific issues. The strategy extends this approach in order to set priorities in terms of integration. Geographically, this concerns primarily but not only: within the EU – Germany (Baden-Württemberg and Bavaria), Austria, the Slovak Republic, the Czech Republic, Hungary, Slovenia, Romania, and Bulgaria, as well as beyond its borders – Croatia, Serbia, Bosnia and Herzegovina, Montenegro, the Republic of Moldova, and Ukraine (regions along the banks of the Danube). The strategy remains open to other partners in the region. Since the Danube flows into the Black Sea, it must undoubtedly be linked to the development prospects of the Black Sea region, which has a population of more than 100 million people and is the fifth largest territory of the EU (Eurostat regional yearbook, 2012).

The Danube macro-regional strategy, despite the common principles and methodologies for forming Euroregions, has obvious features. Firstly, the region is characterized by deep imbalances both between countries and within countries themselves. Secondly, the Strategy is an example of a multidisciplinary approach to territorial planning in the region and has a pronounced ecological character, and environmental problems are solved in the search for a compromise with the tasks of socio-economic development. Thirdly, being the internal strategy of the European Union, however, has a significant external dimension, the incorporation of which can be quite a challenge.

Four main directions for the regional development in the Danube Strategy are determined (so-called “pillars”: association, ecology, well-being, strengthening).



For each direction, priority areas are designated that are supervised by the coordinating countries. There are 11 such areas in total (Table 1). Projects selected to achieve the goals and objectives set within priority areas have leaders responsible for their implementation, in the person of countries, subregions, non-profit organizations, as well as private economic entities (Kodric, 2010).

Thus, the main directions of the Strategy are the idea of “smart, sustainable and inclusive development” of the Danube region based on the formation and implementation of promising areas of identified pillars.

The Danube macro-regional strategy is unique in that it implies the abandonment of the traditional model of development (through classical urbanization and industrialization of territories) and the transition to a more intensive format – through modernization, development, and introduction of technology innovations into existing capacities and infrastructure, as well as through improving the quality of human capital (the imperative of smart development). The main priorities include environmentally sound, not subject to the risks of natural and technogenic origin (the imperative of sustainable development), and the imperative of inclusive development is coordinated, cumulative development of all parties and aspects in the relationship and not at the expense of each other.

According to the stated goals and scope, the EU macro-regional strategy for the Danube region is an extremely large-scale project of Brussels. However, its implementation, in our opinion, will inevitably face a number of objectively arising challenges related to socio-economic and institutional imbalances.

The Danube region is characterized by serious heterogeneity. Within its borders, one can distinguish both highly developed urbanized and rich agricultural territories, as well as less developed and even depressed areas. It includes both countries-members of the

European Union and those that, to varying degrees, claim to receive this status, and non-members of this integration association. They have different political and economic traditions and peculiarities, which affect their ability to develop infrastructure, preserve the environment, and carry out socio-economic policy.

The countries with one of the highest standards of living in the EU and countries where the share of the population at risk of poverty or not integrated into the main society exceeds 40% are in the EUSDR field of action. In 2014 in Bulgaria, this figure was fixed at 49.1%, in Romania – 40.3%, on average in the EU this social group accounts for 24.2%.

The majority of the population of Bulgaria (72.1%), Hungary (70.7%), Romania (89.5%), Slovakia (88.6%), Slovenia (53.1%), Croatia (62.2%), and the Czech Republic (72.0%) lives in regions where GDP at purchasing power parity (PPP) per capita is less than 75% of the average regional GDP in 27 EU countries, and for 85 out of 320 regions of the Danube Strategy, this figure will be below 50% of the average for the EU-27, and all of them are located in Bulgaria, Hungary, Romania, Slovakia, and Croatia (Eurostat regional yearbook 2016).

Particularly vividly, regional differences between the Danube countries are visible in the ratio of the productivity of the richest area in the region and the poorest (15.2:1). Thus, the level of GDP per capita of the capital of Bavaria, Munich, is 330.2%, and the similar indicator of Bulgarian Silistra – 21.7%.

Against the background of the average unemployment rate among the economically active population of 4.3% for Austria and 5.5% for Germany in 2012, in Croatia and Slovakia it was 15.9 and 14.0%, respectively, in Bulgaria – 12.3%, Hungary – 10.9% (Eurostat regional yearbook 2016).

The Stuttgart region of Baden-Württemberg has become the leader in the Danube region in terms of

Table 1  
The main directions of the EU Strategy for the Danube Region

Pillars	I. Association	II. Environmental protection	II. Building well-being	IV. Strengthening
Priority and coordinators	improving mobility and multimodality: the development of inland waterway transport (Austria and Romania)	restoration and maintenance of water quality (Hungary, Slovakia)	building a knowledge society through the development of science and education, the introduction of information technology (Slovakia, Serbia)	building institutional capacity and improving the quality of cooperation (Austria, Slovenia)
	development of road, rail, and air transport (Slovenia and Serbia)	environmental risk management (Hungary, Romania)	supporting the competitiveness of entrepreneurship, including cluster development (Baden – Württemberg – Germany, Croatia)	cooperation in the interests of security and the fight against organized crime (Germany, Bulgaria)
	stimulating more sustainable energy (Hungary, Czech Republic)	conservation of the biological diversity of the region, landscapes, air and soil quality (Bavaria – Germany, Croatia)	investing in the professional skills of the population of regions (Austria, Moldova)	
	support of culture and tourism, contacts between people (Bulgaria, Romania)			

expenditure on research and development, it allocates more than 5% of GDP (5.83%) for these purposes. In Karlsruhe and Tübingen of Baden-Württemberg, Upper Bavaria of Bavaria, as well as in Vienna and Austrian Styria, this figure exceeds 3%. At the same time, in the former socialist countries of the Danube basin, the maximum level of R&D expenditure varies from 0.77% (South-West region of Bulgaria) to 2.47% (Central Bohemian Region in the Czech Republic), i.e. in most of them it is below the average for the European Union – 2.01% of GDP (Eurostat regional yearbook 2016).

The different status of Danube states in relation to membership in the European Union predetermines their unequal opportunities in obtaining financial resources for the implementation of their projects. EU structural funds money will be available for member countries. Only through the European Regional Development Fund (ERDF), the Cohesion Fund, the European Social Fund (ESF) in the period from 2007 to 2013 for the implementation of the tasks of the first pillar – development of transport, energy, and tourism – 34.5 billion euros were allocated. Funding for the second pillar programs related to environmental protection is estimated at 19.5 billion euros. 38.1 billion euros were allocated for the development of science, education, and information technologies, and 3.4 billion for the strengthening of security. The countries-neighbours of the European Union that belong to the Danube basin (Moldova and Ukraine) can only claim funds allocated under the European Neighbourhood Policy (ENP).

Another challenge to the success of the Danube Strategy is the unequal opportunities of participants in the field of management and administration. EU regional policy directly changes the territorial organization of the participating countries. It is aimed at activating new players of the regional policy in the face of the authorities of the subregional and local levels, NGOs, small and medium enterprises. However, such structures of civil society are well developed in countries with long-standing democratic traditions and federal structure, Austria and Germany, where they have the necessary legal powers, experience in conducting regional policy, and relevant institutions. The situation in the former socialist countries is somewhat different. The issue of harmonization of the national interests of the neighbouring member countries in the framework of the EUSDR is also problematic (Yurasova, 2013).

As a result of geopolitical changes of the last decade of the XX century, most of the Danube basin was in the European Union space, and the European Union got new opportunities to solve the problems existing in the region and more effectively realize its potential. By 2020, the association plans to increase its freight traffic on the Danube to 300 million tons per year. For comparison: all Ukrainian ports handled almost 146 million tons of cargo in 2016 (Yurasova, 2013).

In the Danube region, Ukraine is represented by four regions (Ivano-Frankivsk, Zakarpattia, Odesa, and Chernivtsi), with a population of about 6 million people. In 2016, the Government of Ukraine approved the State Program for the Development of Cross-Border Cooperation for 2016–2020, which identified priorities, tasks, activities, and 25 major projects for cross-border cooperation, almost half of which are aimed at solving the development priority tasks of the very Danube region.

The participation of Ukraine at the state level in the development of the Strategy from the very beginning was formal and declarative. As a result, Ukraine was not included in the list of states that are responsible for specific priority areas. For example, Romania – for activities in the following areas: increasing mobility and communication between different types of transport – water transport (with Austria, and Ukraine – only interested party), the development of culture and tourism, interpersonal contacts (together with Bulgaria), and environmental risk management (with Hungary).

At the same time, in spite of the competition existing between the states of the Danube basin, there are issues that cannot be resolved without joint efforts. Thus, the Danube Strategy in the field of transport development sets itself the following goals:

- to increase the volume of transportation of goods by 20% until 2020 compared with 2010;
- to eliminate the existing navigation “narrowing” on the river in order to ensure navigation of VIb-type ships throughout the year by 2020;
- to improve the travel time of competitive passenger traffic between the main cities;
- to develop effective multimodal terminals in the ports of the Danube in order to link inland waterways with rail and road transport by 2020.

Now the share of Danube shipping in the total volume of traffic on inland waterways in Europe is about 10%, which creates an idea of its significant reserves. This reserve really exists. However, the transportation market is under constant pressure from various factors, in particular, the global financial and economic crisis. In addition, the Danube shipping route often does not compete with rail and road transport. According to experts, the main reason for the traditional weakness of the Danube shipping market is the underdeveloped infrastructure and the uneven development of its individual elements. It is this factor that inhibits the introduction on the Danube of new, above all – high-speed, transportation technologies that could compete with the railways and highways in terms of time and cost.

The tasks assigned require serious financial resources and, in technical terms, efficient design solutions. Given the limited financial resources of each of the nation states, the goal can be achieved only through joint efforts.

The financing agreement for the Danube Transnational Program was signed by Ukraine in December 2017. The law on ratification of financing was signed by the President of Ukraine only in October 2018.

The implementation of the agreement will contribute to the fulfilment of the obligations defined by the Association Agreement between Ukraine and the European Union, as well as the socio-economic development of the Ukrainian part of the Danube region, which covers the Odesa, Ivano-Frankivsk, Chernivtsi, and Zakarpattia regions. The program is one of the financial instruments of the European Union for the implementation of the EU Strategy for the Danube Region, participation in which opens for Ukrainian partners the opportunity to receive funding and implement projects together with partners from European countries of the Danube Region.

Under this program, the European Union and Hungary will provide Ukraine with a donation of 5 million euros for projects that will be selected on a competitive basis according to its rules. Funding is expected in four areas: "Innovation and social responsibility", "Environment and cultural responsibility", "Improving infrastructure links and energy efficiency", "Good governance in the Danube Region". The implementation of the projects will strengthen interregional and cross-border cooperation and partnership in the areas of development of transport infrastructure, energy, entrepreneurship, communication networks, culture, education, tourism, healthcare, etc.

In our opinion, one of the most powerful latent reserves for the development of economic cooperation in the Danube Strategy is the use of the ethnic potential of diasporas living in Ukraine. For shaping a sustainable economic design strategy, the use of the possibilities of ethnic identity can lead to the formation of loyal conditions due to the use of the transparent possibilities of diasporas. The following major diasporas live on the territory of Ukraine: Bulgarian (about 204.7 thousand, mainly in the Odesa region – 150.6 thousand people and Zaporizhzhia region – 27.4 thousand); Romanian (about 151.1 thousand people); Hungarian (about 120 thousand, but recently its number is rapidly decreasing). Engaging diasporas as ethnocultural communities with collective interests and goals can contribute to the development of a strategy at the national, regional, and local levels. The formation of informational interaction between diasporas and relevant national-cultural associations with the authorities, local self-government, and other public organizations and movements will help to create unique tools for resolving issues of ethno-social, ethno-political, and ethno-conflict policies.

#### 4. Conclusions

The creation and activity of cross-border regions make a significant contribution both to the strengthening of political and economic integration within the EU and to the development of cooperation between the member countries of the Union and neighbouring states.

Speaking about the results of cross-border formations, it is worth paying attention to a certain negative potential. The activity of cross-border regions, especially Euroregions with a high degree of integration, can contribute to the development of separatist tendencies at the level of national states since the radical regional authorities have access to an alternative agency to the state, through which they have the opportunity to realize their economic and political interests.

Cooperation between Ukraine and the EU in the field of regional policy today focuses on the following areas: 1) implementation of the Memorandum of Understanding to establish a dialogue in the field of regional policy; 2) the establishment of interaction between representatives of local and regional authorities of Ukraine and the EU in the framework of the Committee of the Regions of the EU; 3) participation in the implementation of the Eastern Partnership Pilot Regional Development Program; 4) implementation of projects at the regional level taking into account EU financial instruments (European Neighbourhood and Partnership Instrument, European Investment Bank, Neighbourhood Investment Facility); 5) Ukraine's involvement in the implementation of the EU Strategy for the Danube Region; 6) facilitating the involvement of Ukrainian regions in the activities of European regional associations, in particular, the Assembly of European Regions, the Association of European Border Regions, the Council of European Municipalities and Regions, the Conference of Peripheral Maritime Regions, the Conference of Presidents of Regions with Legislative Powers.

Conceptually, the EUSDR is a continuation of the Europe-2020 strategic document of the EU and proclaims the achievement of the region's "smart, sustainable and inclusive development" as its main objectives. At the same time, a kind of paradox is that the Danube strategy aimed at levelling social, economic, institutional gaps in the region generates them by the very principles of its existence. It is hard to imagine that unequal countries, getting too different funding, will be able to equalize their capabilities at the finish.

An attempt to eliminate the disparities in the region may lead to their strengthening and consolidation; more developed countries will go forward. The initiators of EUSDR do not conceal that one of the goals of the Strategy is to create a "water-transporting European Union". This implies the unification of the Danube and Rhein navigation. However, given the weak technical equipment of most of today's ships belonging to the countries of Southeast Europe and the obvious advantages of the Rhine shipowners, this will most likely lead to the bankruptcy of some Danube shipping companies (including, for example, Ukrainian) and the next assertion of Western European domination on the Danube. In addition, the EU Strategy for the Danube Region aims to ensure that technical, navigation, legal, and environmental regulations on navigation on



the Danube, as well as to unify and harmonize radio communication standards with the standards adopted in the EU. Obviously, all this may hinder the navigation activities of other participants remaining outside the framework of the Strategy.

Of all the aspects of the development of the Danube region which have been updated by the EUSDR, in our opinion, the most problematic is the innovation sphere. Disproportions in this area seem overwhelming. Especially since interstate cooperation between leading and catching-up countries is determined as the main approach to solving the problem and involves the use of the first available new technologies. In other words, it all comes down to the banal transfer of scientific developments already developed in the West to more backward players in the region, which will be presented as a process of their modernization. A platform for the emergence and implementation of these innovations will still remain more advanced regions.

Despite the significant external component, it should be recognized that the EUSDR is an internal EU strategy aimed at solving the internal problems of the association. The entire decision-making process is concentrated within European institutions; coordination at the political level remains the prerogative of the European Commission. The high-level group is represented by EU member states, non-member countries will be invited to its meetings only in some cases.

A differentiated European approach consists in preference to individual EU members and the entire Community, although they may not be beneficial in their consequences for neighbouring countries. The Danube macro-regional strategy will help to realize the EU's obvious desire to turn the Danube into an internal transport artery with a highly developed infrastructure and improved cargo traffic, which will allow connecting the North Sea with the Black and

Azov seas, placing the Caspian and Asian resources transportation under control of European structures.

In addition, the EUSDR can be viewed as a mechanism for implementing some of the objectives of the Eastern Partnership Program – the integration of the neighbouring countries into the EU's influence through the harmonization of national legislation and legal norms in the field of trade liberalization, transport services for inland water transport, technical, navigation, and environmental rules for shipping on the Danube with European ones.

Summarizing the above, it should be emphasized that the main challenge for the EUSDR remains the excessive heterogeneity of the Danube macro-region. Despite the considerable financial resources allocated for the implementation of integration policy objectives, the era of consolidation in the EU will not come soon, because the mechanisms used, including the macro-regional approach, if not aggravate, then certainly fix the gap between the leaders and the laggards.

As a part of the deepening of integration processes, the use of the potential of Euroregions requires special attention (today, 8 Euroregions have been created on the territory of Ukraine) and the intensification of cross-border cooperation. Despite the vast European experience, the development of many models of the functioning of this institution in Ukraine, the implementation of cross-border projects has not received sufficient development. The creation of the Carpathian, Bug, and Lower Danube Euroregions, which could play an important role in blurring the borders with the European Union, does not have a proper legislative base. When introducing the European model in Ukraine, the "policy of intentions" dominates in interregional policy, while the experience of cooperation and introduction of joint projects is so low that it gives some researchers ground to talk about the inefficiency of the Euroregions.

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