

**ECONOMIC SCIENCES:  
PRIORITY DIRECTIONS  
OF MODERNIZATION**

**Collective monograph**



**Lviv-Toruń  
Liha-Pres  
2019**

**Reviewers:**

*Prof. nadzw., dr hab. Stanisław Kunikowski, Rektor of Cuiavian University in Wloclawek (Republic of Poland);*

*Prof. dr hab. Joanna Marszalek-Kawa, Uniwersytet Mikołaja Kopernika w Toruniu / Nicolaus Copernicus University (Republic of Poland);*

*Dr Henryk Stepień, Associate prof. of the Faculty of Social and Technical Sciences, Rector's representative for Development of Cuiavian University in Wloclawek (Republic of Poland).*

**Economic sciences: priority directions of modernization** : collective monograph / L. B. Barannik, O. L. Galtsova, O. V. Horniak, T. V. Derkach, etc. – Lviv-Toruń : Liha-Pres, 2019. – 288 p.

ISBN 978-966-397-126-1



Liha-Pres is an international publishing house which belongs to the category „C” according to the classification of Research School for Socio-Economic and Natural Sciences of the Environment (SENSE) [isn: 3943, 1705, 1704, 1703, 1702, 1701; prefixMetCode: 978966397]. Official website – [www.sense.nl](http://www.sense.nl).

# CONTENTS

## CHAPTER 1

### PENSION SYSTEM AS A GLOBAL PROBLEM AND SUBJECT OF GLOBAL STUDY

<b>Barannik L. B.</b> .....	<b>1</b>
1.1. Historical and theoretical aspects of the development of pensions in the world .....	3
1.2. World models of pension benefits .....	8

## CHAPTER 2

### INSTITUTIONAL DEVELOPMENT OF LOCAL SELF-GOVERNMENT IN DECREASING CONDITIONS IN UKRAINE

<b>Galtsova O. L.</b> .....	<b>18</b>
2.1. The influence of decentralization on the development of the national economy and territorial communities .....	19
2.2. Institutional analysis of the effect of decentralization on the development of territorial communities .....	23
2.3. External experience of decentralization .....	27

## CHAPTER 3

### DEVELOPMENT OF THE FIRM THEORY BY NEW INSTITUTIONAL ECONOMICS: METHODOLOGY, CONCEPTS, AND MODELS

<b>Horniak O. V.</b> .....	<b>38</b>
3.1. Methodological principles of analysis of modern firms .....	39
3.2. Concepts and models of modern firms .....	45

## CHAPTER 4

### ECONOMICS OF THE FUTURE: SYNERGETICS OF MODERNIZATION OF SCIENCE AND THE REAL ECONOMY

<b>Derkach T. V.</b> .....	<b>57</b>
4.1. Evolution of economic thoughts and views .....	59
4.2. Synergetics of modernization of theory and practice .....	63

<b>CHAPTER 5</b>	
<b>ASSESSMENT OF THE RISK PROFILE OF UKRAINIAN BANKS BY THE METHOD OF STRUCTURAL-FUNCTIONAL GROUPS</b>	
<b>Zarutskya O. P.</b> .....	<b>77</b>
5.1. The main risks in the activities of banks of Ukraine.....	79
5.2. Distribution of risks by structural-functional groups of banks .....	87
<b>CHAPTER 6</b>	
<b>COMPETITIVENESS OF THE BUILDING INDUSTRY POTENTIAL AS THE COMPONENT OF THE NATIONAL ECONOMY'S COMPETITIVENESS</b>	
<b>Kovalenko-Marchenkova Ye. V.</b> .....	<b>96</b>
6.1. An overview of theoretical and methodological approaches to the definition of the essence of potential and components of industry potential.....	96
6.2. Definition of the essential characteristics of the concept “competitiveness and competitiveness of the industry potential” .....	105
<b>CHAPTER 7</b>	
<b>THE CHOICE OF DEVELOPMENT MANAGEMENT DRIVERS OF THE SOCIO-ECONOMIC SYSTEM OF THE NATIONAL AND INTERNATIONAL LEVEL BASED ON THE RESULTS OF FORECASTING</b>	
<b>Kononova I. V.</b> .....	<b>113</b>
7.1. Determination of the main tendencies of the parameters of the functioning of the European Union and Ukraine as the basis for the choice of a development management system .....	113
7.2. Justification of the choice of the driver for development management and its structural elements .....	120
<b>CHAPTER 8</b>	
<b>PROCESSES OF ECONOMIC GLOBALIZATION AND THEIR EFFECT ON DIVERSIFICATION</b>	
<b>Korinko M. D.</b> .....	<b>131</b>
8.1. Globalization processes in the development of international entrepreneurship .....	132
8.2. Diversification under the conditions of globalization processes .....	140

<b>CHAPTER 9</b>	
<b>ISSUES OF PROFESSIONALIZATION OF MANAGERIAL ACTIVITY IN THE CONDITIONS OF THE MODERNIZING ECONOMY</b>	
<b>Kuznietsov E. A.</b> .....	<b>149</b>
9.1. The creativeness of the scientist’s personality and science development.....	150
9.2. Process of management science and practice cooperation .....	152
9.3. Modern processes of the managerial professionalization .....	155
9.4. Managerial processes of leadership development.....	157
9.5. The scientific conception of the management professional system.....	161
<b>CHAPTER 10</b>	
<b>TAX ADMINISTRATION: THEORY AND RETROSPECTIVE ANALYSIS</b>	
<b>Melnyk V. M.</b> .....	<b>169</b>
10.1. Nature of tax administration.....	169
10.2. Retrospective Analysis of Tax Administration .....	175
<b>CHAPTER 11</b>	
<b>THE ECONOMIC ASSESSMENT FOR THE RELIABILITY OF INVESTMENT IN THE CONSTRUCTION COMPANY</b>	
<b>Popova V. V.</b> .....	<b>185</b>
11.1. The essence and content of the concept of reliability, features of its accounting in the assessment of investment .....	186
11.2. Methodical prerequisites for the economic rationale for the reliability of investment .....	196
<b>CHAPTER 12</b>	
<b>BACKGROUND OF FORMING THE RELEVANT LEVEL OF ECONOMIC SECURITY OF THE ENTERPRISE: EFFICIENCY, INNOVATION, AND COMPETITIVENESS</b>	
<b>Fisunenko P. A.</b> .....	<b>206</b>
12.1. An overview of theoretical and methodological approaches to the definition of the essence of economic security of the enterprise .....	207
12.2. Definition of the essential characteristics of the concept “economic security of the enterprise” .....	212
12.3. Preconditions for the formation of a proper level of economic security of the enterprise .....	216

<b>CHAPTER 13</b>	
<b>ESSENTIAL AND FUNCTIONAL ANALYSIS</b>	
<b>OF REGIONAL ECONOMIC SYSTEMS</b>	
<b>IN TERMS OF FOOD SECURITY</b>	
<b>Shaposhnykov K. S., Holovko O. P.....</b>	<b>223</b>
13.1. Food security in the structure of economic security .....	224
13.2. Strategic management of economic development, its characteristics, and role in shaping the competitive advantages of the region .....	227
13.3. Priorities of regional development in terms of food security .....	230
<b>CHAPTER 14</b>	
<b>THE METHODOLOGY OF FORMING</b>	
<b>UNITED TERRITORIAL COMMUNITIES' BUDGET</b>	
<b>EXPENDITURES IN UKRAINE</b>	
<b>Shchur R. I. ....</b>	<b>241</b>
14.1. The theoretical background of budget expenditures of united territorial communities.....	241
14.2. UTC Budget Expenditure Planning .....	247
<b>CHAPTER 15</b>	
<b>IMPLEMENTATION OF OUTSOURCING</b>	
<b>AT THE CONSTRUCTION COMPANIES</b>	
<b>Spiridonova K. O. ....</b>	<b>263</b>
15.1. Ways and necessity of cost reduction .....	263
15.2. Essence, structure and characteristics of outsourcing .....	266
15.3. Advantages and disadvantages of outsourcing .....	271

# CHAPTER 1

## PENSION SYSTEM AS A GLOBAL PROBLEM AND SUBJECT OF GLOBAL STUDY

**Barannik L. B.**

### INTRODUCTION

The system of pension provision of the population, or simply pension benefits, is of interest for not only scientists and politicians but also ordinary people. This interest has close character because the pensioning has grown into a global financial problem. The pension system (hereinafter referred to as PS) is the subject of study of scientists, economists, practices both in the world and in Ukraine, which is not accidental. Among the major research on pension provision development, the works of scientists for different periods should be noted. A classic of the genre is undoubtedly the report of the Rome Club scientists titled “Borders of Growth” and other works aimed at solving current problems by developing a new direction in their study, known as global modelling<sup>1</sup>. Under the globalization challenges influence, many works are devoted to the functioning of pension systems in different countries. E. Whitehouse collected and systematized data on pension systems operating in 53 countries of the world<sup>2</sup>. Kotlikoff and Burns analysed the deep structural deficiencies of modern pension provision systems in developed countries, in particular, in the United States. The authors suggest a set of political measures that will, if not prevent the coming storm, at least mitigate its impact, as well as provide recommendations to ordinary citizens on the preservation of personal savings in a virtually inevitable financial crisis<sup>3</sup>.

The development of pension issues in many scientific studies is closely linked with the analysis of political and globalization processes

---

<sup>1</sup> Meadows, D. H., Meadows, D. L., Randers, J., & William, W. Behrens III (1972). *The limits to growth*. A Report for the Club of Rome’s Project on the Predicament of Mankind (211 p.). New York: Universe Books.

<sup>2</sup> Whitehouse, E. (2007). *Pension Panorama: Retirement-Income Systems in 53 Countries* (234 p.). Washington, DC: The World Bank. Retrieved from: <http://www.biomedsearch.com/article/Edward-Whitehouse-Pension-PanoramaRetirement/210033207.html>

<sup>3</sup> Kotlikoff, L., & Burns, S. (2005). *Pensionnaya sistema pered burey: to, chto nuzhno znat kazhdomu o finansovom budushchem svoey strany* [Pension system before the storm: what you need to know about each other about the financial future of your country] (348 p.). Translated from English. Moscow: Alpina Biznes Buks.

(Pension Reform in Europe). Gugushvili in his monograph summarizes the experience of the formation and development of pension systems in 23 countries of Central and Eastern Europe, the independent states that arose in the territory of the former USSR in 1989–1997. The author concluded that in these countries, economic indicators, change in demographic background, internal political struggle, and external influence became the main reasons for the transformation of pension system models. Surhone, Russell, Kaplan, and Hannon examined the legislative basis of pension provision in China, India, Brazil, and described the investment processes of pension savings, the relationship between enterprises and trade unions, considered the mechanisms that allowed pension systems to survive economic cataclysms<sup>4</sup>.

Issues of pension provision in the context of social and economic development of Ukraine after gaining state sovereignty are researched in the works of domestic scientists and practitioners, namely L. Barannik, B. Zaychuk, E. Libanova, I. Lunina, O. Makarova, B. Nadtochii, D. Polozenko, M. Rippa, V. Skurativskyi, L. Tkachenko, V. Tropina, I. Chugunov, S. Yurii, and others. It is worth noting a number of authors and their work.

Problems, which are seriously identified in the pensioning, attributed to a number of factors, including the growing trend of the modern society ageing; disproportion between economically active population and pensioners; unemployment, inefficient models of social protection for elderly people, highly active labour migration; economic downturns; an increase in local/global dichotomy uncertainty, which complicates the reforming national pension systems. These trends are global in nature and affect more or less all countries of the world. They have a negative impact, primarily, on the systems of social protection of the population in substantially all civilized states, especially on the pension provision for citizens. The way out of this situation was initially the practice of financing pensions and other social guarantees at the expense of state budgets. However, this approach does not work in favour of long-term sustainable development.

Currently, in most developed countries, an affordable model of pension provision is a three-tier pension system, based on several forms of pension payment financing. World experience suggests that after the

---

<sup>4</sup> Akbulatov, R. S. (2013). *Istoriya stanovleniya i razvitiya pensionnoy sistemy Krasnoyarskoy kraya v 90-e gg. XX v. – nachalo XXI v.* [The history of the formation and development of the pension system of the Krasnoyarsk Territory in the 90s. XX – the beginning of the XXI century]. Thesis. Irkutsk.



introduction of such a system, some countries have made significant advances in the pension provision for their citizens, despite global challenges.

This experience is extremely useful for countries in transition, including Ukraine, which creates its own PS, and where 30% of the country's population is retired. Ukraine is not isolated from globalization processes and is influenced by the same way as other countries. However, ageing of the population is not supported by significant changes in solving problems such as low fertility, labour outflows, and high mortality in working age, etc.

Unfortunately, the problem of poor pension provision is compounded by the internal political and economic crisis and the military conflict of geopolitical nature. Consequently, these points indicate the relevance of studying the globalization trends impact on the effective pension provision.

### **1.1. Historical and theoretical aspects of the development of pensions in the world**

When Julius Caesar introduced the military pension system in Rome, he was hardly aware of the fact that he was setting a precedent that would seriously increase the financial difficulties of the Roman Empire in a few centuries. The history of the modern pension system is the most ambitious example of such a decision on influencing public finances and social development. Pension systems began to appear massively in Europe and its colonies in the late 19th – early 20<sup>th</sup> centuries. Historically, the first legally organized PS appeared in Germany. In 1889, the Reichstag adopted a law on retirement benefits according to age or disability. Soon, other European countries introduced old-age insurance and passed a number of laws on social protection of the population<sup>5</sup>. At that time, the revolutionary events in the countries of Western Europe in the second half of the 19th century were the impetus of social reforms. In some countries, insurance was called “in case of illness”, and health laws were adopted separately in different regions. Social insurance, 8-hour working day, paid leave; extended trade union

---

<sup>5</sup> Antropov, V. V. (2006). *Sotsyalnaya zashchita v stranakh Evropeyskogo Soyuza. Istoriya, organizatsiya, finansirovaniye, problemy* [Social protection in the European Union. History, organization, financing, problems] (271 p.). Moscow: Izdatelstvo Ekonomika; Tserkasevich, L. V. (2002). *Sovremennyye tendentsii sotsialnoy politiki v stranakh Evropeyskogo Soyuza* [Modern trends in social policy in the European Union] (245 p.). St. Petersburg: SPb HEUF.

rights, etc. were introduced. A characteristic feature of the German approach was that social insurance was compulsory and based on contributions paid by both employers and workers. The German system based on the previous practice of voluntary mutual funds, organized by guilds and labour unions. The pension rights in the new system were based on previously paid contributions.

Denmark (1891) and New Zealand (1898) introduced a “system of retirement” focused on targeted assistance to the poor, it was funded by general tax fees, provided for scrutiny of needs and it guaranteed insignificant levels of payments. These pension systems are more likely to derive from traditional laws on the poor<sup>6</sup>. The system of pension insurance was introduced as a mechanism that guarantees substantive possibility in case of living into the non-working age.

In the first half of the 20th century, many countries have created national pension systems based on the principle of solidarity between generations, and in the second half of the 20th century, they also passed the laws on the minimum guaranteed income. Despite all this, the civilized world still tries to organize the system of social protection of the elderly properly, though the reasons are already hidden in another.

First of all, these are negative demographic processes. At the beginning of the 21st century, practically the whole industrialized world has shown a birth rate below the estimated level required for simple reproduction of the population – 2.1 children per woman at procreative age. In 2000, the world’s population was 6.03 billion people (which is 4.4 billion more than in 1930, and 2.5 billion more than in 1950), in 2010 – 6.7 billion people. According to experts, by 2050, the population of the planet will reach 9.3 billion, and then stabilize at 10.5-11.0 billion people. Demographic processes are at an uneven pace. The slowdown in the growth rate of the planet’s population is expected to be 0.9% on average per year. In developed countries, average annual growth rates will drop to 0.36%, compared to 0.6% over the past 25 years. In developing countries, the population will grow by 18%, an average of 1.1% per year<sup>7</sup>.

However, in some of these countries, low living standards and a lack of health care systems, high mortality, and some others are critical

---

<sup>6</sup> Haidar, E. (2004). *Istoriya pensiy* [The history of pensions]. URL: [http://www.ng.ru/ideas/2004-07-13/10\\_histori.html](http://www.ng.ru/ideas/2004-07-13/10_histori.html)

<sup>7</sup> Dynkin, A. A. (Ed.) (2007). *Mirovaya ekonomika: prognoz do 2020 goda* [World Economy: Forecast until 2020] (429 p.). Moscow: Mahistr; Bilorus, O., & Matseiko, Yu. (2002). *My mohly b buty sered lideriv* [We could be among the leaders]. *Holos Ukrainy*, March 1, 6.

demographic factors that slow down their development. Increasing the standard of living of people in economically developed countries has led to an increase in life expectancy and a decline in fertility. Active migration processes also had some negative consequences, which resulted in a significant reduction in the number of workers in some European countries, and an increase in the burden on the working part of the population. It turned out that the solidarity system of pension provision is too dependent on demographic problems and is not able to solve the entire complex of urgent socio-economic problems. The changes in the demographic structure of European countries at the end of the 20<sup>th</sup> century in the direction of an increase in the proportion of people over the age of 65 in the total population forced the governments of these countries to increase public expenditures for social needs and pension provision<sup>8</sup>.

Dr. David Knox, the Senior Partner of the Melbourne Mercer Global Pension Index, says that pension systems around the world, including social security systems and private sector arrangements, are now under more pressure than ever before. Significant ageing of the population in many countries is a fact. “Yet this is not the only pressure point on our pension systems. Others include: the low-growth/low-interest economic environment which reduces the long-term benefit of compound interest, particularly affecting defined contribution arrangements; the increasing prevalence of defined contribution schemes and the related increased responsibility on individuals to understand the new arrangements; the lack of easy access to pension plans in both developed and developing economies, whether it be due to informal labour markets or the growing importance of “gig employment”; government debt in some countries which affects the ability to pay benefits in pay-as-you-go systems while high household debt in other countries will affect the long term adequacy of the benefits provided; the need to develop sustainable and robust income products as retirees seek more control and flexibility over their financial affairs”<sup>9</sup>.

“As significant pension reform is being considered or implemented in many countries, it is important that we learn together to understand what best practice may look like, both now and into the future”<sup>10</sup>.

---

<sup>8</sup> Tanzi, V., & Schuknecht, L. (2000). *Public Spending in the 20th Century*. A Global Perspective. Cambridge and New York: Cambridge University Press.

<sup>9</sup> *Melbourne Mercer Global Pension Index* 2018. P. 3. URL: <https://australiancentre.com.au/wp-content/uploads/2018/10/MMGPI-Report-2018.pdf>

<sup>10</sup> Ibid.

In addition, measures of many governments have been taken to stimulate the birth rate by providing more material assistance to families at the birth of a child; increase in leave due to pregnancy and childbirth; introduction of social security for migrants, refugees, people with disabilities in the national systems of social protection of the population (hereinafter referred to as the SPP); attracting foreign skilled workers to the country. In Germany alone, from 1960 to 1973, their number increased from 686 thousand to 2.6 million people<sup>11</sup>.

By the start of World War II, almost all industrialized countries had pension systems, some of them were limited according to the proportion of the population covered by pension protection. The decades after World War II were a time of unprecedented expansion of the level of pension payments coverage in most developed countries. However, active subsidization of the PS from the state budget took funds from other sectors of the economy, which hindered the country's development. So at the end of the 20th century, pension reforms have begun in almost all countries of the world. Their goal was to create a national pension system that would take into account economic, political, and socio-demographic changes in their own countries and in the world as a whole. Those countries that timely found the problems and estimated the implications for the state budgets began pension reforms to find new sources of funding and new organizational and legal principles.

Pension system reforming occurred as a modernization of the distribution pension system without the introduction of accumulative principles, implementation of the transition to cumulative schemes and a sharp restriction in this distribution sector, as well as the adoption of a variant that combines distribution and accumulation principles. The third variant was chosen by the majority of developed and developing countries. It is based on the introduction of an individual accounts system with obligatory and voluntary contributions. The latter is called the accumulative pension system since it is based on the capitalization of contributions for future retirement.

The world experience of pension reforms has shown that a cumulative system is more acceptable since it contributes to an increase in aggregate national savings, and hence to economic growth; does not depend on demographic risks, which jeopardize the development of the

---

<sup>11</sup> Karachurina, L. (2009). Germanyia: kak upravliat migrantami [Germany: how to manage migrants]. *Sovremennaya Yevropa*, 2, 18–33.

distribution system; provides a sufficient level of pensions differentiation depending on earnings and the efficiency of using retirement savings<sup>12</sup>. In theory, the liberal model of social policy has prevailed, which is based on the subsidiarity and self-financing principles, in other words, it is the economic doctrine of minimal state interference in the social sphere.

Earlier it was considered that retirement is possible only at the expense of two financial methods of accumulation of funds. Otto Bismarck formulated one of the first concepts of retirement provision. He considered the system of pensions as a system of material protection of workers and their family members in old age and in the case of disability, in which the amount of the assistance provided should be consistent with the duration of payment of contributions to the pension fund. That is, it refers to social insurance, including pension insurance. According to W. Beveridge's concept, the system of pensions is a system of material protection of citizens, in which all persons at the age of reaching a minimum amount of material assistance (minimum pension) financed from the state tax revenues are provided. Today there are much more options for financing pensions. There is an active search for effective pension insurance models in the world.

The reform of the pension system by many European countries is aimed at ensuring its future sustainability. In the case of an unbalanced pension system, the increase in retirement benefits caused by the aging population will lead to an increase in expenditures from the state budget, which remains one of the main sources of coverage of the deficit of the pension fund. According to experts, this part of government spending in OECD countries will increase from 9.3% of GDP in 2010 up to 11.7% of GDP by 2050<sup>13</sup>.

Among the primary measures to change the financial mechanism of retirement – the transition to a multilevel pension system. It is known, the International Labour Organization and the European Union use the classification of pension systems based on the “three-tiered” system and reflect the role of different actors in providing retirement income. The current classification of the World Bank includes five levels of the pension system.

---

<sup>12</sup> Ivanova, E. I., & Sidornia, A. A. (2014). Mirovoy opyt razvitiya pensionnykh sistem: obshchemirovyye tendentsii i mezhranovyye razlichiya [World experience in the development of pension systems: global trends and differences between countries]. *Molodezhnyy nauchnyy forum: Obshchestvennyye i ekonomicheskiye nauki*. URL: <https://nauchforum.ru/studconf/social/viii/23188>

<sup>13</sup> *Pensions at a Glance 2013. OECD and G20 Indicators*. URL: [https://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2013\\_9791195073054-ko](https://www.oecd-ilibrary.org/finance-and-investment/pensions-at-a-glance-2013_9791195073054-ko)

Zero or basic level is social payments from the state budget to the poorest (basic pension) without reference to the insurance record or salary. This is the level of poverty eradication.

The first level is the level of a solidarity system in which a generation of working citizens pays contributions to the pension fund and thus generates elderly people who have reached the retirement age.

The second level is the compulsory accumulative. This is a way in which people in the course of their work accumulate contributions in a separate account, from which they then receive a pension. Accumulated contributions invest in various financial instruments. After retirement, the participant receives the right to receive a pension, which is calculated taking into account the accumulated amount of contributions and investment income.

The third level is voluntary accumulative. A future pensioner will accumulate funds on his own. Because he refuses to use these funds now and accumulates them in his retirement future, he will receive certain incentives, for example, tax benefits – they will not pay taxes from these funds.

The fourth level is the municipal pension infrastructure. We are talking about nursing homes, retirement benefits, various types of care<sup>14</sup>.

Such a system, as the world practice has shown, allows us to employ various financial opportunities, thereby contributing to the motivation of earning a future pension.

## **1.2. World models of pension benefits**

In countries with developed economies (countries-leaders), classical, social-oriented, and liberal-democratic models are commonly used, while radical-accumulative and accumulative-distribution systems are typical for countries whose economies are on an active stage of development.

In the world experience of retirement, it is accepted to consider several basic models of the pension system. All of them are built on the basis of distribution or accumulation principles, have specific features that are taken into account when developing national models of pension insurance.

---

<sup>14</sup> Robert Holzmann, Richard Paul Hinz, Mark Dorfman. Pension Systems and Reform Conceptual Framework Social protection & Labor. *The World Bank*. P. 7. URL: <http://documents.worldbank.org/curated/en/716871468156888545/pdf/461750NWP0Box334081B01PUBLIC10SP00824.pdf>

Existing world pension models can be classified as:

- features of the formation of financial resources;
- level of centralization of financial resources;
- structural construction;
- the specificity of countries;
- strategies;
- the level of economic development;
- types of reforms;
- a multi-level model of the World Bank.

By the peculiarities of the formation of financial resources are distinguished:

1) solidarity pension systems – when employees and employers make transfers between generations, that is, they form financial resources for the financing of pensions;

2) capitalized (accumulated) – based on the accumulation of employee financial resources on a personal account during the labour activity and provide for the binding capital markets, through which temporary transfers are carried out. The size of the pension depends on the accumulated amount of money during work.

Pension provision of the world's countries is characterized by structural construction, which forms the basis of state pension provision (basic, social assistance, and minimum pensions), non-state pension provision, as well as additional pension schemes that are able to function at both the state and non-state levels. The level of centralization of financial resources allows the allocation of centralized and decentralized pension systems. Centralization assumes that all responsibility lies with one state or pseudo-state institution that collects all contributions, administers the first and second levels without duplication of functions.

In decentralized models, there are several savings-based pension funds based on individual choices and strengthening regulatory oversight of the system<sup>15</sup>.

The specificity of the countries of the world allows distinguishing the following models of pension insurance:

– Chilean, which is characterized by the payment of contributions only by employees. In Chile, 10% of the salary is covered by retirement insurance;

---

<sup>15</sup> Nelipovich, O. V. (2009). Pension systems with non-state pension funds in market economies. *Bulletin of the Khmelnytsky National University*, 2, 58–62.

- Hungarian, where contributions are paid both for mandatory joint and several pension insurance and for non-state pension provision under defined-contribution pension schemes;
- Latvian – with conditional savings accounts;
- Polish, supplementing the previous model. In Poland, until January 1, 1999, there was a conditional accumulation system, and afterward – contributions were paid to private pension funds, from which payers receive real investment income;
- Russian, consisting of basic pension for all citizens, as well as additional pension payments (due to nominal and real investment of pension assets)<sup>16</sup>.

By type of pension reform, distinguish:

1) parametric (non-structural) pension systems, which consist of a change in the deduction and payment scales within the framework of the national pension system. Increasing the length of service, introducing actuarial allowances for early retirement, indexing pensions in response to rising prices, and not wages, are a part of the parametric reform of retirement insurance.

2) nonparametric (structural) – include the replacement of the share of the national pension system with the private sector. Countries such as Hungary, Croatia, Poland, Latvia, and some Latin American countries have implemented structural reforms. Ukraine can also be considered a country for structural reforms in the area of pensions since the basic pension is provided at the state level, while non-state pension funds offer additional pensions.

Pension systems, such as distributive and cumulative, have both advantages and disadvantages. The purpose of the distributive pension system is to implement a mechanism for protection from poverty, but at the same time, it is not adapted to demographic changes. But the main advantage of a distributive pension system is the propensity of insured persons in the long run to risk investment in pension funds and inflation. The purpose of the accumulative pension system is the economic efficiency that is inherent in countries with market economies. The disadvantage of a funded pension system is that it cannot be instantaneously introduced and it has a high sensitivity to changes in financial markets.

---

<sup>16</sup> Grushko, V. I., Grushko, N. V., Bevzenko, O. V., Krasota, O. V., & Laptev, S. M. (2006). *Pension system of Ukraine: Textbook*. Kyiv: Condor.



Many countries have introduced a PS with three financial schemes (or tiers). I Tier is the financing of pensions from state pension funds; II Tier – from the state accumulative pension fund; III Tier is non-state pension provision, which involves financing from different sources. That is, these countries have maintained a public distribution system with the simultaneous encouragement of voluntary private pension schemes. In essence, the reform of the PS was aimed at ensuring that the retirement age depended as much as possible on the individual achievements of the employee (insurance period, salary, deductions, and other personal preferences). At present, in most developed countries, citizens' pension benefits come from three sources: state pension funds, corporate sector pensions, and individual pensions received under a voluntary pension accumulation insurance contract. In percentage terms, it is about equal proportions. In many countries, pension provision is mostly provided by non-state pension funds (hereinafter referred to as NPFs) and life insurance companies. Thus, citizens prefer the mechanism of pension insurance to form pensions. In each country, the pension system has its own peculiarities related to the specifics of that SPP model, which has been formed over a decade. Therefore, in some countries, NPFs are preferred, in others – insurance companies or individual programs of saving for the old age. Insurance companies are the main providers of services that allow accumulating the necessary funds upon reaching retirement age. This is explained, first of all, by the peculiarities of taxation of contributions and payments under supplementary pension insurance contracts, which allow either the total or partial exclusion from the tax base of the abovementioned funds. And due to the fact that states are taking less and less part in guaranteeing pension benefits.

Despite the fact that the amount of accumulated assets in NPFs and insurance companies in the developed EU countries is quite significant, they need to allocate additional 456 billion euros in order to preserve the current sizes of state pensions in the next 35 years. Already, the pension burden is 10.4% of GDP in the fifteen EU countries. In 2040, it will increase to 13.6%. In this regard, the European Commission recommends that EU member states continue to reform pension systems in order to minimize the negative effects of aging and population reduction.

According to the Organization for Economic Cooperation and Development (OECD), in 2013–2015, 26 of 34 countries have made changes to their pension systems. In nine countries, the majority of the

population was involved in the reform while other changes affected certain groups of employees (for example, private or public sectors) or pensioners themselves.

But the population continues to grow old. The proportion of the population over 65 years old to the engaged people in the world will be doubled by 2050. This will overload the pension systems and employees who finance their pensions by their work and taxes. The continuation of reforms is inevitable. The question arises as to how and when the countries of the world will carry out this reform. This affects not only the fairness to current and future pensioners but also the state of the economy, both national and world<sup>17</sup>.

There are three ways to reduce government spending for pensions: raising the retirement age, reducing retirement payments and benefits, and raising taxes. Solidarity PS reforms are usually aimed at reducing pension payment. This increases the need to develop private pension provision and its role in future retirement income. All OECD countries have accumulative pension systems. On average, in 34 countries, the distributive part provides a pension in a 41% average salary, with the accruals being increased to 58%, that is, about one-third of the pension is provided by savings<sup>18</sup>.

In general, measures taken by many OECD countries are aimed at reducing retirement expenditures and at parametric reforms. For example, the Czech Republic and Finland reduced indexation, France changed its order, Greece and Belgium froze it. Since 2017, Slovakia tied indexation to inflation (earlier – to inflation rates and wage growth), Sweden, Finland, Portugal, and Germany applied the same rules. In Turkey, indexation depends on GDP rates. Luxembourg indexes pensions only if pension income exceeds costs. Some recent political reforms were aimed at delaying retirement, others – vice versa. The pension age is rising massively. By 2015, 30 out of 34 OECD countries have made an increase. Most countries have gone through a gradual increase in pension age.

For example, in France, in 2010, an increase took place in the pension age from 60 to 62 years to 2018, to 2030 – to 67 years, and the minimum required period of payment of contributions will gradually be

---

<sup>17</sup> Tuladkhar, A., Pereyra, Zh., Muir, D., & Karam, F. (2011). *Globalnaya pensionnaya reforma* [Global Pension Reform]. Retrieved from: <http://www.mn.ru/newspaper/opinions/71478>

<sup>18</sup> Kuvshynova, O. (2016). *Kak mir reformiruyet svoi pensionnyye sistemy* [How the world is reforming its pension systems]. URL: <https://www.vedomosti.ru/economics/articles/2016/12/23/670920-mirreformiruet>

raised from the current 41.5 years to 43. Canada, Belgium, and Spain announced on the gradual increase in the retirement age to 67 years old, in Germany it raises from 65 to 67 per month in a year, in the Netherlands it will reach 67 years in 2021, and in Australia it will reach this number in 2023. In countries with economies in transition, where the retirement age was 60 years for men and 55 for women in the mid-1990s, it now stands at 65 and 63, respectively (Kuvshynova, 2016). Hungary increases the age from 62 to 65 years. In the Czech Republic, they will retire at the age of 68. In Slovenia, where the retirement age is one of the lowest – 58, it raises to 60 for those who paid contributions for 40 years, if less – to 65<sup>19</sup>.

Improving the pension system in Ukraine is a top priority, so the foreign experience is very useful. Ukraine has the first and third levels PS. The deficit of the Pension Fund of Ukraine is covered from the state budget. Now it is more than 140 billion UAH, which is much more than the state's expenditures on education, science, and culture together. The pension benefits of the main part of pensioners are low. However, in our opinion, shifting the retirement burden to just one employee is unacceptable; this may increase retirement poverty over the long term. After all, the pensions of most citizens are low. In favour of raising the retirement age for women in 2011, the following “argument” worked: in Ukraine, women after retirement live much longer than men. Moreover, the fact that a large number of Ukrainian women not only work but also do a lot as housewives and raise children was not taken into account.

In Ukraine, a situation has arisen, in which, in the medium term, the fulfilment of state pension obligations is possible only due to state borrowing increase. Therefore, maintaining the sustainability of the state budget requires a change in the financial model of the Ukrainian pension system. After attainment of independence in Ukraine, efforts were made to reform the pension system in various years – the transition from pension provision to pension insurance (2004), raising the pension age and extending the minimum period of insurance to obtain a pension (2011), introducing new rules for the calculation of pensions, modernization of pension payments, etc. (2017). However, the process of creating an optimal model of financial support for PS is not over. The ultimate goal of pension reform is to ensure long-term macroeconomic and social stability in the state and improve the pensioners' well-being.

---

<sup>19</sup> Ibid.

The reform is a part of the current macroeconomic policy of the state, which is aimed at a progressive restructuring in order to comply with general socio-economic norms. The multi-level pension system protects many risks, especially from the general risks arising from the economy and politics. Therefore, one of the tasks of the strategy of the development of the pension system of Ukraine is to determine the optimal proportions and accrual principles of pension provision. The main question is how to change the model between the state, employers, and employees.

## CONCLUSIONS

Pension provision of citizens is one of the most important social functions of the state. It should be noted that from how effectively the PS works, one can judge the level of socialization of the country's economy. The PS is also a kind of barometer of the health of the state finance system. The last few decades in the world there are global changes that negatively affect the financing of pensions. First of all, it is an ageing of the population. It takes place against the background of declining birth rates, large-scale migration of the population, structural changes in national economies, and the like. The effects of population ageing are exacerbated by problems with public finances after the global financial crisis of 2008–2009. The reform of the pension system by many European countries is aimed at ensuring its future sustainability.

Currently, Ukraine has the first and third levels PS. The deficit of the Pension Fund of Ukraine is covered from the state budget. Now it is more than 140 billion UAH, which is much more than the state's expenditures on education, science, and culture together. The pensions of the main part of pensioners are low. The world standard of replacement rate cannot be sustained. In a difficult financial situation, the government is limited in its ability to cover the deficit of PFCs at the expense of public funds. All this suggests that the Ukrainian pension system needs radical reform, first of all, the transition to a three-tier system. The government announced a gradual introduction of the accumulation (second) level of the pension system from 2020. It is extremely important that this innovation is supported by the development of the stock market and the growth of incomes of Ukrainian citizens. Government officials expect that the deficit of PFC will gradually decrease, in 2026 the turning point will come and in 2027 the budget of the fund will be deficit-wise<sup>20</sup>.

---

<sup>20</sup> Kalacheva, G. *Pension reform suffered by competitors*. What is waiting for her in autumn? URL: <https://www.epravda.com.ua/publications/2017/07/25/627399/>

## **SUMMARY**

The article analyses the development of pensions in the world and the problems of its implementation in the context of global risks. The main reasons for which the pension is considered as a global problem are named. It is noted that the negative manifestations of globalization are inherent in the Ukrainian practice of pension provision. The aim of the work is to study the global experience of reforming national pension systems in the face of growing global negative trends. The study was conducted using the methods of scientific knowledge: comparison and synthesis – to identify significant differences in approaches to the study of globalization processes; analysis and synthesis – identifying patterns of economic development and determining their social consequences; historical and logical, as well as statistical methods. The article discusses the experience of some countries in improving the practice of pensions. It has been established that pension reforms are aimed at ensuring that the individual achievements of an employee (pension insurance, salary, deductions, other personal preferences) are taken into account as much as possible. In most developed countries, pensions are funded from three sources: state pension funds, corporate sector pensions, and individual pensions that a pensioner receives under a personal voluntary retirement savings policy. Further development of the pension system in Ukraine should be ensured through the introduction of its second level. The study found that global problems have a particular negative impact on retirement benefits. The search for ways to neutralize or mitigate the effects of global problems has led many countries to introduce a three-tier pension system that provides funding from various sources. The World Bank proposes to introduce a five-tier pension system. Since raising the retirement age cannot be infinite, pension systems must be multivariately constructed.

## **REFERENCES**

1. Meadows, D. H., Meadows, D. L., Randers, J., & William, W. Behrens III (1972). *The limits to growth. A Report for the Club of Rome's Project on the Predicament of Mankind*. New York: Universe Books.
2. Whitehouse, E. (2007). *Pension Panorama: Retirement-Income Systems in 53 Countries*. Washington, DC: The World Bank. URL: <http://www.biomedsearch.com/article/EdwardWhitehouse-Pension-PanoramaRetirement/210033207.html>

3. Kotlikoff, L., & Burns, S. (2005). Pensionnaya sistema pered burey: to, chto nuzhno znat kazhdomu o finansovom budushchem svoey strany [Pension system before the storm: what you need to know about each other about the financial future of your country]. Moscow: Alpina Biznes Buks. (in Russian)
4. Akbulatov, R. S. (2013). Istoriya stanovleniya i razvitiya pensionnoy sistemy Krasnoyarskoy kraya v 90-e gg. XX v. – nachalo XXI v. [The history of the formation and development of the pension system of the Krasnoyarsk Territory in the 90s. XX – the beginning of the XXI century]. Thesis. Irkutsk. (in Russian)
5. Antropov, V. V. (2006). Sotsyalnaya zashchita v stranakh Evropeyskogo Soyuza. Istoriya, organizatsiya, finansirovaniye, problem [Social protection in the European Union. History, organization, financing, problems]. Moscow: Izd-vo Ekonomika. (in Russian)
6. Tserkasevich, L. V. (2002). Sovremennyye tendentsii sotsialnoy politiki v stranakh Evropeyskogo Soyuza [Modern trends in social policy in the European Union]. St. Petersburg. (in Russian)
7. Haidar, E. (2004). Istoriya pensiy [The history of pensions]. URL: [http://www.ng.ru/ideas/2004-07-13/10\\_histori.html](http://www.ng.ru/ideas/2004-07-13/10_histori.html) (in Russian)
8. Dynkin, A. A. (Ed.) (2007). Mirovaya ekonomika: prognoz do 2020 goda [World Economy: Forecast until 2020]. Moscow: Mahistr. (in Russian)
9. Bilorus, O., & Matseiko, Yu. (2002). My mohly b buty sered lideriv [We could be among the leaders]. *Holos Ukrainy*, March 1, 6. (in Ukrainian)
10. Tanzi, V., & Schuknecht, L. (2000). Public Spending in the 20<sup>th</sup> Century. A Global Perspective. Cambridge and New York: Cambridge University Press.
11. Melbourne Mercer Global Pension Index 2018. P. 3. URL: <https://australiancentre.com.au/wp-content/uploads/2018/10/MMGPI-Report-2018.pdf>
12. Karachurina, L. (2009). Germaniya: kak upravliat migrantami [Germany: how to manage migrants]. *Sovremennaya Yevropa*, 2, 18–33. (in Russian)
13. Ivanova, E. I., & Sidornia, A. A. (2014). Mirovoy opyt razvitiya pensionnykh sistem: obshchemirovyeye tendentsii i mezhstranovyeye razlichiya [World experience in the development of pension systems: global trends and differences between countries]. *Molodezhnyy*

*nauchnyy forum: Obshchestvennyye i ekonomicheskiye nauki*. URL: <https://nauchforum.ru/studconf/social/viii/23188> (in Russian)

14. Pensions at a Glance 2013. OECD and G20 Indicators. URL: <http://www.oecd.org/pensions/public-pensions/OECDPensionsAtAGlance2013.pdf>

15. Holzmann, R., Hinz, R. P., Dorfman M. Pension Systems and Reform Conceptual Framework Social protection & Labor. The World Bank. URL: <http://documents.worldbank.org/curated/en/716871468156888545/pdf/461750NWP0Box334081B01PUBLIC10SP00824.pdf>

16. Nelipovich, O. V. (2009). Pensiini systemy z uchastiu nederzhavnykh pensiinykh fondiv v krainakh z rynkovoju ekonomikoju [Pension systems with non-state pension funds in market economies]. *Visnyk Khmelnytskoho natsionalnoho universytetu*, 2, 58–62. (in Ukrainian)

17. Grushko, V. I., Grushko, N. V., Bevzenko, O. V., Krasota, O. V., & Laptev, S. M. (2006). Pensiyna systema Ukrainy [Pension system of Ukraine]: Textbook. Ed. V.I. Grushko. Kyiv: Condor. (in Ukrainian)

18. Kalacheva, G. Pensiinu reformu spitkaly konkurenty. Shcho na nei chekaie voseny? [Pension reform suffered by competitors. What is waiting for her in autumn?]. URL: <https://www.epravda.com.ua/publications/2017/07/25/627399/> (in Ukrainian)

19. Tuladkhar, A., Pereyra, Zh., Muir, D., & Karam, F. (2011). Globalnaya pensionnaya reforma [Global Pension Reform]. URL: <http://www.mn.ru/newspaper/opinions/71478> (in Russian)

20. Kuvshynova, O. (2016). Kak mir reformiruyet svoi pensionnye sistemy [How the world is reforming its pension systems]. URL: <http://www.vedomosti.ru/economics/articles/2016/12/23/670920-mirreformiruet> (in Russian)

#### **Information about the author:**

**Barannik L. B.**

Doctor of Economics, Professor,  
Head of the Department of Taxation and Social Security,  
University of Customs and Finance, Ukraine

**CHAPTER 2**  
**INSTITUTIONAL DEVELOPMENT**  
**OF LOCAL SELF-GOVERNMENT**  
**IN DECREASING CONDITIONS IN UKRAINE**

**Galtsova O. L.**

**INTRODUCTION**

The development and establishment of the institution of local self-government in modern conditions are essential for the comprehensive development of the country and for the dignified life of the people. In Ukraine, during the period of independence, the idea of the development of the local self-government was constantly adhered to, but the centralization policy, which intensified the reproduction of people from the authorities, the growing distrust of the population, and the intensification of problems in the field of public administration, remained a priority. The development of the institution of local self-government in the contemporary context is essential for the comprehensive development of the country and for the dignified life of the people.

The existence of any democratic, rule-of-law, and civil society, as well as the processes of European integration, foresees the creation of an effective decentralized system of public power, based on the rule of law, democracy, recognition of man with the highest social value. These tasks cannot be realized without a complete system of local self-government.

The introduction of decentralization of public administration is conditioned by the urgent need for the transformation of public administration, characterized by rigid centralization of powers and resources, the inability to effectively address the problems of the development of territorial communities and their associations (within raions and regions), the existence of opaque decision-making mechanisms and, as a consequence, significant manifestations of corruption.

At the same time, the complexity and multidimensionality of the introduction of decentralization of public administration, which would finally give a significant dynamism to the economic and social development of the country and its regions, require a theoretical substantiation of the conditions, under which the transfer of powers and responsibilities from the central to the regional and local levels will not



lead to further deterioration of the provision of public services to the population, the growth of disproportions in access to them by citizens, depending on the place of residence and the increase of social strain in connection with this, and centrifugal manifestations threatening the integrity of the state. This formulation of the question determines the urgency of specifying the theoretical positions regarding the impact of decentralization on the development of the state and territorial communities.

Consideration of the issues of the effectiveness of the functioning of the local self-government institution should be based on the differences in the use of public access resources and the nature of business structures in the market environment. First of all, we should emphasize the differences in the direction of the goals. In the market, owners of business entities determine goals that can be to increase the level of profitability, increase the level of business capitalization, etc. In the process of achieving certain business goals, the degree of consumer satisfaction serves as an instrument for realizing the goals set. In the non-profit sector, one of the main goals is to meet the needs of the consumer by providing quality services.

### **2.1. The influence of decentralization on the development of the national economy and territorial communities**

Today, Ukrainian statehood will test itself, on the one hand, the tendency towards integration into the European and world community, to the formation of a common political, legal, and cultural space, and on the other – the desire for a course on self-sufficiency through regionalization and decentralization in the tendency towards unity and the integrity of the historically formed state. As practice shows, these processes can intersect, which is accompanied by all sorts of contradictions and conflicts<sup>1</sup>.

The need for decentralization of the administrative vertical, the close power of the local government, the empowerment of citizens' participation in the management of the state, the division of powers and responsibilities of executive authorities and local self-government – all this requires the development and scientific substantiation of a comprehensive scientific and legal concept of public power that meets

---

<sup>1</sup> Онупрієнко А. М. Принципи централізації та децентралізації в територіальній організації влади. *Форум права*. 2014. №4. С. 224–227. URL: [http://nbuv.gov.ua/UJRN/FP\\_index.htm\\_2014\\_4\\_40](http://nbuv.gov.ua/UJRN/FP_index.htm_2014_4_40)

the needs of society, introduction of legal, social, and economic standards of human life, society, and state, optimal decentralization and centralization. Therefore, today the relevance of the study is determined primarily by the fact that the process of decentralization promotes the democratization of society, which is especially relevant for Ukraine, where democratic institutions of power are experiencing a period of improvement and reform<sup>2</sup>.

Domestic and foreign experience shows that in the exercise of local power, there are constantly two opposing trends – centralization and decentralization. The state by its nature tends to centralize in order to ensure national interests, and territorial communities, in their turn, seek self-government, self-solution of issues of local importance. Therefore, the progress of Ukraine through the formation of civil society depends to a large extent on the optimal combination of these trends<sup>3</sup>.

In any case, the criterion for the optimal balance of centralization and decentralization of power is to meet the needs of the population; at the central level, only those powers that relate to the functioning of the country as a whole remain, the other powers are transferred to the place; power. In other words, the degree of decentralization of power in a democratic society should be determined by the objective needs of the development of society and the state, that is, at the local level, “power” should be as much as it is necessary for the effective life support of territorial communities and the solution on the ground, within their territories, issues of state importance.

The centralized system of government has the following features: competency and finance are concentrated in the centre; there is a strong central apparatus with a developed network of local bodies subordinate to the centre; the direction of the links is “from the top down”, and the self-government either absent or formally; horizontal, functional the type of separation of powers is dominant.

The decentralized system of government is characterized by the following: competency and finance are divided between levels; there is real self-government; a variety of links (“from bottom to top”, “from top to bottom”, horizontal and vertical); the multiple division of powers is typical.

---

<sup>2</sup> Онупрієнко А. М. Принципи централізації та децентралізації в територіальній організації влади. *Форум права*. 2014. №4. С. 224–227. URL: [http://nbuv.gov.ua/UJRN/FP\\_index.htm\\_2014\\_4\\_40](http://nbuv.gov.ua/UJRN/FP_index.htm_2014_4_40)

<sup>3</sup> Концепція політичної реформи в Україні. *Політична реформа як засіб демократизації українського суспільства* : матеріали науково-практичної конференції, м. Харків, 18 квітня 2003 р. Харків : Вид-во ХРІДУ УАДУ «Магістр», 2003. 152 с.

In addition to rationalizing public authority and creating legal conditions for the economic development of the regions, decentralization of public authority is also a way of developing democratic institutions and guaranteeing the formation of an authoritarian political regime<sup>4</sup>. Indeed, some decentralization is a real way to avoid a “central government trap” and, inevitably, the processes of “social ossification”<sup>5</sup>. Decentralized management, if only provided with the necessary facilities and conditions, is much more practical than centralized management<sup>6</sup>. For effective decentralization, as a rule, it is necessary to allocate territorial teams with a clearly defined competence and adequate means of solving issues pertaining to this competence, giving them the opportunity to form their own governing bodies, limiting the control over the activities of local authorities by the central authorities<sup>7</sup>. Subject to the general logic of the decentralization process of public authority, in particular, the vertical decentralization of power<sup>8</sup>, the state should establish a balance between: a) between the central and local levels of government; b) between authorities of different levels; c) between the state, on the one hand, and society – on the other.

Thus, the central problem of balancing the two opposite trends – centralization and decentralization (vertical organization (division) of power) – is the problem of optimal definition of the system of territorial units, which requires compliance with two principles: “homogeneity” of the separable unit (i.e., it is advisable to determine the size of the area of residence of people so to have a similar group of processes that could be regulated by the authorities); the optimality of the size of the unit (that is, the definition and establishment of the boundaries of the territory so that it can simultaneously “see” the proceeding process, cover its power influence, control the course of events, and “see” the results of influence).

Decentralization and centralization can be considered as certain actions to increase or decrease the number of authorities and

---

<sup>4</sup> Конституционное право: учебник / за ред. В.В. Лазарев. Москва : Юрист, 1999. 592 с.

<sup>5</sup> Остром В. Смысл американского федерализма. Что такое самоуправляющееся общество : пер. с англ. / Винсент Остром; предисл. А. Оболонского. Москва : Арена, 1993. 320 с.

<sup>6</sup> Ведель Ж. Административное право Франции: пер. с фр. / под ред. М. А. Крутиголова. Москва : Прогресс, 1973. 512 с.

<sup>7</sup> Черкасов А. И. Сравнительное местное управление: теория и практика. Москва : ФОРУМ-ИНФРА-М, 1998. 160 с.

<sup>8</sup> Тоффлер Э. Футорошок : пер. с англ. / Элвин Тоффлер. СПб.: Лань, 1997. 472 с.

responsibilities of authorities, structural units or officials who are at different hierarchical levels of a management system<sup>9</sup>.

The optimal organization of public authority depends on the effectiveness of distributing its powers at the appropriate vertical and horizontal levels of its implementation, establishing limits of competence of each level, effective public and judicial control, adherence to the principles of autonomy in the implementation of the exclusive competence of each level of public authority and subsidiarity. In any case, a modern approach to the problem of the development of statehood involves creating a holistic view of the system of institutions of social, political governance and self-government, mediated by law, connected both with society as a whole and with its subsystems, and closes on a person – higher value of a democratic society.

Economic and social development of the community occurs in the case of the existence of three necessary conditions: ensuring the microeconomic efficiency of economic entities, and an appropriate local social policy that supports this. These conditions create the so-called microeconomic environment that reduces transaction costs (adaptation costs to changing market conditions)<sup>10</sup>, forms the confidence of economic entities in the predictability of the economic environment, positively affects the assessment of expected profitability, risk reduction, and reduction of necessary business efforts<sup>11</sup>. The state's ability to effectively perform its functions is determined by its institutional capacity to create the general favourable conditions for development, first of all, economic: macroeconomic stability, transparency of rules and procedures of doing business, effective mechanism for solving problems that arise in relations between different economic actors, fair (competitive) access to resources. The proper institutional capacity of the state to ensure the economic and social development of the country as a whole makes it possible to reduce the probability internal conflicts of interest (between communities and separate social groups within the communities) and minimize the potentially negative external challenges (the impact of globalization processes, open markets, territorial problems associated with the need to update their economic base). This is the basis

---

<sup>9</sup> Енциклопедія державного управління: у 8 т. / наук.-ред. колегія: Ю. В. Ковбасюк (голова) та ін. Київ : НАДУ, 2011. 748 с.

<sup>10</sup> Стратегии бизнеса: аналитический справочник / под ред. Г. Б. Клейнера. Москва : КОНСЭКО, 1998. 612 с.

<sup>11</sup> Rodriguez-Pose A. Better Rules or Stronger Communities? On the Social Foundations of Institutional Change and Its Economic Effects. *Economic Geography*. 2006. № 82 (1). P. 1–25.

that generates the spread of trust in the institutions of state power to communities, which is transformed into strict compliance with the implementation of state decisions at their adaptation at the community level. In turn, trust in the main institutional structure – the state – enables to increase the capacity of the local self-government body to solve the problems of local development in the communities.

On the contrary, the institutional weakness of the state stimulates territorial communities with relatively high economic potential, influential business groups that form stable informal rules and connections within communities, seek rent not only in their own territory but also receive it from the state, thereby violating the principles of equality and competitiveness in the country as a whole, adversely affecting its economic and social development. To overcome such possible stability in relations, a state with low institutional capacity is unable. The economically weak communities, especially the crushed ones, lose the opportunity to defend their interests before such a state, and their socioeconomic situation completely falls into dependence on the volumes of resources that it can send them. Own weakness, together with the lack of trust in the state, alternatively, impair their ability to develop. Decentralization, on the one hand, should contribute to strengthening the role and capacity of communities in shaping the environment of their own development, which cannot be effectively created by the state, namely: reduction of transaction costs in the territory, favourable microeconomic conditions, and a rapid reaction to solving problem issues that arise in the process business activity. On the other hand, decentralization requires an institutionally strong state, which is the key to a balanced relationship between it and the communities, as well as within the community in the long run. Therefore, in the processes of decentralization of management, the primary should be the strengthening of the state itself, which should establish clear and transparent institutions for individuals and legal entities that form the basis of dynamic development.

## **2.2. Institutional analysis of the effect of decentralization on the development of territorial communities**

In 1991, after the proclamation of independence, the question of introducing a policy of decentralization, including financial, arose in Ukraine. This process is associated with significant legal, economic, organizational, and staffing difficulties. The Constitution of Ukraine in

1996 consolidated the system of organization of power at the local level, established in 1992 in the Law “On Local Councils of People’s Deputies, Local and Regional Self-Government”. Important acts in creating the legal basis for the decentralization of power were the Laws of Ukraine “On Local Self-Government in Ukraine” as of 1997 and “On Local State Administrations” as of 1999. An important step on this path is the adoption by the CMU of the Concept of Local Self-Government Reform and Territorial Organization of Power in Ukraine on April 1, 2014<sup>12</sup>. The consolidation of the principle of decentralization in the exercise of state power is the main slogan of the developed proposals for amending the current Constitution of Ukraine, which are based on the provisions of the European Charter of Local Self-Government, the work of the Constitutional Assembly and the Constitutional Commission of the Verkhovna Rada, groups of experts in the field of constitutional law and local self-government<sup>13</sup>.

The purpose of the Concept is to identify the areas, mechanisms and timelines for the formation of effective local self-government and territorial organization of power to create and maintain a full-fledged living environment for citizens, providing high-quality and affordable public services, establishing institutions of direct democracy, meeting the interests of citizens in all spheres of life in the respective territory, harmonization of interests of the state and territorial communities.

The Decree states that the implementation of the Concept is carried out in two stages. The Law of Ukraine “On Cooperation of Territorial Communities” as of June 17, 2014<sup>14</sup>, and in February 2015 a practical commentary was prepared by the Institute of Civil Society in cooperation with the Council of Europe Program “Strengthening Institutional Capacity of Local Self-Government Bodies in Ukraine” at the request of the Ministry of Regional Development, Construction, Housing and Communal Services of Ukraine within the framework of implementation of the Action Plan for the implementation of the provisions of this Law<sup>15</sup>. On August 6, 2014, the Cabinet of Ministers

---

<sup>12</sup> Концепція реформи місцевого самоврядування та територіальної організації влади в Україні : Розпорядження Кабінету Міністрів України від 01.04.2014 р. № 333-р / *Відомості Верховної Ради України*. 2014. № 333-р.

<sup>13</sup> Питання конституційної комісії : Указ Президента України від 31 березня 2015 року № 190/2015. URL: <http://www.president.gov.ua/documents/19212.html>

<sup>14</sup> Про співробітництво територіальних громад: Закон України від 17.06.2014 р. № 1508-VII. *Голос України*. 2014.

<sup>15</sup> Практичний коментар Закону України «Про співробітництво територіальних громад». URL: <http://www.minregion.gov.ua>

approved the State Strategy for Regional Development for the period until 2020<sup>16</sup>.

At the second stage of the Concept's implementation, the Law of Ukraine "On the Principles of State Regional Policy" was adopted<sup>17</sup>, which creates a legislative framework for the implementation of a new state regional policy, which should cover a much larger range of issues than simply supporting regional development. On March 4, the Law of Ukraine "On Voluntary Association of Territorial Communities" came into force on February 5, 2015<sup>18</sup>, which defines the specific mechanism of voluntary association of territorial communities, which did not exist before.

In addition, the provisions put forward in the Concept were enshrined in the presidential draft constitutional reform. On July 3, 2014, the President of Ukraine submitted to the Parliament for consideration a draft Law of Ukraine "On Amendments to the Constitution of Ukraine (Regarding Authorities of State and Local Government Bodies)" (Reg. No. 4178a dated 26.06.2014)<sup>19</sup>, which in compliance with the requirements of society regarding the decentralization of power directly relates to the reorganization of the system of local authorities, which proposes to change the principle enshrined in the Basic Law of the territorial structure of power on the principle of its administrative-territorial system, in the application of which the main unit of authority should act as a territorial community. But in November 2014, the project was withdrawn and discontinued. Thus, the provisions of the Constitution did not change. However, on March 31, 2015, the Decree of the President of Ukraine approved the personal composition of the constitutional commission, which should develop draft amendments to strengthen the role of territorial communities in the field<sup>20</sup>. As a result, the effectiveness and accountability of local communities will be enhanced.

---

<sup>16</sup> Про затвердження Державної стратегії регіонального розвитку на період до 2020 року : Постанова Кабінету Міністрів України від 06.08.2014 р. № 385. *Офіційний вісник України*. 2014. № 70. С. 23. Ст. 1966.

<sup>17</sup> Про засади державної регіональної політики : Закон України від 05.02.2015 р. № 156-VIII. *Офіційний вісник України*. № 18. С. 9. Ст. 470.

<sup>18</sup> Про добровільне об'єднання територіальних громад: Закон України від 05.02.2015 р. № 157-VIII. *Офіційний вісник України*. № 18. С. 21. Ст. 471.

<sup>19</sup> Проект Закону України «Про внесення змін до Конституції України (щодо повноважень органів державної влади та місцевого самоврядування)» (реєстр. №4178а від 26.06.2014 р.). URL: [http://w1.c1xada.gov.ua/pls/zweb2/webproc4\\_1?pf3511=51513](http://w1.c1xada.gov.ua/pls/zweb2/webproc4_1?pf3511=51513).

<sup>20</sup> Питання конституційної комісії : Указ Президента України від 31 березня 2015 року № 190/2015. URL: <http://www.president.gov.ua/documents/19212.html>

The process of decentralization of power, which began in Ukraine in 2014, led to the creation in 2015 of the united territorial communities (hereinafter the UTC). Capacious communities should become a basic element of an effective system of government in Ukraine.

At the stage of creating, the UTC met many challenges, including:

- the absence of generally accepted priorities for the provision of basic services to the residents of the UTC. Each local self-government body that was a part of the UTC had its own development priorities and its own system of values for resource management. After combining these priorities, the approaches to managing “unified” resources must obviously be reviewed and developed;

- the need for effective management of new land and budget resources that have become available for UTs and can be used for development;

- an increase in the number of stakeholders with whom it is necessary to coordinate decision-making within the UTC.

In a broader context, the community must respond effectively to external challenges, such as globalization of the economy, increased labour mobility, and the resulting increase in unemployment, increased international competition for investment and development resources.

The answer to these and some other challenges may be promising (medium and long-term) planning of the UTC. The methodology of strategic planning of UTC development in Ukraine was developed by experts of the EU program “Support to Regional Development Policy in Ukraine” (PPRRU).

The methodology integrates key aspects of life and development: economic, social and environmental, supporting their interaction. The methodology promotes the active participation of all interested and competent persons in the process of strategic planning and implementation of development plans in accordance with their interests and capabilities. Finally, the methodology is a definite guide to the development of ingenuity and support for creative thinking. However, this is not a recipe for solving all problems and challenges for local development, but only a document for creative use<sup>21</sup>.

Negotiations and consultations take pace with one of the carriers of the district on the procedure of reimbursement by the settlement council

---

<sup>21</sup> Сайт проекту ЄС «Підтримка політики регіонального розвитку в Україні». URL: <http://www.minregion.gov.ua/press/news/>



of the cost of travel in suburban and interurban transportation for preferential categories of residents of the community. In addition, the community assumed the provision of free meals in secondary schools in the district of children whose parents are participants in the ATO or died during the service in the area of the anti-terrorist operation. This is an incomplete list of socially-oriented projects within the community that are planned to be implemented. The Department of Social Protection of the Oblast State Administration, within the limits of the designated authorities, is assisted in accelerating the process of creating communities on a regional scale. It is envisaged to maintain as much as possible the existing level of service to the poor people of different categories, taking into account local features and experience gained<sup>22</sup>.

Thus, the optimal organization of public authority depends on the efficiency of the distribution of its powers on the relevant vertical and horizontal levels of its implementation, the establishment of the limits of competence of each level, effective public and judicial control, adherence to the principles of autonomy in the implementation of the exclusive competence of each level of public authority and subsidiarity. In any case, a modern approach to the problem of the development of statehood involves creating a holistic view of the system of institutions of social, political governance and self-government, mediated by law, connected both with society as a whole and with its subsystems, and closes on a person – higher value of a democratic society.

### **2.3. External experience of decentralization**

In Ukraine, decentralization has recently been seen as a serious reform that should address a number of problems and, most importantly, economic growth. In order for the decentralization tool to become effective and ensure a real increase in the efficiency of the national economy, the world experience in implementing the principles of decentralization should be studied, especially on the example of developing countries. A study of the experience of different countries will also provide an opportunity to understand the conditions that are necessary for decentralization to have a positive impact on the development of the entire economy.

---

<sup>22</sup> Газета запорізької обласної ради. URL: <http://www.zp-pravda.info/suspilstvo/857-pro-reformu-mistsevogo-samovyadvannya.html>.

Decentralization in the European Union has become an integral part of governance. It covers both the issue of decentralization within individual member countries and the peculiarities of the division of responsibilities between countries and European institutions throughout the entire association. EU countries are in a position to find an effective model of public administration. This search provides several options that differ in a higher or lower level of decentralization. Own model of decentralization of expenses and centralization of income collection was formed in Australia, which made it possible to improve the vertical fiscal imbalance and stabilize the central and state budget, as well as local government budgets. The “second kind” of US citizens calls the financial decentralization of J. Brockner<sup>23</sup>. Financial decentralization is also a goal for many countries that were previously centralized. One of the most successful examples of decentralization is Poland’s experience. The main transformational processes that took place in Poland after 1989 were<sup>24</sup>: firstly, democratization (political changes were aimed at the formation of a democratic system that would be characterized by the protection of individual rights and civil liberties); secondly, the formation of a free market (reforms of the economic system envisaged the formation of a market economy, which is based on private property); and thirdly, decentralization (reforming the system of public financial management). Reform of such a scale leads to the transformation of the general state system. The reform effect has become a civilian state that operates at various levels of government and is open to change, cooperation, and competition.

The processes of decentralization in Poland were based on the fact that local self-government is an integral part of a community that lives and operates in a certain territory; accordingly, local authorities must exist to such an extent that they will contribute to the development of the state. The examples presented show that decentralization has become not only a mechanism for solving problems of regions, the state budget and, most importantly, a condition for ensuring economic development of the country as a whole, although this conclusion in the scientific literature is not always clear.

---

<sup>23</sup> Brueckner, J. K. (2004). Fiscal Decentralization with Distortionary Taxation : Tiebout vs. Tax Competition International Tax and Public Finance, 11: 133–153.

<sup>24</sup> Kulesza, M. (2002). Methods and Techniques of Managing Decentralization Reforms in CEE Countries. The Polish Experience. Public Administration Department Faculty of Law and Administration Warsaw University, Poland. URL: [www.oecd.org](http://www.oecd.org)

The experience of developed countries shows that the main precondition for the successful development of communities is the unification of territories and resources. It is necessary to distinguish the main criteria of a capable community:

1. Transparency in the management of own development, including the setting of real strategic goals, ongoing analysis, and monitoring of the implementation of current tasks.

2. The priority of investments, which involves continuous work on attracting investment through the development of local business.

3. Quality and simplicity of management, implemented through the lack of bureaucratic delays in the registration of business and property, obtaining a permit or license, certificate, passport, subsidy, social assistance, etc.

4. Availability of services, including the availability of modern equipped educational and medical facilities with skilled workers, cultural and sports institutions, quality roads and housing utilities, etc.

In general, there are two generalized schemes for the association of territorial communities in Europe: the North European, within which the formation of large municipalities and the South European – with the association of communities in relatively small municipalities. Accordingly, various municipalities and 22 municipalities were formed. In Sweden, the average size of the community is 34 thousand inhabitants, in Denmark – 55 thousand, in England – 120 thousand. In some areas of Germany, reforms have led to an increase in the average size of the municipality to 45 thousand inhabitants<sup>25</sup>. Another model for the emergence of effective local self-government is in Spain, Switzerland, Italy, and France where the number of municipalities has not changed. The latter, in general, is the leader in Europe in terms of the number of local self-government bodies, over 36,000 of them, and the majority of the population does not exceed 2,000. However, most of the functions there are implemented through institutions of inter-municipal cooperation, of which more than 2,500 people have been created in France. Their creation and functioning is voluntary and comes from community initiatives whose tasks they are called to perform<sup>26</sup>. It should be noted that in countries with small communities, most of the powers

---

<sup>25</sup> Методичні матеріали «Впровадження зарубіжного досвіду децентралізації управління». URL: [objjust.gov.ua/uploads/Метод\\_рекомендації\\_23\\_12.doc](http://objjust.gov.ua/uploads/Метод_рекомендації_23_12.doc)

<sup>26</sup> Методичні матеріали «Впровадження зарубіжного досвіду децентралізації управління». URL: [objjust.gov.ua/uploads/Метод\\_рекомендації\\_23\\_12.doc](http://objjust.gov.ua/uploads/Метод_рекомендації_23_12.doc)

belong to the central government. The experience of foreign countries confirms that the implementation of decentralization reforms will not bring positive results if this process is compulsory. This is the statement that Ukraine adheres to. At the same time, it should be noted that in reality, the degree of voluntariness was, in some cases, not too high. An example might be the introduction of administrative-territorial reform in Latvia. The difficulties of the processes of decentralization primarily concerned the reluctance of small communities to unite. During the first six years of reform, only 20 united communities have been formed. At the same time, the government's mistake was that there were no clear rules on the criteria and format of the merger. This led to the fact that new communities even though they were but were unable to perform the necessary functions<sup>27</sup>.

It is obvious that voluntarily uniting all communities in Ukraine will not succeed. As of September 2016, there are 184 associations of territorial communities in Ukraine<sup>28</sup>. Among the total number of Ukrainian territorial communities (12 thousand), half are small with a population of fewer than 3 thousand people. Therefore, leaving the opportunity for the existence of small communities, it is important to provide them with tools to solve common problems with neighbouring communities. Therefore, the main reform efforts need to be directed at them, because under existing conditions, they have no chances for the effective self-government. Consequently, foreign experience confirms that even in countries that were successful in the political, economic, and social terms, they had great problems in the process of decentralizing power.

Ukraine should take into account all factors in advance in order to prevent possible negative consequences of decentralization. In this regard, a clear separation of functions and powers between the state and local authorities should be ensured. So the main goals of the government should be foreign policy, national security and defence, elaboration of strategic directions of state development. The task of managing the economic development of the region, managing the budget funds and property of the territorial community and ensuring the system of

---

<sup>27</sup> Пігуль Н. Г. Зарубіжний досвід проведення децентралізаційних реформ. *Глобальні та національні проблеми економіки*. 2016. №9. С. 684–688.

<sup>28</sup> Перелік об'єднаних територіальних громад. URL: <http://www.minregion.gov.ua/napryamki-diyalnosti/regionaldev/rozvytok-mistsevoho-samovryaduvannya/dobrovil-ne/obyednani-terytorial-ni-hromady/perelik-ob-yednanih-teritorialnihgromad/>

providing services for the population should be the task of local authorities.

Implementing the decentralization policy should take into account those risks that may arise. Decentralization can increase centrifugal tendencies because of the extremely low level of state responsibility to administrative and territorial entities. Foreign experience confirms that even in the countries that succeeded politically, economically, and socially (France, Great Britain, Italy, Poland), they had great problems in the process of decentralizing power. In a deep political, economic, and social crisis, this factor should be taken into account in advance in order to prevent possible negative effects of decentralization<sup>29</sup>. In Ukraine, which seeks to be a democratic state both de jure and de facto, the urgency of the further implementation of the policy of financial decentralization, and more specifically the financial evolution, is one of the forms of decentralization. This is due to the fact that the particular features of the organization of financial evolution are more in line with the political, administrative, and economic conditions that have developed in Ukraine. All planned reforms in the future, namely, effective fiscal and tax reforms, should be correlated with the reform of the institution of local self-government and the administrative-territorial structure of the country, which will increase the level of financial independence of local self-government bodies.

## CONCLUSIONS

The study of the theoretical aspects of the impact of decentralization on the development of the state and territorial communities gives grounds to formulate the following conclusions and determine the directions of further research: 1. Decentralization of public administration – a complex and multifaceted concept, representing in the most general form the transfer of authority (power), responsibility, and resources from the national (state) level to the subnational (regional, local) level represented by the relevant elected authorities or territorial bodies in (representations) of central bodies of executive power, or in the private sector. 2. It is expedient to consider decentralization in terms of its different types: political, administrative, fiscal and market, which can take on various forms. None of these types predominates over others; they can be

---

<sup>29</sup> Скрипнюк О. В. Децентралізація влади як фактор забезпечення стабільності конституційного ладу: питання теорії і практики. URL: <http://www.ccu.gov.ua/uk/doccatalog/list>

implemented separately or combined; Depending on the existing economic and social problems in the state in certain time periods, decentralization can accelerate, slow down or even reverse (decentralization). 3. The introduction of decentralization is accompanied by significant risks, including in-kind and methodological, which need to be taken into account: the main obstacle to its implementation is the lack of a systematic approach to the reform of public administration and the fragmentation and incompleteness of other important reforms (judicial, budgetary, fiscal, tax, institutional, administrative-territorial, social, etc.); lack of scientifically grounded prediction of the model of development of the country and its institutions. 4. The complexity of the adaptation of international decentralization experience is determined by the unique economic, social, political, cultural, historical, and mental characteristics and developmental conditions of each individual state. In this context, it is important to carry out a comprehensive study and scientific substantiation of the sequence of implementation of all types of decentralization, taking into account their mutual influence and conditionality. 5. The state and community always act as complementary forms of organization of public administration, the relative balance and interaction of which form the economic and social potential of each territory in a certain time period. Changes in this balance of relations between the community and the state are ongoing and affect the definition of medium and long-term prospects for the development of territories of different scales – from settlements to the whole country. In these circumstances, a certain balance must be struck between centralization and decentralization of powers and resources, the use of different types of periods and forms of decentralization in different time periods for the formation of economic, social, and legal conditions for the development of both the state and territorial communities. Decentralization involves providing local authorities with the maximum number of powers on the basis of subsidiarity, adequate level of their resource provision (including financial resources), which will become a solid foundation for sustainable development on the ground, will contribute to increasing the responsibility of local governments for fulfilling their obligations regarding community development and the rule of law. Decentralization is the only way to build a strong, unitary, democratic, European Ukraine. An integral part of decentralization is the strengthening of accountability and accountability of local authorities to voters – community members, citizens, for the welfare of which all branches of public authority in Ukraine must work.

Decentralization is the key to effective territorial development, the road to democratization, real democracy. The obvious need for reforming both the system of local self-government and the entire territorial organization of power in Ukraine has led to the appearance of a sufficiently large number of relevant projects. At the stage of direct implementation of the Concept of Reforms of Local Self-Government and Territorial Organization in Ukraine, we have a newly created legal framework for the implementation of the rights of territorial communities in the field, which corresponds to the vector of the European development of local self-government.

The most pressing issue is the appropriate financial support for territorial communities in providing them with authority over controlled territories. Further development requires the promotion of self-government units to effectively exercise their powers, as well as educational work on the awareness of opportunities provided by the legislative framework to all members of the community. In the long term, constitutional reform is expected to take place regarding changes in the provisions of the Basic Law in the area of decentralization of power and development of local self-government. Thus, the process of reforming local self-governance is complex and requires a further multidisciplinary approach to the development and implementation of changes in the current legislation of Ukraine in this area.

## **SUMMARY**

The existence of any democratic, rule-of-law, and civil society, as well as the processes of European integration, foresees the creation of an effective decentralized system of public power, based on the rule of law, democracy, recognition of man with the highest social value. These tasks cannot be realized without a complete system of local self-government. The complexity and multidimensionality of the introduction of decentralization of public administration require theoretical substantiation of the conditions under which the transfer of powers and responsibilities from the central to the regional and local levels will not lead to further deterioration of the provision of public services to the population, an increase in imbalances in access to them by citizens, depending on the place of residence and the strengthening of contacts. As a result of this, both social tension and centrifugal manifestations threaten the integrity of the state. This formulation of the question determines the urgency of specifying the theoretical positions regarding the impact of

decentralization on the development of the state and territorial communities. The introduction of decentralization is accompanied by significant risks, including the scientific and methodological nature that need to be taken into account: the main obstacle to its implementation is the lack of a systematic approach to the reform of public administration and the fragmentation and incompleteness of other important reforms, the lack of scientifically based prediction of the model of development of the country and its institutions. Decentralization is the key to effective territorial development, the road to democratization, real democracy. An integral part of decentralization is the increased accountability and accountability of local authorities to community members, citizens who, for the sake of their well-being, must work in all branches of public authority in Ukraine. The process of reforming local self-government is complex and requires a further multidisciplinary approach to the development and implementation of changes in the current legislation of Ukraine in this area.

## REFERENCES

1. Onupriienko, A. M. (2014). Pryntsypy tsentralizatsii ta detsentralizatsii v terytorialnii orhanizatsii vlady [Principles of centralization and decentralization in the territorial organization of power]. *Forum prava*, 4, 224–227. URL: [http://nbuv.gov.ua/UJRN/FP\\_index.htm\\_2014\\_4\\_40](http://nbuv.gov.ua/UJRN/FP_index.htm_2014_4_40)
2. Kontseptsiiia politychnoi reformy v Ukraini [Concept of political reform in Ukraine]. *Politychna reforma yak zasib demokratyzatsii ukrainskoho suspilstva: materialy naukovo-praktychnoi konferentsii*, m. Kharkiv, 18 kvitnia 2003. Kharkiv: Vyd-vo KhRIDU UADU «Mahistr».
3. Lazarev, V. V. (Ed.) (1999). *Konstitutsionnoe pravo: uchebnik* [Constitutional law: textbook]. Moskva: Yurist'.
4. Ostrom, V. (1993). *Smyysl amerikanskogo federalizma* [The Meaning of American Federalism]. *Chto takoe samoupravlyayuscheesya obschestvo: per. s angl.* Moskva: Arena.
5. Vedel, Zh. (1973). *Administrativnoe pravo Frantsii: per. s fr.* [French administrative law] / pod red. M. A. Krutigolova. Moskva: Progress.
6. Cherkasov, A. I. (1998). *Sravnitelnoe mestnoe upravlenie: teoriya i praktika* [Comparative Local Governance: Theory and Practice]. Moskva: FORUM-INFRA-M.



7. Toffler, E. (1997). Futoroshok: per. s angl. [Futoroshok: translation from English] / Elvin Toffler. SPb.: Lan.
8. Entsyklopediia derzhavnoho upravlinnia: u 8 t. [Encyclopedia of Public Administration: 8 t.] / nauk.-red. kolehiia: Yu. V. Kovbasiuk ta in. Kyiv: NADU, 2011.
9. Strategii biznesa: analiticheskiy spravochnik [Business Strategies: An Analytical Reference] / pod red. G. B. Kleynera. Moskva: KONSEKO, 1998.
10. Rodriguez-Pose, A. (2006). Better Rules or Stronger Communities? On the Social Foundations of Institutional Change and Its Economic Effects. *Economic Geography*, 82 (1), 1–25.
11. Kontsepsiia reformy mistsevoho samovriaduvannia ta terytorialnoi orhanizatsii vlady v Ukraini: Rozporiadzhennia Kabinetu Ministriv Ukrainy vid 01.04.2014 r. № 333-r [The concept of reform of local self-government and territorial organization of government in Ukraine: Order of the Cabinet of Ministers of Ukraine dated 01.04.2014 № 333-p]. *Vidomosti Verkhovnoi Rady Ukrainy*. 2014. № 333-r.
12. Pytannia konstytutsiinoi komisii: Ukaz Prezydenta Ukrainy vid 31 bereznia 2015 roku № 190/2015 [Issues of the Constitutional Commission: Presidential Decree of March 31, 2015 No. 190/2015]. URL: <http://www.president.gov.ua/documents/19212.html>
13. Pro spivrobotnytstvo terytorialnykh hromad: Zakon Ukrainy vid 17.06.2014 r. № 1508-VII [On Cooperation of Territorial Communities: Law of Ukraine of 17.06.2014 No. 1508-VII]. *Holos Ukrainy*, 2014.
14. Praktychnyi komentar Zakonu Ukrainy «Pro spivrobotnytstvo terytorialnykh hromad» [Practical Commentary on the Law of Ukraine «On Cooperation of Territorial Communities»]. URL: <http://www.minregion.gov.ua>
15. Pro zatverdzhennia Derzhavnoi stratehii rehionalnoho rozvytku na period do 2020 roku: Postanova Kabinetu Ministriv Ukrainy vid 06.08.2014 r. № 385 [On approval of the State strategy for regional development for the period up to 2020: Resolution of the Cabinet of Ministers of Ukraine dated 06.08.2014 No. 385]. *Ofitsiinyi visnyk Ukrainy*. 2014. № 70. S. 23. St. 1966.
16. Pro zasady derzhavnoi rehionalnoi polityky: Zakon Ukrainy vid 05.02.2015 r. № 156-VIII [On the principles of state regional policy: Law of Ukraine dated 05.02.2015, № 156-VIII]. *Ofitsiinyi visnyk Ukrainy*. № 18. S. 9. St. 470.

17. Pro dobrovilne obiednannia terytorialnykh hromad: Zakon Ukrainy vid 05.02.2015 r. № 157-VIII [On the voluntary association of territorial communities: Law of Ukraine of 05.02.2015 No. 157-VIII]. *Ofitsiinyi visnyk Ukrainy*. № 18. S. 21. St. 471.

18. Proekt Zakonu Ukrainy «Pro vnesennia zmin do Konstytutsii Ukrainy (shchodo povnovazhen orhaniv derzhavnoi vlady ta mistsevoho samovriaduvannia)» (reiestr. № 4178a vid 26.06.2014 r.) [Draft Law of Ukraine «On Amendments to the Constitution of Ukraine (Concerning the Powers of State Authorities and Local Self-Government)». URL: [http://wI.cIxada.gov.ua/pls/zweb2/webproc4\\_1?pf3511=51513](http://wI.cIxada.gov.ua/pls/zweb2/webproc4_1?pf3511=51513).

19. Pytannia konstytutsiinoi komisii: Ukaz Prezydenta Ukrainy vid 31 bereznia 2015 roku № 190/2015 [Issues of the Constitutional Commission: Presidential Decree of March 31, 2015 No. 190/2015]. URL: <http://www.president.gov.ua/documents/19212.html>

20. Sait proektu YeS «Pidtrymka polityky rehionalnoho rozvytku v Ukraini» [Website of the EU project «Supporting Regional Development Policy in Ukraine»]. URL: <http://www.minregion.gov.ua/press/news/>

21. Hazeta Zaporizkoi oblasnoi rady [Newspaper of Zaporizhzhya Regional Council]. URL: <http://www.zp-pravda.info/suspilstvo/857-pro-reformu-mistsevogo-samovryaduvannya.html>.

22. Brueckner, J. K. (2004). Fiscal Decentralization with Distortionary Taxation: Tiebout vs. Tax Competition International Tax and Public Finance, 11, 133–153.

23. Kulesza, M. (2002). Methods and Techniques of Managing Decentralization Reforms in CEE Countries. The Polish Experience. Public Administration Department Faculty of Law and Administration Warsaw University, Poland. URL: [www.oecd.org](http://www.oecd.org)

24. Metodychni materialy «Vprovadzhennia zarubizhnoho dosvidu detsentralizatsii upravlinnia» [Methodical materials «Introduction of foreign experience of decentralization of management»]. URL: [obljust.gov.ua/uploads/Метод\\_рекомендации\\_23\\_12.doc](http://obljust.gov.ua/uploads/Метод_рекомендации_23_12.doc)

25. Pihul, N. H. (2016). Zarubizhnyi dosvid provedennia detsentralizatsiinykh reform [Foreign experience of decentralization reforms]. *Hlobalni ta natsionalni problemy ekonomiky*, 9, 684–688.

26. Perelik obiednanykh terytorialnykh hromad [List of united territorial communities]. URL: <http://www.minregion.gov.ua/napryamki-diyalnosti/regionaldev/rozvytok-mistsevoho-samovryaduvannya/dobro-vilne/obyednani-terytorial-ni-hromady/perelik-ob-yednanih-teritorialnih-gromad/>

27. Skrypniuk, O. V. Detsentralizatsiia vlady yak faktor zabezpechennia stabilnosti konstytutsiinoho ladu: pytannia teorii i praktyky [Decentralization of power as a factor in ensuring the stability of the constitutional order: issues of theory and practice]. URL: <http://www.ccu.gov.ua/uk/doccatalog/list>

**Information about the author:**

**Galtsova O. L.**

Doctor of Economic Sciences, Professor,  
Head of Department of National Economy and Marketing  
and International Economic Relations,  
Classic Private University, Ukraine

## **CHAPTER 3**

### **DEVELOPMENT OF THE FIRM THEORY BY NEW INSTITUTIONAL ECONOMICS: METHODOLOGY, CONCEPTS, AND MODELS**

**Horniak O. V.**

#### **INTRODUCTION**

The modern development stage of economic theory is characterized by cardinal shifts in the methodology, conceptual approaches to solving urgent scientific and practical problems. Despite the fact that already in the 60s and 70s of the XX century, neoclassical theory and neoclassical synthesis as a mainstream of economic science were criticized, above all, due to disconnect from the practice of management, its tools, methodological principles continue to be used in the study of modern economic processes. At the same time, one should pay attention to the fact that the theory of the firm as a component of the general economic theory to some extent differs in that the theoretical abstract structures are gradually replaced there by modern models, reflecting some progress in the study of real firms and the retreat from the interpretation of a firm as a “black box”, as a model that “is not intended to explain and anticipate the behaviour of specific firms; on the contrary, it should explain and anticipate changes in prices ... arising as a result of certain changes in conditions (wage rates, interest rates, import duties, taxes, technologies, etc.)”<sup>1</sup>

New approaches and concepts such as the new institutional economic theory, evolutionary theory of economic change are different in that here the firm is the main object of research. This is associated with a change in the role and importance of firms in the real economy with changes that take place in the very firm. The theoretical substantiation of the shifts in the modern economy, in the functioning of firms, requires appropriate methodological tools, new conceptual approaches, and modern models that would reflect the peculiarities of

---

<sup>1</sup> Machlup, F. (1999). Teorii firmy: marzhinalistskiye, bikhevioristkiye i upravlencheskiye [Theories of the firm: marginalist, behavioral and managerial]. *Milestones of economic thought*. St. Petersburg: School of Economics. (in Russian)

the development of the main organizational and economic unit of the economic process.

### **3.1. Methodological principles of analysis of modern firms**

The formation of the modern theory of the firm provides an opportunity, firstly, to deeply explore the national economy, its development prospects, trends, and competitive advantages, as it is known that the latter are developed and supported by firms representing the national economy in world markets. Secondly, firms are a complex entity where the economic and social interests, problems and goals of society, the realization and achievement of which they provide, are intertwined. Therefore, the study of a firm in the conceptual context is important both for the development of economic science and for the effective functioning of firms of the real economy, for the development of economic, social relations and socio-economic system.

At one time, K. Polanyi described the role of firms in economic processes: “Undoubtedly, labour, land, and money markets are essential to a market economy. But no society could stand the effects of such a system of crude fictions even for the shortest stretch of time unless its human and natural substance, as well as its business organization, was protected against the ravages of this satanic mill.”<sup>2</sup>

Research of the modern firm was most fully conducted by representatives of the new institutional economic theory, including A. Alchian, M. Aoki, O. E. Williamson, S. J. Winter, H. Demsetz, P. Joskow, T. Eggertsson, R. Coase, C. Menard, D. Morris, P. Milgrom, D. North, R. Nelson, J. Tirole, E. Furubotn, O. Hart, G. Hodgson, D. Hay. In their works, the methodological principles of the analysis of a modern firm are revealed, concepts and models are developed. However, modern firms, constantly developing, require further research on their essence, forms, the interaction between them and the state, market mechanisms, other organizational formations that form the modern economic space. In this paper, the main purpose is the critical re-evaluation of existing approaches and the development of some areas for the development of a modern firm that take into account the changes occurring at the micro level, in the context of methodology, theory, and development models' formation.

---

<sup>2</sup> Polanyi, K. (1993). Samoreguliruyushchiysya rynok i fiktivnyye tovary: trud, zemlya i dengi [Self-regulating market and fictitious goods: labor, land and money]. Thesis. T. 1. Vyp. 2, s. 15. (in Russian)

The formation of new methodological approaches in the firm's research is explained by the fact, as T. Eggertsson writes, that neoclassical theory left out of the attention such research areas as alternative social rules (property rights) and types of economic activity that significantly affect the behaviour of economic agents, the allocation of resources and equilibrium; various forms of economic organizations; economic logic, and changes in fundamental social and political rules governing production and exchange<sup>3</sup>. It should be noted that within the framework of the neoclassical theory, attempts were made to introduce these problems into the analysis, but the new theories were not developed since the methodological approaches did not change and the main theoretical postulates remained: rational choice and equilibrium state.

In economic theory, since the 70s of the XX century following the work by I. Lakatos<sup>4</sup>, the idea is affirmed that studies within one or another theory consist of a solid core and a protection belt. The solid core is unchanged, and the protective belt changes under the influence of various modifications. If the core changes, this means the rejection of the old theory and the transition to a new one, the formation of a new paradigm based on new methodological approaches and principles. The neoclassical theory is based on such postulates as rational choice, equilibrium, and persistent advantages that form its solid core. The protection belt of the neoclassical theory consists of the following elements, which were defined in due time by C. Knudsen<sup>5</sup>: the exact definition of the restrictions that the economic agent must take into account; a clear definition of the type of information available to the agents. If we consider the neoinstitutional economic theory from the viewpoint of such methodological approaches, then we can somewhat agree with T. Eggertsson<sup>6</sup> that all its directions, beginning with the theory of transaction costs, the theory of property rights and ending with a new economic history, a new comparative theory of economic systems, can be interpreted as modification of the protection belt of the neoclassical

---

<sup>3</sup> Eggertsson, T. (2001). *Ekonomicheskoye povedeniye i instituty* [Economic behavior and institutions]. Moscow: Business. (in Russian)

<sup>4</sup> Lakatos, Imre (1970). *Falsification and the Methodology of Scientific Research Programs*, Cambridge: Cambridge University Press.

<sup>5</sup> Knudsen, Christian (1986). *Normal Science as a Process of Creative Destruction: From a Microeconomic to a Neoinstitutional Research Program*. Paper presented at the International Symposium on Property Rights Organizational Forms and Economic Behavior. (P. 10). Lund: The Swedish Collegium for Advanced Study in the Social Sciences.

<sup>6</sup> Eggertsson, T. (2001). *Ekonomicheskoye povedeniye i instituty* [Economic behavior and institutions]. Moscow: Business. (in Russian)

economic theory by including it in transaction and information costs and restrictions on property rights.

Another direction of research in line with the new institutional theory refuses the model of rational choice, that is, it begins to change the core of the neoclassical theory, initiating a new paradigm. The new institutional economic theory is at an early development stage. It is characterized by the formality of categorical framework, some refusal from mathematical models but, along with that, extensive empirical studies are carried out. Economists working within the framework of neoinstitutional economic theory and the new institutional economic theory develop common approaches (modelling of constraints, the existence of transaction costs, the study of qualitative characteristics of goods and services, their impact on the economic performance of firms), indicating the convergence of these two directions.

The transition to new methodological principles is carried out gradually; therefore, a rational choice of individual agents, which maximize the target function under certain constraints, still plays the main role in neoinstitutional economic theory. At the same time, research concentrates around the definition of the target function in the presence of alternative opportunities. Under such conditions, the maximization of profits by firms, which made sense in perfect competition, complete information, and definite property rights, is inferior to a satisfactory result, which was substantiated by H. Simon in the theory of behaviour<sup>7</sup>. He believed that the rationality of people is limited and it forces them to be satisfied with the result, adequate to their wishes. In the course of achieving such a result, the behaviour of a rational individual means that not only objective but also subjective factors of this activity are taken into account.

Such an interpretation of the model of rational behaviour means the change of the solid core of the neoclassical theory and the formation of new methodological approaches to the analysis of activities of individuals and firms. According to T. Eggertsson, "...the task of the institutional economy is to rise above methodological criticism and develop an effective program of scientific research".<sup>8</sup>

---

<sup>7</sup> Simon, G. A. (1999). *Teoriya prinyatiya resheniy v ekonomicheskoy teorii i nauke o povedenii* [Decision making theory in economics and behavior science]. *Milestones of economic thought* (T. 2. The theory of the company). St. Petersburg: School of Economics. (in Russian)

<sup>8</sup> Eggertsson, T. (2001). *Ekonomicheskoye povedeniye i instituty* [Economic behavior and institutions]. Moscow: Business. (in Russian)

The new institutional economic theory has restored interest in the institutions and, hence, in the fundamental issues regarding the nature of the firm<sup>9</sup>. It is possible to reveal the nature of the firm as an institution based on its delineation with other institutions, first of all, the market. This approach allows dividing all institutions into the market and non-market and determining their interaction in the process of economic activity. The most typical non-market institution is a firm characterized by a hierarchy, authoritarian relations, which radically distinguishes it from the market with its freedom and formal equality. The common feature of these two institutions is the division of labour; nevertheless, the specific differences are much more significant.

In economic theory, there is also another point of view, which denies the fundamental difference between the market and the firm. It is presented in the article by A. Alchian and H. Demsetz, where they substantiate the idea that there are no significant differences between the firm and the market. Market exchange and employment contract in the firm do not differ from each other. As a result, the existence of the firm's hierarchical relations, the power relations between the employee and the employer, which, according to A. Alchian and H. Demsetz, are symmetrical, an agreement to exchange service for service, is denied. An employee dismisses an employer when he chooses to resign from the firm, in the same way as the employer dismisses the employee. But they also see one important difference between these institutions, which is associated with the fact that production is collective and it is necessary to measure the contribution and remuneration of each employee. In order to avoid the workers' shirking from work, control over their actions is required by the employer, who receives income from the establishment of labour prices and other factors of production, as well as the control over their effective use. At the same time, they believe that the employment contract should be constantly reviewed, but under such circumstances, it will be virtually impossible to organize production.

Therefore, most economists working in this direction, believe that, firstly, the firm and the market are two different types of institutions, and secondly, the firm concludes incomplete contracts and, therefore, during the period of their actions, the employer receives certain powers

---

<sup>9</sup> Hojon, J. (2003). *Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii* [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)



that provide control over the efficient use of resources in the production process.

The conceptual difference between the firm and the market, based on the methodology of neoinstitutional economic theory, was first substantiated by R. Coase, emphasizing that the main characteristic of the firm is the displacement of the mechanism and the allocation of resources not through prices but regularly<sup>10</sup>, at the same time, the market is based on the system of prices and their dynamics and coordinated by exchange transactions. In the firm, processes are coordinated by the entrepreneur. Firms exist because they make it possible to reduce the cost of using the price mechanism. O. E. Williamson, developing the approaches of R. Coase, confirms that the main goal and the result of the functioning of institutions of the firm type is the minimization of transaction costs<sup>11</sup> but herewith their definition as a category is not provided. This leads to the fact that they are often reduced to direct expenses, that is, to a part of the firm's expenses. But for such an interpretation, it is difficult to imagine them as one of the important foundations of neoinstitutional economic theory. At the same time, there are works in which more in-depth studies of the essence of the category of transaction costs have been carried out, as discussed in the second part of this research paper.

An important element of the firm's research methodology in the context of neoinstitutionalism is uncertainty since it is inherent both in theoretical constructions and in real economic processes. According to G. Hodgson, "...in a world of uncertainty, where the probabilistic calculus is ruled out, rules, norms and institutions play a functional role in providing a basis for decision-making, expectation and belief."<sup>12</sup> Uncertainty creates the need for rules, norms, social routines, and habits that enable economic agents to make decisions. All these tools combine subjective and objective aspects. Understanding this is important for developing the theory of the firm.

Under market conditions, price mechanisms and norms that are recognized as economic agents are created. They are the result of the action of objective laws and regularities. The firm does not have such

---

<sup>10</sup> Coase, R. (2001). Priroda firmy [The nature of the firm]. *The nature of the company*. Ed. O. Williamson and S. J. Winter Moscow: Business. (in Russian)

<sup>11</sup> Williamson, O. E. (2001). Ekonomichni instytutsiyi kapitalizmu. Firma, marketynh, ukladannya kontraktiv [Economic institutions of capitalism. Firm, marketing, contracting]. Kyiv: ArtEk. (in Ukrainian)

<sup>12</sup> Hojon, J. (2003). Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)

mechanisms since the exchange as such is not inherent to it. Therefore, the effectiveness of rational calculations of costs and benefits in the firm decreases and even reduces to zero because it becomes impossible over the lack of objective information on prices and costs.

The institutional solution to the problem of uncertainty, as emphasized by G. Hodgson, is fundamentally different within the firm compared with the market. The market, creating rules and regulations, gives them legal force through the interaction of relatively independent agents that have no long-term commitments with each other. The firm as a social institution forms other rules and regulations on an ongoing basis. The rules and regulations of the market relate to price parameters while the rules and regulations of the firm cannot form them<sup>13</sup>. But the paradox is that the uncertainty in the firm requires a rational calculation of costs and profits, which is more important for the firm than for the market. Therefore, the nature and causes of the firm's appearance are disclosed not in the minimization of transaction costs but in the formation of an institutional structure that can replace to some extent the measurement of costs existing in the market. Such institutional structure creates peculiar additional mechanisms based on trust, habits, traditions that may have a cognitive character, be subconscious and quite unique for each individual firm. It is about a fact that the firm's function is to produce and reproduce the rules, habits, routines that provide the appropriate level of its effective operation over a long period of time and constitute an alternative to a rational calculation of costs and profits generated by the market.

The firm forms and maintains habits and traditions because they embody skills and information accumulated throughout its existence. They cannot always be calculated, and their institutionalization takes place within the organizational structure, which makes them permanently stable and protected from the unfettered market forces. R. Nelson and S. Winter, following T. Veblen, substantiated that the firm has the ability to maintain and reproduce a large number of habits and routines that are similar to genes<sup>14</sup>. The firm, accumulating skills, knowledge, and technologies that form its production potential, is a rather stable institute

---

<sup>13</sup> Hojon, J. (2003). *Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii* [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)

<sup>14</sup> Nelson, R. R., & Winter S. J. (2000). *Evolyutsionnaya teoriya ekonomicheskikh izmeneniy* [The evolutionary theory of economic change]. Moscow: ZAO Finstatinform. (in Russian)

and successfully operates in conditions of uncertainty, both external and internal. It overcomes external uncertainty by means of internal unity and organic interconnection of all its components, and internal one – by means of changes, evolution, modernization of its structure.

### **3.2. Concepts and models of modern firms**

Within the framework of the new institutional economic theory, several directions of research of the firm have been formed. One of the first such concepts developed by R. Coase is the theory of transaction costs. It clearly delineates the firm and market and explores the causes and nature of the firm. The theory of R. Coase is based on the following principles: resource constraints and choice; limited rationality of the behaviour of economic agents and opportunism; market transactions on a paid basis and the choice between them and the firm. The reason for the occurrence of transaction costs is market transactions on a paid basis, and the reason for the occurrence of the firm is the difference between the size of market transaction costs and related costs of the firm. R. Coase also determines limits of a firm by the level of internal transaction costs, which at a certain stage of the firm's development become higher compared to the market, and the entrepreneur begins to conclude a part of the internal contracts in the market. This allows reducing total transaction costs and optimizing firm size. Herewith, R. Coase defines transaction costs as “the cost of using the price mechanism”.<sup>15</sup>

The theory of transaction costs was further developed in the work of O. E. Williamson, who interpreted transaction costs as “the economic counterpart of friction in physics”.<sup>16</sup> Economists interpret the essence of transaction costs differently. Since their occurrence is associated with the need for information search, as T. Eggertsson writes, “transaction costs reflect the scarcity of information,”<sup>17</sup> they are interpreted as an element of information costs. In the conditions of complete and reliable information, transaction costs are zero.

If in the theory of transaction costs they are considered as an element of information costs, then in public choice theory they are

---

<sup>15</sup> Coase, R. (2001). Priroda firmy [The nature of the firm]. *The nature of the company*. Ed. O. Williamson and S. J. Winter Moscow: Business. (in Russian)

<sup>16</sup> Williamson, O. E. (2001). Ekonomichni instytutsiyi kapitalizmu. Firma, marketynh, ukladannya kontraktiv [Economic institutions of capitalism. Firm, marketing, contracting]. Kyiv: ArtEk. (in Ukrainian)

<sup>17</sup> Eggertsson, T. (2001). Ekonomicheskoye povedeniye i instituty [Economic behavior and institutions]. Moscow: Business. (in Russian)

associated with the agreements on the use of public goods. In the opinion of researchers, they arise in the process of reimbursement of public goods and their transfer by the parties to the agreement on each other. Contract theory interprets transaction costs as the cost of harmonizing different regulations governing different spheres of life. Asymmetry of information generated by the coexistence of different systems of information and access to it facilitates the use of certain norms for own benefit<sup>18</sup>. G. Hodgson studies transaction costs in the context of the comparative effectiveness of the firm and believes that the explanation of the reasons for its occurrence, its essence only in terms of transaction costs is insufficient. He pays special attention to the fact that “the existence of the firm is partly explained by its ability to protect and maintain routines [due to which skills are transferred and production is supported] within its institutional structure.”<sup>19</sup> This is confirmed by the fact that, according to G. Hodgson, firms conclude non-market agreements with other firms and organizations on a long-term basis, which forms additional security features against the unfettered market forces. In the process of cooperation of activities, mutual trust between firms is formed on the basis of such agreements, which contributes to reducing the costs of mutual control and monitoring of contract execution. Although relations between firms can be unequal in this case, the benefits of such interconnections neutralize such inequality to a certain extent.

Trust support within the firm is also an important condition for ensuring its sustainability and efficiency. The trust of workers, managers, and owners is very important since, as R. Nelson emphasizes, “only a small fraction of what people actually do at work are subject to detailed control”.<sup>20</sup> In relation to this, trust and cooperation become functional for the firm and where they become an element of corporate culture, productivity can grow. Support for trust is an important prerequisite for

---

<sup>18</sup> Eggertsson, T. (2001). *Ekonomicheskoye povedeniye i instituty* [Economic behavior and institutions]. Moscow: Business. (in Russian); Arkhiireev, S.I. (2005). *Transaktsionnyye izderzhki institutsionalizatsii fondovogo rynka* [Transaction costs institutionalization of the stock market]. Kharkiv. (in Russian); Gornyak, O. V. (2004). *Firma v ekonomichnyy teoriiy ta praktytsi hospodaryuvannya* [Firm in Economic Theory and Practice of Management]. Odessa: Astroprint. (in Ukrainian)

<sup>19</sup> Hojon, J. (2003). *Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii* [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)

<sup>20</sup> Nelson, R. R. (1981) Research of productivity Growth and Productivity Differences: Dead Ends and New Departures. *Journal of Economic Literature*, 29, 1029–64.

its effectiveness, which is also confirmed by empirical studies<sup>21</sup>. Under such conditions, the level of opportunism in the firm significantly decreases. It is kept within certain limits, which also has a positive effect on the results of work. Therefore, it can be concluded that the firm exists and develops because it is able to form a consistent type of behaviour of its employees, which differs from the antagonistic behaviour of market participants. This indicates the influence of the institutional environment on the formation of economic behaviour. The institutional environment of the market forms a competitive, antagonistic type of behaviour, and the institutional environment of the firm forms a type of behaviour based on trust, cooperation, and the decline of opportunism. Therefore, the key to ensuring the effectiveness of the firm is not only the resources, prices, costs but also the level of trust and cooperation of employees.

The first approach to a modern firm corresponds not only to the institutional tradition but also to objective processes that occur in real production and real firms. The networking of the modern economy raises the problem of trust as one of the priorities at the level of inter-firm, inter-organizational networks. Individualization of modern production requires taking into account individual consumer needs, building trust between the producer and the consumer, since customer loyalty is an important intangible asset of the firm and a prerequisite for its high competitive advantages.

In relation to this study, important is the internal structure of the firm, which is considered in the theory of contracts, where it is interpreted as a network of contracts, and the attention of researchers also focuses on the organizational structures of management that use firms in the business practice. These are simple or unitary structures (U) and complex and multidivisional (M)<sup>22</sup>. The use of one or the other is associated with a number of factors but the performance of the firm depends on the successful choice of them.

The research of real processes occurring within the firm was carried out by representatives of the theory of property rights. In this concept, a firm is interpreted as a set of ownership rights to tangible assets. Use of assets is the owner's prerogative. He/she also defines the directions of

---

<sup>21</sup> Hojon, J. (2003). *Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii* [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)

<sup>22</sup>Williamson, O. E. (2001). *Ekonomichni instytutsiyi kapitalizmu. Firma, marketynh, ukladannya kontraktiv* [Economic institutions of capitalism. Firm, marketing, contracting]. Kiev: ArtEk. (in Ukrainian)

activity, the strategy of the firm<sup>23</sup>. Such an approach provides an opportunity to identify problems of vertical integration and limits of a firm.

The construction of hierarchical relations of the firm and the problems of their development are studied in the agency theory. T. Eggertsson interprets them as follows: agency relations arise when some trustee delegates some rights to some agent who is obliged, in accordance with a formal or informal contract, to represent his/her interests in return for a certain remuneration<sup>24</sup>. In the firm as a hierarchical structure, each employee, with the exception of its highest and lowest levels, is simultaneously both a principal and an agent. The asymmetry of information is characterized by the fact that the agent has a larger array than the principal, and, hence, it is possible to use it to achieve own goals, that is, there is a risk of opportunistic behaviour. Formation and development of agency relations generate agency costs that relate to transaction costs and are investigated within the framework of a new institutional theory<sup>25</sup>. Reducing agency costs primarily involves reducing the level of opportunistic behaviour by increasing trust in the team and using such mechanisms as adversarial agents, the participation of agents in the profits and capital of the firm, and the use of a circular management organization in which agents perform the functions of the principal one after another<sup>26</sup>.

In the new institutional economic theory, firms are investigated not only as separate entities but as groups (populations) of homogeneous organizations. Herewith, the research tools developed by other sciences are used. Such an approach to the analysis of the firm is peculiar to the evolutionary theory of economic change, which explores the population on the basis of taking into account the rules of their individual behaviour, the interaction between themselves, and the appearance (disappearance) of the firm in this set. These rules provide an opportunity to analyse the changes that occur in the process of a firm's operation in the population.

---

<sup>23</sup> Joskow, P. (2001). Spetsifichnost aktivov i struktura vertikalnykh otnosheniy: empiricheskiye svidetelstva [Asset specificity and vertical relationship structure: empirical evidence]. *The nature of the firm*. Ed. O. E. Williamson and S. J. Winter. Moscow: Business. (in Ukrainian); Hart, O. (2001). Nepolnyye kontrakty i teoriya firmy [Incomplete contracts and the theory of the firm]. *The nature of the company*. Ed. O. E. Williamson and S. J. Winter. Moscow: Business. (in Russian)

<sup>24</sup> Eggertsson, T. (2001). Ekonomicheskoye povedeniye i instituty [Economic behavior and institutions]. Moscow: Business. (in Russian)

<sup>25</sup> Stiglitz, J. (1987). Principal and Agent. *The New Palgrave: A Dictionary of Economics*. London. Macmillan.

<sup>26</sup> Oleinik, A. (2000). *Institutsionalnaya ekonomika [Institutional economy]*. Moscow: INFRA-M. (in Russian)

The evolutionary theory explores the skills and routines that play a major role in ensuring the firm's effective performance. Routines, rather than optimal solutions, determine the behaviour of the firm. Routines also explain the fact that firms are not responding so quickly to changes in the external environment. The stability of routines is explained by the fact that they are formed over a fairly long period and are unique assets of the firm, for the development of which it makes appropriate costs. Change of routines worsens the relationship within the firm and beyond. Such an important value of routines is based on the fact that they represent the memory of the firm, the conditions of operation and development, and the purpose. Such a broad interpretation ensures their unique role in the firm.

In the market, the firm's behaviour, according to representatives of the evolutionary theory of economic change, is determined by the fact to which population of firms it relates. If the firm relates to a population of innovators, it takes a monopoly position in the market, dictates the price, and maximizes profits, thus displacing the most ineffective representatives of the population of conservatives. Conservatives are trying to survive. In the course of competition between innovators and conservatives, there is economic, technical, technological progress. The process of change and the firm's behaviour are studied by evolutionists on the basis of the use of computer models, which opens wide opportunities for studying the activity of individual firms but limits possibilities for generalizations on the functioning of the populations of firms. At the same time, the fact that this concept recognizes the existence of effective, less effective, and also ineffective firms in one population and studying their behaviour contributed to the approximation of the theoretical scheme to the real economy.

An important direction in the development of the new institutional theory of the firm is a competence-based theory, which develops in line with a new resource theory, initiated by E. Penrose<sup>27</sup>. Competences, like routines, are formed throughout the whole period of development of the firm, they are hardly exposed to imitate, and so competitors cannot copy and use them. At the same time, the firm is a concentration of production resources, and its unique properties in the form of competences are associated with the heterogeneity of knowledge about the use of resources, organization of production, training of skilled workers, etc. In modern conditions, this concept has developed in the theory of strategy<sup>28</sup>.

---

<sup>27</sup> Penrose, E. (1959). *The Theory of the Growth of the Firm*. Oxford Basil Black Well.

<sup>28</sup> Hamel, G., & Prahalad, C. K. (1989). Strategic Intent. *Harvard Business Review*. Mai-June.

The competence-based theory of the firm is based on the following main categories: competences – the ability of the firm to combine resources in order to achieve its goals; information – a set of structured data, through which it is possible to obtain new information; knowledge – a set of cognitive abilities, skills and ability of firm employees to study; routine – a set of organizational interactions that are codified and adapted to solve specific problems of the firm’s development. This direction of research of the firm differs in that it uses situational rationality in making decisions. This is explained by the fact that in an unstable environment, difficult decisions are made. Upon that, optimization calculations cannot be implemented, therefore, the decisions are satisfactory and correspond to one or another moment of the current situation. Calculations are taken into account in the context of routines that shape the behaviour of workers and firms.

A competence-based theory assumes that the firm’s resources are specific, so they cannot simply be bought in the market. The resources are created and accumulated by the firm, which is developing in this process of creation and accumulation of resources. As a result, firms cannot have the same characteristics, they are unique. Focusing on the analysis of these problems provides an opportunity for conducting a deep study of production, which distinguishes the competence-based theory from other competences of the firm of institutional economic theory. Production is studied in terms of the ability of employees to combine resources, make decisions, and ensure achieving goals. These abilities are formed in the process of training and are decisive for the firm since they form the basis of its competences. Therefore, the training in this theory is given the main role. The conditions for the formation, evolution, and transformation of competences in the process of training are also important. This theory, as well as the evolutionary theory of economic change, attaches particular importance to the previous development of the firm, that is, it is said that previous investments and formed routines determine the future behaviour of the firm. But at the same time, the firm should not rely solely on previous development; it should take into account the complexity and changes in the environment, which, in conditions of uncertainty and rapid changes, can become decisive for it.

In the competence-based theory in the “information-knowledge” dichotomy, preference is given to knowledge, which is regarded as the ability of learning and cognitive properties of workers. In its turn,



information is interpreted as a set of structured and codified data that cannot create new information, although it can be used to obtain new information. Knowledge generates new information, provides an opportunity to integrate it and use it in a new way.

Preferring the way of organizing production, the competence-based theory offers a kind of approach to the definition of the nature of the firm. The firm in its interpretation is a place of training, which has two levels: routine training, which involves repetition of actions and their simulation; training in the course of changing the nature of the firm. At the second level, there is a codification of knowledge implemented in the training process. K. Polanyi at one time noted that the basis is the difference between knowledge in general and codified knowledge<sup>29</sup>. The first ones are realized only by their owners, who often ignore them or do not have the opportunity to realize them. Such knowledge deepening requires high costs because they should be identified and the owner should be interested in their implementation. Codification of knowledge allows separating knowledge from the owner and form competences based on them that are difficult to simulate. Upon that, the training process should take the form of an organizational routine.

The competence-based theory, emphasizing the role of training in the creation of competences, suggested the justification of the existence of the firm not from the viewpoint of “failures” of the market but from the viewpoint of own advantages a firm has regardless of the market. It has its own effectiveness and provides activities that some individuals cannot. Advantages of the firm are associated with possibilities of information processing, conflict resolution, adaptation to changes<sup>30</sup>.

Competences determine the competitive advantages of the firm, so it must form them and be able to determine. S. Tywoniak believes that for the competences of the firm, which determine its competitive advantages, the following conditions must be fulfilled: cost: competence should provide the opportunity to use opportunism, neutralize the threats of the environment, and provide a significant contribution to the value of the product for the client; rarity: competence should be rarity; imitation difficulties: competitors should not be able to imitate it; longevity: competences should be used for a certain time, depending on the ways of technical innovations, the activities of other manufacturers, the

---

<sup>29</sup> Polanyi, M. (1966). *The Tacit Dimension*. Petersmith Publisher.

<sup>30</sup> Menard, C. (1996). *Ekonomika organizatsiy [Economics of organizations]*. Moscow: INFRA-M. (in Russian)

fundamental character of knowledge in competences; irreplaceability: competence should not have substitutes; appropriation: firms should be able to appropriate profits from the results of the use of competences<sup>31</sup>.

Competences explain the long-term operation of certain firms, and their lack – the existence of firms within a rather short period. At the same time, effectively operating firms focus on one or several core competences. O. Bouba-Olga explains this by such circumstances. Cognitive abilities of the firm's employees are limited, so they can concentrate only on a few training processes. This is one human knowledge space. Another one is characterized by the fact that a person receives ready information in it. The firm also considers the scope of knowledge and concentrates cognitive resources in one or two competences and develops, protects, identifies them<sup>32</sup>.

An important fact is that competence-based management is very expensive. The production, accumulation, and movement of strategic knowledge between the divisions of the firm require constant investment, so the firm selects and supports a limited number of basic competences. And, finally, there is declining productivity of the desire to disseminate knowledge to many types of activities<sup>33</sup>, so firms control them in close activities that require the same knowledge.

At the same time, firms may use non-core competences for other development paths that are not associated with the previous ones. In modern conditions, such opportunities are important for firms since they increase their flexibility, adaptability, and promote the effective use of existing potential.

## CONCLUSIONS

The research of a modern firm by economic theory differs, firstly, in the formation of new approaches in the course of paradigmatic shifts in the very economic theory. First of all, it concerns methodological constructions that do not reflect the peculiarities of activities of real firms. This takes place through the introduction of social determinants, psychological factors in analysis in addition to purely economic parameters that enrich the content of the category and in an integrated manner reflects the system of relations that are formed in the firm, as

---

<sup>31</sup> Tywoniak, S. (1998). *Le modele des ressources et des competences: un nouveau paradigme pour le management strategique? Repenser la strategie*. Paris. Vouibert.

<sup>32</sup> Bouba-Olga, O. (2003). *L'economie de l'entreprise*. Paris. Editions du Seuil.

<sup>33</sup> Richardson, G. (1972). The organization of Industry. *The Economics Journal*, vol. 87.

well as provides an opportunity to determine the prospects for its development in conditions of uncertainty, fierce competition, and instability. The gradual shift away from the coercion of methodological individualism ensures the approach of the firm's theory to the solution of real problems existing in various industries and spheres of modern firms.

Secondly, modern economic theory, based on the analysis of economic relations, which are formed within the firm and the socio-economic system as a whole, focuses on the analysis of the relationships that are formed based on a set of ownership rights in the process of transferring the control rights and the delegation of one or another functions. It contributes to the understanding of internal processes and provides an opportunity to build relationships with other firms, to form new formations on the basis of interfirm relations, to analyse not individual firms but their totality, and to substantiate the existence of not only successful but also less successful firms in the economy.

Thirdly, the development of the modern theory of the firm involves the inclusion of elements of economic knowledge in the analysis, which is organic for the theory of the firm, since the competences for a modern firm is an important component of its intangible assets that provide it with competitive advantages, prospects for development and prosperity. The firm's research in the competence-based theory provides an opportunity to determine its role and place in the process of formation of the social capital of society and withdraw from the understanding of the firm as a production function, fill it with the new modern content, and determine its true inwardness.

## **SUMMARY**

The chapter analyses the following paths of development of the firm as the theory of transaction costs, contract theory, the theory of property rights, agency theory, competence-based theory, and the evolutionary theory of economic change. The reasons for changing the methodology of research of modern firms related to the underestimation of property rights, forms of organizations, and types of economic activity by the neoclassical economic theory are substantiated. The studies focus on defining the firm's target function in the presence of alternative limits, the conceptual difference between firm and market, and uncertainty inherent both in theoretical concepts and in real economic processes.

It is determined that theoretical concepts of the firm of neoinstitutional economic theory are based on the fact that the firm

exists and develops due to the formation of an agreed type of behaviour of its employees, which differs from the antagonistic behaviour of market participants. It is substantiated that the contract theory and the theory of property rights reveal the internal structure and real processes of the firm's activity. It is determined that competence-based theory interprets the firm as a set of competences, information, knowledge, and routines, which are formed throughout the entire existence of the firm and are difficult to imitate. It is substantiated that in the evolutionary theory of economic change, not only individual firms are studied but their populations, where both competitiveness and unprofitable firms coexist.

### REFERENCES

1. Alchian, Armen, & H. Demsetz (1972). Production, Information Costs, and Economic Organization. *American Economic Review*, 62, 777–795.
2. Arkhiireev, S. I. (2005). Transaktsionnyye izderzhki institutsionalizatsii fondovogo rynka [Transaction costs institutionalization of the stock market]. Kharkiv. (in Russian)
3. Bouba-Olga, O. (2003). *L'economie de l'entreprise*. Paris: Editions du Seuil.
4. Coase, R. (2001). Priroda firmy [The nature of the firm]. In the book: *The nature of the company*. Ed. O. Williamson and S. J. Winter. Moscow: Business. (in Russian)
5. Joskow, P. (2001). Spetsifichnost aktivov i struktura vertikalnykh otnosheniy: empiricheskiye svidetelstva [Asset specificity and vertical relationship structure: empirical evidence]. *The nature of the firm*. Ed. O.E. Williamson and S.J. Winter. Moscow: Business. (in Ukrainian)
6. Eggertsson, T. (2001). Ekonomicheskoye povedeniye i instituty [Economic behavior and institutions]. Moscow: Business. (in Russian)
7. Gornyak, O. V. (2004). Firma v ekonomichniy teorii ta praktytsi hospodaryuvannya [Firm in Economic Theory and Practice of Management]. Odessa: Astroprint. (in Ukrainian)
8. Hamel, G., & Prachalad C. K. (1989). *Strategic Intent*. Harvard: Business Review. Mai-June.
9. Hart, O. (2001). Nepolnyye kontrakty i teoriya firmy [Incomplete contracts and the theory of the firm]. *The nature of the company*. Ed. O. E. Williamson and S. J. Winter. Moscow: Business. (in Russian)

10. Hojon, J. (2003). *Ekonomicheskaya teoriya i instituty: Manifest sovremennoy institutsionalnoy ekonomicheskoy teorii* [Economic Theory and Institutions: The Manifesto of Modern Institutional Economic Theory]. Moscow: Business. (in Russian)
11. Knudsen, Christian. (1986). *Normal Science as a Process of Creative Destruction: From a Microeconomic to a Neoinstitutional Research Program*. Paper presented at the International Symposium on Property Rights Organizational Forms and Economic Behavior. (P. 10). Lund: The Swedish Collegium for Advanced Study in the Social Sciences.
12. Lakatos, Imre. (1970). *Falsification and the Methodology of Scientific Research Programs*, Cambridge: Cambridge University Press.
13. Machlup, F. (1999). *Teorii firmy: marzhinalistskiye, bikheviostikiye i upravlencheskiye* [Theories of the firm: marginalist, behavioral and managerial]. *Milestones of economic thought*. St. Petersburg: School of Economics. (in Russian)
14. Menard, C. (1996). *Ekonomika organizatsiy* [Economics of organizations]. Moscow: INFRA-M. (in Russian)
15. Nelson, R. R. (1981). Research of productivity Growth and Productivity Differences: Dead Ends and New Departures. *Journal of Economic Literature*, 29, 1029–64.
16. Nelson, R. R., & Winter S. J. (2000). *Evolyutsionnaya teoriya ekonomicheskikh izmeneniy* [The evolutionary theory of economic change]. Moscow: ZAO Finstatinform. (in Russian)
17. Oleinik, A. (2000). *Institutsionalnaya ekonomika* [Institutional economy]. Moscow: INFRA-M. (in Russian)
18. Penrose, E. (1959). *The Theory of the Growth of the Firm*. Oxford: Basil Black Well.
19. Polanyi, K. (1993). *Samoreguliruyushchiysya rynek i fiktivnyye tovary: trud, zemlya i dengi* [Self-regulating market and fictitious goods: labor, land and money]. Thesis. T. 1. Vyp. 2, p. 15. (in Russian)
20. Polanyi, M. (1966). *The Tacit Dimension*. Petersmith: Publisher.
21. Richardson, G. (1972). The organization of Industry. *The Economics Journal*. Vol. 87.
22. Simon, H. A. (1999). *Teoriya prinyatiya resheniy v ekonomicheskoy teorii i nauke o povedenii* [Decision making theory in economics and behavior science]. *Milestones of economic thought*. St. Petersburg: School of Economics. (in Russian)

23. Stiglitz, J. (1987). Principal and Agent. The New Palgrave: A Dictionary of Economics. London: Macmillan.

24. Tywoniak, S. (1998). Le modele des ressources et des competences: un nouveau paradigme pour le management strategique? Repenser la strategie. Paris: Vouibert.

25. Williamson, O. E. (2001). Ekonomichni instytutsiyi kapitalizmu. Firma, marketynh, ukladannya kontraktiv [Economic institutions of capitalism. Firm, marketing, contracting]. Kyiv: ArtEk. (in Ukrainian)

**Information about the author:**

**Horniak O. V.**

Doctor of Economic Sciences, Professor,  
Head of Department of Economics and Entrepreneurship,  
Odessa I. I. Mechnikov National University, Ukraine

## **CHAPTER 4**

### **ECONOMICS OF THE FUTURE: SYNERGETICS OF MODERNIZATION OF SCIENCE AND THE REAL ECONOMY**

**Derkach T. V.**

Science never solves a problem  
without creating ten more.

*George Bernard Shaw*  
*The Nobel Prize Laureate in Literature*

#### **INTRODUCTION**

In any given country, every person and society as a whole wants to live in prosperity and material independence. It is unlikely that anyone will doubt that most of the inhabitants of the planet want to have a comfortable house or apartment, to buy goods that they like, travel around the world and enjoy their impressions, receive moral and material satisfaction from living in a developed and respected country. However, there are not enough goods and services for all members of society over the limited and uneven distribution of resources. Therefore, ensuring proper welfare is not easy. Different sectors of society and professional groups have a heterogeneous level of prosperity – some people own billions of dollars, others eke out a miserable existence. These social groups often misunderstand each other, and this circumstance gives rise to economic conflicts, which sometimes turn into confrontations and even civil wars.

The economy is intended to find answers to numerous economic issues associated with the uneven distribution of incomes, living standards, inflation, and unemployment. Defining the goal of economic science, the “father of economics” A. Smith pointed out that “it proposes to enrich both the people and the sovereign”<sup>1</sup>.

---

<sup>1</sup> Смит А. Исследование о природе и причинах богатства народов. Москва : Соцэкгиз, 1962. 684 с.

Economics – a science that develops and should develop gradually and continuously. At first glance, some of the best works of contemporary authors contradict the works of their predecessors. Meanwhile, when these new studies fall into place over time and their critical acuteness is removed, it turns out that in reality they do not violate the continuity of the process of development of science. New doctrines only supplement the old ones, expand, develop, sometimes correct them, often give them a different tone, emphasizing in a new way, but very rarely subvert them<sup>2</sup>.

Despite the fact that more than two and a half centuries have passed since the definition of this concept, it still remains the most concise, capacious, and correct. Add to it only small touches. Economics is a scientific discipline that studies the issues of improving the welfare of the people and the country, provided that the economic processes are balanced and social justice is respected.

It is not possible to solve this complex and multifaceted economic task without scientific analysis, research into the development trends of the economic system, and the establishment of interconnections between economic and social phenomena.

Economic science is often called the “queen of the social sciences,” thereby confirming its special merits to human civilization. And although, as an independent branch of science, it exists for a relatively short time, it has earned this status. Because, just 500 years ago, the first school of economic science, namely the school of mercantilism, arose. And just then definitions of the subject-matter, methods, and tasks of economic science were formulated. One cannot but recall the words of P. Samuelson that the “birthday of political economy” is determined by mercantilist theory.

The relevance of modernization of economic science is also determined by the inconsistency of the traditional division of the economics into micro and macro due to its growing complexity and, therefore, insufficiency to understand the ongoing economic processes, including the causes of recurring and increasingly global crises. It is also the spread of the ideas of synergetics in the scientific world and the formation of the evolutionary synergetic paradigm of the analysis of socio-economic systems.

---

<sup>2</sup> Маршалл А. Принципы политической экономии. Пер. с англ. Москва : Прогресс, 1983, т. 1. 415 с.



## 4.1. Evolution of economic thoughts and views

Economy is the art of making the most of life.

*George Bernard Shaw*  
*the Nobel Prize Laureate in Literature*  
*(Maxims for Revolutionists)*

The first attempts to generalize economic practice and create a new science of the proper management of the economy were undertaken by ancient Greek thinkers and philosophers Aristotle and Xenophon.

Aristotle divided economic science into two main disciplines – oikonomics (the science of rational housekeeping) and chrematistics (the science of wealth). Aristotle called oikonomics (or economics) the totality of the actions of people aimed at creating material wealth. Aristotle believed that the main goal of the economy is to provide citizens of the country with everything necessary for a comfortable life. The main tasks of the economy are ensuring public welfare and meeting the needs of people<sup>3</sup>.

Xenophon introduces for the first time such important economic categories as the use and exchange value of goods, the degree of profitability (cost effectiveness) of the production of goods, proper payment, and incentives of labour.

However, the theoretical developments put forward by ancient thinkers dealt mainly with households, the agricultural sector, handicrafts, and trade relations – all that we would now call microeconomics. The economy of the country as a whole remained outside the research<sup>4</sup>.

Winner of the Nobel Prize in Economics in 1976, Friedrich Hayek immediately revealed three differences between the economy and other sciences. “First: the very subject of this science can only be precisely determined through lengthy research. Second: in our science, it is much more difficult to distinguish a real scientist from a quack. Third: a famous international award gives the economist public influence that is not comparable to scientists in other disciplines.”

Of course, the first difference can immediately cause a protest. Although the understanding of the subject-matter of economics has

---

<sup>3</sup> Поиск науки о богатстве. 21 Biz.ru Журнал о бизнесе и благосостоянии. URL: <http://21biz.ru/poisk-nauki-o-bogatstve/> (дата звернення: 11.07.2019).

<sup>4</sup> Поиск науки о богатстве. 21 Biz.ru Журнал о бизнесе и благосостоянии. URL: <http://21biz.ru/poisk-nauki-o-bogatstve/> (дата звернення: 11.07.2019).

really changed, the definition has changed over time. Based on the classical formulation, we can say that economics has always been and is a science of the creation and distribution of wealth. Nevertheless, an understanding of how wealth is created is necessary. The basis of neoclassical economic theory and, at the same time, the answer to this question is the formula of Lionel Robbins: “a person strives for reasonable goals; time and funds at his disposal are limited; at each moment of time, they can be aimed at achieving alternative goals; at every moment in time, different goals have different importance”<sup>5</sup>. Based on this, we can say that the economy is dealing with the problem of distributing limited resources between competing goals. Therefore, we can conclude that the subject-matter of economic science – a problem of distribution.

Hayek himself gave this definition: “The fundamental goal of economic analysis is to determine how a dynamic production system uses the scattered information of time and place in a way that adjusts production plans to consumer demand”<sup>6</sup>. An interesting explanation of the second difference between economics and other sciences is given by Hayek himself. It is the following: in the case when economists put forward ideas that contradict the views of the layman, those immediately appear who offer him an explanation that is quite understandable, albeit erroneous. The third distinguishing feature of the economy is that all people face economic problems. And everyone wants to get recommendations on how to solve these problems. And thus, the economist who has received world recognition becomes an indisputable authority<sup>7</sup>.

The famous economist J. Schumpeter said on the changes in economic science that modern economic science has arisen based on practical and philosophical studies in various fields: from the study of the trade balance to discussions about the legality of charging interest<sup>8</sup>.

Lionel Robbins in his classic *Essay on the Nature and Significance of Economic Science* (chapter 3) comes close to the viewpoint of the Austrians. However, he is better known for his definition of economic theory as “a science that explores human behaviour as a connection between goals and the rare means of achieving them, which can be used in different ways.”

---

<sup>5</sup> Лайонел Роббинс. Предмет экономической науки. THESIS, 1993. Вып. 1. С. 10–23.

<sup>6</sup> Gary S. Becker. *Economic Analysis and Human Behavior*. THESIS, 1993. № 1. Pp. 24–40.

<sup>7</sup> Gary S. Becker. *Economic Analysis and Human Behavior*. THESIS, 1993. № 1. Pp. 24–40.

<sup>8</sup> Schumpeter J.A. *Epochen der Methoden- und Dogmengeschichte*.

“Economic theory – a science that studies human behaviour from the viewpoint of the relationship between goals and limited means, which can have different uses”<sup>9</sup>.

According to this definition, economic science does not deal with any particular class of social phenomena (such as the production of goods, their distribution, exchange or consumption). Economic science deals with a specific aspect of human behaviour. The decision of a person to have children or violate the marriage-bed is, according to Robbins, the same part of economics as supply and demand in the tuna market.<sup>10</sup>

“Economic science investigates the normal functioning of human society; it studies the sphere of individual and social actions, which is closely connected with the creation and use of the material foundations of welfare”<sup>11</sup>.

According to Professor Pigou, economics examines economic welfare, which, in turn, is defined as “a welfare area where you can directly or indirectly apply the monetary scale of measurement”<sup>12</sup>.

They insisted that economics study a certain type of social behaviour, driven by the institutions of an individualistic market economy. From this point of view, any kind of behaviour that is not social in this specific sense does not belong to the subject-matter of economic science. Professor Amonn developed this concept especially vigorously<sup>13</sup>.

Of course, it should be noted that despite the wide and diverse interpretation of the definitions of economic science, the main attention is paid to the problems of a market economy.

At first glance, the differences between them are not so great. One of them relates human behaviour, driven by a comparison of goals and means, to the subject-matter of economic science, the other – the causes of material well-being. In fact, we are talking about the same thing, though<sup>14</sup>.

Among the main definitions of economic science, there are three main but quite opposing definitions of economics. So, according to the

---

<sup>9</sup> Лайонел Роббинс Предмет экономической науки. THESIS, 1993. № 1. С. 10–23.

<sup>10</sup> Дэниел Хаусман. Философия экономики – Антология. Пер. с англ. Москва : Изд. Института Гайдара, 2012. 520 с.

<sup>11</sup> Маршалл А. Принципы политической экономии. Пер. с англ. Москва : Прогресс, 1983, т. 1. 415 с.

<sup>12</sup> Пигу А.С. Экономическая теория благосостояния. Пер. с англ. Москва : Прогресс, 1985. т. 1. 512 с.

<sup>13</sup> L. Robbins. An Essay on the Nature and Significance of Economic Science. 2nd ed. London: Macmillan, 1935. Part. 1. Pp. 1–23.

<sup>14</sup> Лайонел Роббинс Предмет экономической науки. THESIS, 1993. № 1. С. 10–23.

first, it studies the distribution of material goods for the satisfaction of material needs, according to the second one – market sector and, according to the third definition, it studies the distribution of limited funds to meet competing goals<sup>15</sup>.

If we analyse the first definition of economic science from the point of view of material goods, then it is without a doubt limited and does not provide a true understanding of a market economy. For example, in the United States, less than half of all those working in the market are now engaged in the production of tangible goods, and the intangible output of the service sector exceeds the value of the commodity output. Moreover, it is precisely the definitions of economic science by professors E. Cannan<sup>16</sup>, A. Marshall<sup>17</sup>, and V. Pareto<sup>18</sup> are associated with the study of the causes of material well-being.

Moreover, in our opinion, the meaning of the definition lies, first of all, in its use.

According to Lionel Robbins<sup>19</sup>, an understanding of economics through the definition of “rarity” is interesting. So, Lionel Robbins claims that “from the point of view of an economist, the conditions of human existence are characterized by the following four fundamental provisions: a person strives for different goals; time and means at his disposal are limited; they can be aimed at achieving alternative goals; at each point in time, different goals are of different importance. It is the rarity of the means intended to meet the goals of different importance – this is an almost universal property of the environment in which human activity takes place”<sup>20</sup>.

The most general and broad is the definition of economic science in terms of limited resources and competing goals. It proceeds from the specific nature of the problems to be solved, and covers a much wider area than the market sector or “what economists do.” Rarity and choice characterize any resources, in whatever form their distribution takes place – within the framework of the political process (including decisions about which industries to tax, how to quickly expand the money supply, and whether to enter the war), through the family (including the choice of spouse and planning family sizes, determining

---

<sup>15</sup> Gary S. Becker. *Economic Analysis and Human Behavior*. THESIS, 1993. № 1. С. 24–40.

<sup>16</sup> Лайонел Роббинс Предмет экономической науки. THESIS, 1993. № 1. С. 10–23.

<sup>17</sup> Маршалл А. *Принципы политической экономии*. Пер. с англ. Москва : Прогресс, 1983, т. 1. 415 с.

<sup>18</sup> Pareto V. *Cours d'économie politique professé à l'université de Lausanne*. Lausanne: Rouge. 1897. 426 p.

<sup>19</sup> Лайонел Роббинс Предмет экономической науки. THESIS, 1993. № 1. С. 10–23.

<sup>20</sup> Лайонел Роббинс Предмет экономической науки. THESIS, 1993. № 1. С. 10–23.

the frequency of church attendance, and the distribution of time between sleep and wakefulness), or when organizing scientific research (including the allocation by scientists of their time and mental efforts for various scientific problems) and so on ad infinitum<sup>21</sup>.

Based on the foregoing, we can note that economic science itself and the needs for it evolve according to their own laws and, at the same time, independently of each other. The needs of people stimulate the development of science, and the development of science leads to the growth and qualitative transformation of human needs. The needs for science and the possibilities of science push each other and move humanity upward in the direction of social development to new frontiers of scientific achievements and living standards.<sup>22</sup>

Thus, the specifics of the current stage of development is not so much in new scientific research but primarily in the effective application and implementation of existing knowledge, we need not discoveries independently but innovations on how to apply existing discoveries. And then it is possible to reduce the imbalance between needs and opportunities.

#### **4.2. Synergetics of modernization of theory and practice**

Science is but an image of the truth.

*Francis Bacon*  
*English philosopher*

At present, the potentialities of science are quite significant, however, applied research, unfortunately, lags behind over its inapplicability.

Based on the analysis of the development of economics and the approaches on which its development is drawn upon, today there is a clear understanding of the laws and mechanisms of the functioning of the economic system. Herewith, countries of the world, regardless of their level of development, are constantly confronted and forced to solve serious economic challenges and problems that, it would seem, should no longer arise. And this is associated not with the problems of the

---

<sup>21</sup> Gary S. Becker. *Economic Analysis and Human Behavior*. THESIS, 1993. № 1. С. 24–40.

<sup>22</sup> Евгений Балацкий Экономическая наука на современном этапе: кризис или прорыв? Капитал страны. Интернет-издание: веб-сайт. URL: [http://kapital-rus.ru/articles/article/ekonomicheskaya\\_nauka\\_na\\_sovremennom\\_etape\\_krizis\\_ili\\_proyuv/](http://kapital-rus.ru/articles/article/ekonomicheskaya_nauka_na_sovremennom_etape_krizis_ili_proyuv/) (дата звернения: 10.07.2019).

development of economics but with the weakness in using its capabilities.

It can even be argued that the economic success of a particular country is not directly related to the potential of economics that it possesses. The most illustrative example is Germany, which does not have a strong economic school but has a strong economy. Japan, which is associated worldwide as an “economic miracle”, also cannot boast of the outstanding development of economic science. The paradox lies in the ability to apply economic knowledge while not going into subtleties of economic theory. If we analyse the economic success of China, we can notice the same trend. For example, in relation to the US Federal Reserve System (FRS), G. Soros wrote that the key to its effective work lies in the skilful combination of science and pragmatism. If the US FRS tried to implement all modern economic science in its practice, then most likely it would come to terrifying results<sup>23</sup>.

Currently, not so much in-depth studies of the economy are required, but first of all, specialists who would be able not only to use the “wealth” of economics existing today and also economists who would be able to modernize economics in view of the practical needs and emerging diversity of international economic relations.

Unfortunately, the enthusiasm of theoretical economists for endless theoretical computations, often without practical results, does not allow the further development of economic science in relation to new conditions.

According to researchers, one can state the existence of crisis trends in economics<sup>24</sup>. Thus, economics has in its arsenal two fundamental laws formulated in the work of Hermann Heinrich Gossen, “The Laws of Human Relations and the Rules of Human Action Derived Therefrom”<sup>25</sup>. According to the first law of H. Gossen, namely, the law of diminishing marginal utility, with increasing consumption of one product (at a constant consumption of all the others), marginal utilities are diminishing, i.e. the overall utility is increasing at a slower rate, and decreasing – at a higher rate.

---

<sup>23</sup> Балацкий Е. Экономическая наука на современном этапе: кризис или прорыв? Капитал страны. Интернет-издание: веб-сайт. URL: [http://kapital-rus.ru/articles/article/ekonomicheskaya\\_nauka\\_na\\_sovremennom\\_etape\\_krizis\\_ili\\_proryv/](http://kapital-rus.ru/articles/article/ekonomicheskaya_nauka_na_sovremennom_etape_krizis_ili_proryv/) (дата звернения: 10.07.2019).

<sup>24</sup> Балацкий Е. Экономическая наука на современном этапе: кризис или прорыв? Капитал страны. Интернет-издание: веб-сайт. URL: [http://kapital-rus.ru/articles/article/ekonomicheskaya\\_nauka\\_na\\_sovremennom\\_etape\\_krizis\\_ili\\_proryv/](http://kapital-rus.ru/articles/article/ekonomicheskaya_nauka_na_sovremennom_etape_krizis_ili_proryv/) (дата звернения: 10.07.2019).

<sup>25</sup> Hermann Heinrich Gossen. The Laws of Human Relations and the Rules of Human Action Derived Therefrom. Nicholas Georgescu-Roegen MIT Press, 1983. 465 p.

The second law of diminishing marginal efficiency states that, as a certain production resource grows, the marginal return (productivity) from it decreases. Despite the fact that the law of H. Gossen is manifested in the sphere of consumption, and that the law of decreasing marginal efficiency – in the production sphere, both of these laws are a consequence of the same economic principle. The listed laws are not absolute and in some cases can still be violated. However, if they are carried out and, at the same time, manifested in a rather strong form, this indicates a certain crisis in the studied area<sup>26</sup>.

If to apply the law of H. Gossen to economics, we come to the conclusion that the accumulation of new scientific knowledge brings less and less benefit to mankind. The law of diminishing marginal utility – the growing financial, material, and labour costs of science give less and less scientific results. “Even the most superficial look at modern economic science allows concluding that both laws are fully applicable to it”<sup>27</sup>.

The modernization of economic science is determined by the fact that, unlike many exact sciences, it does not give unambiguous assessments and forecasts of processes and phenomena. For example, this concerns the forecast of world financial and economic crises that usually “unexpectedly” arise, trends in the development of the world economy, states, and individual industries.

Moreover, economists are constantly arguing about the causes of economic phenomena, about ways to improve the quality of life of the population, about methods of intensifying economic growth, about the amount of taxes and directions of business development. So, R. Feynman said that “...the economy is dealing with constantly changing, very subtle properties of human nature”<sup>28</sup>.

Based on the position of A. Poincaré that any science is a system of relations<sup>29</sup>, the task of economic science according to A. Marshall is “to collect facts, systematize, interpret them and derive appropriate conclusions from them”<sup>30</sup>. And in order to understand the essence of the

---

<sup>26</sup> Hermann Heinrich Gossen. *The Laws of Human Relations and the Rules of Human Action Derived Therefrom*. Nicholas Georgescu-Roegen MIT Press, 1983. 465 p.

<sup>27</sup> Балацкий Е. Экономическая наука на современном этапе: кризис или прорыв? Капитал страны. Интернет-издание: веб-сайт. URL: [http://kapital-rus.ru/articles/article/ekonomicheskaya\\_nauka\\_na\\_sovremenном\\_етапе\\_krizis\\_ili\\_proryv/](http://kapital-rus.ru/articles/article/ekonomicheskaya_nauka_na_sovremenном_етапе_krizis_ili_proryv/) (дата звернения: 10.07.2019).

<sup>28</sup> Фейнман Р. *Характер физических законов*. Москва : Наука, 1987. 160 с.

<sup>29</sup> Пуанкаре А. *О науке*. Пер. с фр. / Под ред. Л. С. Понтрягина. 2-е изд., стер. Москва : Наука, 1990. 736 с.

<sup>30</sup> Маршалл А. *Принципы экономической науки*. В 3-х т. Москва : Прогресс, 1993. 594 с.

economy, let us turn to the statement of J. Schumpeter that the roots of the economy lie, on the one hand, in philosophy, and on the other, in disputes about pressing problems and difficulties<sup>31</sup>.

In the continuation of the study of economic science, the work of the French professor T. Piketty “Capital in the Twenty-First Century”<sup>32</sup> (2015), which in general stands apart, is of undoubted interest. The author focuses on the problem of inequality. This is just one of the key problems that need to be addressed. And the modernization of economic science is called upon to try to find an answer in the modern conditions of globalization and growth, both of regional and mega-regional integration groups.

T. Piketty’s work is devoted to the topic of capital, one of the central topics in economics. This is a kind of modern continuation of the study of the topic of capital, first raised by K. Marx in the work “Capital. A Critique of Political Economy”<sup>33</sup>, and further continued by John Hicks in the book “Value and Capital”<sup>34</sup>, then Giovanni Arrighi in the work “The Long Twentieth Century”<sup>35</sup>, and then in our time by T. Piketty. In his research, he argues that inequality is the main problem and challenge of modern society “the distribution of wealth – one of the most pressing and discussed issues...”<sup>36</sup>.

Of course, the complexity of economics, its close relationship with most other sciences (natural, humanities, mathematics), its relationship with complex multidimensional systems, which themselves have a high degree of uncertainty, do not allow to get rid of the unpredictability of economic phenomena and processes.

However, all the above difficulties and errors in forecasts do not undermine the authority of economic science in the eyes of the world community. Recall that out of all humanities, the annual Nobel Prize winners are determined only for economics. This emphasizes the special importance of economics for improving people’s lives.

---

<sup>31</sup> Барт П. Политическая экономия. В 2-х т. Пер. с фр. Т. 1. Москва : Международные отношения, 1995. 608 с.

<sup>32</sup> Piketty, T. Capital in the twenty-first century, translated by Arthur Goldhammer. The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, 2014. 452 p.

<sup>33</sup> Marx, K. Capital. Criticism of political economy / In: Marx K., Engels F. Coll. papers, vol. 23. Moscow: State Publishing House of Political Literature, 1960. (in Russian)

<sup>34</sup> Evgeny V. Balatsky. The effect of Piketty: a comment to new concept // Terra Economicus. 2017. T. 15. № 2. Pp. 40–56.

<sup>35</sup> Arrighi, G. The Long Twentieth Century: Money, Power, and the Origins of Our Times. London: Verso, 1994.

<sup>36</sup> Piketty, T. Capital in the twenty-first century, translated by Arthur Goldhammer. The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, 2014. 452 p.



The modernization of science is a push in the development of an innovative economy and the creation of modern high-tech industry. Countries that did not have strong science, as the industry developed, were faced with the need to develop science, as was the case in Japan, Finland, and South Korea.

Science is developing in highly developed countries: they need it to accelerate the development of modern technologies and provide training for qualified specialists who could influence national and global processes.

The word “modernization” means improving, perfecting something, and not for the sake of modernization itself but for the sake of the subsequent successful solution of pre-set tasks.

By modernization, Chinese scientists understand both the development process with the introduction of “modern features” and the state that is the end result of this process.

The adjective “modernized is a characteristic of an object that is at a high level of world development or satisfies the requirements of the present”<sup>37</sup>. Professor He Chuanqi from China distinguishes between primary and secondary modernization. “If the first (primary stage) – a classic modernization, which includes industrialization, urbanization, democratization, and a rational approach, then the second (secondary) is already ‘neo-modernization’, for which the concepts of scientific knowledge, information, globalization, and environmental protection take on meaning”<sup>38</sup>.

By modernization, we mean the possibility of ensuring stable economic growth, a qualitative renewal of the economy, and increasing its efficiency based on the development of scientific and technological potential. Given that science is the “main productive force”, it is its development that is the most important condition for ensuring economic growth<sup>39</sup>.

In our opinion, the modernization of science is necessary and should be carried out, first of all, with a clear understanding and formulation of interests. Modernization should be adequate to the level and complexity of the national economic problems facing society and

---

<sup>37</sup> Обзорный доклад о модернизации в мире и Китае (2001–2010) / под ред. Хэ Ч. и Лапина Н. И. Москва : «Весь мир», 2011. 256 с.

<sup>38</sup> Обзорный доклад о модернизации в мире и Китае (2001–2010) / под ред. Хэ Ч. и Лапина Н. И. Москва : «Весь мир», 2011. 256 с.

<sup>39</sup> Реформы Дэн Сяопина: анализ опыта Китая. 21 Biz.ru Журнал о бизнесе и благосостоянии веб-сайт. URL: <http://21biz.ru/reformy-den-syaopina-analiz-opyta-kitaya/> (дата звернения: 11.07.2019).

the world economic system. To achieve this goal, the mobilization of intellectual and human resources is required. Naturally, funding and support, both from the state and from corporations, will be directed only to those studies that can provide innovative, practical results. Modernization of any science, including economics, is possible only if the state of the environment, which includes the modernized system, is taken into account. The world is rigidly bound by causal relations. Otherwise, the system destabilization and, as a result, its possible degradation can be observed. Further, necessary in the process of modernization of science is the inevitable change in the framework of rationality towards expanding the applied forms of thinking and recognizing the legitimacy of this expansion depending on the tasks being solved. The use of all criteria of truthfulness, depending on research subjects, should be recognized<sup>40</sup>.

It seems that it would be right to make corrections and create new organizational forms of research, namely, the creation of structures that would be organized for specific tasks, in the solution of which there are interested customers.

The modernization of science cannot be achieved without the development of the applied level of the humanities. Along with the transition to the post-industrial stage of development, mankind is moving to new technologies for the development and management of needs. This transition is a qualitative restructuring, or bifurcation point, opening a new window of opportunity. The economic system has such states when it becomes different, but the economic fundamental theory is not able to catch these transitions, even at the most general level.

Among the priority areas of modernization of economic science, a special place belongs to the need to move to the implementation of the requirement to give economic science the form of verified theories.

No less important in the implementation of the modernization of economic science is the need to return to the conviction that political economy should regain the status of a single science, under the dome of which various directions of scientific research of problems of global governance and interstate regulation of economic relations in a changing political, socio-cultural environment are developing. Indeed, emerged in the 1970s as an interdisciplinary industry at the intersection of economics

---

<sup>40</sup> Реформы Дэн Сяопина: анализ опыта Китая. 21 Viz.ru Журнал о бизнесе и благосостоянии. URL: <http://21biz.ru/reformy-den-syaopina-analiz-opyta-kitaya/> (дата звернения: 11.07.2019).

and political science, the school of world political economy has all the properties to study cross-country integration, especially at the stage of formation of supranational governance structures. After all, it is a global political economy that studies and substantiates measures for their implementation by the power structures of individual states and international integration associations in a dynamic external environment, where new challenges to international economic stability regularly appear.

It is also worth noting the absolutisation of the role of mathematics in research, which sometimes occurs to the detriment of the study of pressing issues of socio-economic development. This is confirmed by the words of one of the founders of economic theory, R. Coase, “Existing economics is ... a mathematical system which floats in the air and which bears little relation to what happens in the real world”<sup>41</sup>. A. Marshall saw in mathematics an important, but only an auxiliary tool of economic analysis, not a substitute for a deep study of economic realities and historical precedents<sup>42</sup>.

Therefore, modern economic thinking is forced to adapt to the diversity and inconsistency of the reality of a diverse, dynamic, and very complex economic system<sup>43</sup>.

The modernization of economics also, in our opinion, without the modern “complexity economics”<sup>44</sup> suggests that, although self-organization mechanisms can shift complex adaptive systems to some stationary state (to the so-called attractor), they usually generate multiple equilibria, often unstable and transient. For example, in countries with market economies, the required self-organization, which could help to solve problems on the way to a certain stable attractor, namely the appearance of the necessary instrumental education in a complex environment, can be: 1) very time-consuming to have the desired effect; 2) fragile, i.e. unstable; or even 3) completely blocked. Thus, a systematic policy is needed to further contribute to the sustainable development of complex adaptive economic systems<sup>45</sup>.

---

<sup>41</sup> Gary S. Becker. *Economic Analysis and Human Behavior*. THESIS, 1993. № 1. С. 24–40.

<sup>42</sup> Маршалл А. *Принципы политической экономии*. Пер. с англ. Москва : Прогресс, 1983, т. 1. 415 с.

<sup>43</sup> Khaykin M. M. Evolution of economic theory as science: the challenge of time. *Научно-технические ведомости СПбГПУ. Экономические науки*. 2013. №6-1(185). С. 48–53.

<sup>44</sup> Arthur В. Complexity economics: A different framework for economic thought. SFI Working Paper: веб-сайт. URL: <http://tuvalu.santafe.edu/~wbarthur/Papers/Comp.Econ.SFI.pdf> (дата звернення: 05.07.2019).

<sup>45</sup> Kirman A. *Complex economics: Individual and collective rationality*. London, New York: Routledge, 2011.

Confirmation that economic science is in a state of crisis and needs modernization is the impossibility, with all the variety of areas in economic theory and mathematical models, to describe, explain, and predict the occurrence of critical economic phenomena and processes. And most importantly, this is the lack of proposals for overcoming the crisis and the possibility of preventing destabilizing situations in both the national and global economies.

The presence of major changes in the global economy confirms the need to modernize economic science. As a result of globalization, the world has become more homogeneous and interconnected. It is dominated by one global state and its allies by civilizational criteria. There is a constant redistribution of forces in the global economic space, and new poles of economic growth are being formed. Irreversible changes have occurred in the economic structure: despite all the innovative advantages, the model of the financial economy is gradually beginning to displace the innovative economy. Financial markets have proven to be a major factor in increasing competitiveness. And against this background, reindustrialization is taking place and that is notable and justified, first of all, in highly developed countries. Thus, the post-industrial economy can be discussed mainly in the countries of post-socialist development. Theoretical postulates about the existence of a post-industrial economy as a criterion for a highly developed economy have sunk. The real industrial economy is returning, and, first of all, in the leading countries. The countries that for any reason are not capable of developing industry are beginning to fall into the category of countries with post-industrial economies<sup>46</sup>.

The return of the cyclical nature of economic development should be noted. Until 2009, in the last 15 years, there were no crises in the economies of world leaders. Leading theorists of economic science put forward assumptions about overcoming cyclicity, primarily relying on the ability of the market to self-regulate development dynamics, along with financial innovations that strengthen stability and security in the economy, through diversification and redistribution of risks across the financial system. The return of cycles indicates the need to update the

---

<sup>46</sup> Гринберг Р. С. Поиски новых экономических моделей как ответ на вызовы XXI века. География мирового развития. Выпуск 3: Сборник научных трудов / под ред. Л. М. Синцера. Москва : Товарищество научных изданий КМК, 2016. С. 8–16.

development of new mechanisms of countercyclical regulation based on the modernization of economic science<sup>47</sup>.

Another reason for the need to develop economic science is the return of the role of the state. More recently, the theory of “competitive liberalization” was classified as the most progressive<sup>48,49</sup>.

At the present moment, the constructive role of the state is resuming in the regulation of the economy and the emergence of its new functions. Examples include the United States, China, Germany, and other leading countries. The new functions include the protection of national economic interests, priority support for an innovative economy, and a steady trend in the development of social infrastructure of society<sup>50</sup>.

Existing economic theories are constantly being updated; modern versions are appearing. The theory of the full value of natural substance illustrates the fact that the tradition of economic analysis of the period from the end of the XIX to the first third of the XX century is built into the main tradition of the Quesnay-Ricardo-Marx-Sraffa circuit. There are three aspects to this issue: 1) a representation of the tradition of the circuit as a theoretical “background” of research by economists; 2) a description of the actual Ukrainian tradition of economic analysis of the circuit and the principle of such a description; 3) a way of connecting these two traditions in the history of economic thought<sup>51</sup>. Based on the ideas of the physiocrats, the theory of full value provides clues for an objective energy assessment of reserves and bottlenecks of social development: reserves of full value and rent in the world economic system and what prevents their appropriate use for the common good<sup>52</sup>.

All changes in socio-economic development are taking place against the backdrop of new challenges, such as an increase in anthropogenic and technogenic pressure on the ecological system,

---

<sup>47</sup> Гринберг Р. С. Поиски новых экономических моделей как ответ на вызовы XXI века. *География мирового развития*. Выпуск 3: Сборник научных трудов / под ред. Л. М. Синцера. Москва : Товарищество научных изданий КМК, 2016. С. 8–16.

<sup>48</sup> Деркач Т. В. Либерализация ВЭД в контексте ревитализации экономик интегрирующихся стран. *Science and Education Studies*, Volume III. “Stanford University Press”, 2015. № 2. (16). P. 166–173.

<sup>49</sup> Деркач Т. В. Стратегия конкурентной либерализации в торговле как составляющая развития национальной экономики. *Вісник Херсонського державного університету, Серія: Економічні науки*. 2014. Вип. 8. Частина 5. С. 34–38.

<sup>50</sup> Гринберг Р. С. Поиски новых экономических моделей как ответ на вызовы XXI века. *География мирового развития*. Выпуск 3: Сборник научных трудов / под ред. Л. М. Синцера. Москва : Товарищество научных изданий КМК, 2016. С. 8–16.

<sup>51</sup> Кенэ Ф. Избранные экономические произведения. Москва : Соцэкгиз, 1960.

<sup>52</sup> Никольский А. Ф. Резервы и узкие места устойчивого развития в мировой экономической системе. *География мирового развития*. Выпуск 2: Сборник научных трудов / под ред. Л. М. Синцера. Москва : Товарищество научных изданий КМК, 2010. С. 107–125.

competitive relations are determined by geopolitical and economic interests, the load on natural resources is sharply increasing in the economy, and therefore, the problem of their exhaustion and, at the same time, need to increase the efficiency of raw materials' extraction. Also, inequality between countries is growing, and therefore, social contrasts are becoming sharper. Solving this issue requires the creation of new models of the social state. Science is designed to show how to solve the problems. But the very state must initiate the modernization of science. Because any modernization carries risks and losses, in turn, the state takes responsibility, encouraging a knowledge-based economy, innovative development, thereby adjusting the course of development of economic science and creating new economic models based on theoretical "mainstream", thus minimizing future losses.

## **CONCLUSIONS**

The development of the global economy was based on increased investment in research and development, the formation of global telecommunication networks, the development of information technology, the expanded use of Internet technologies, the use of advanced technical standards and methods of corporate and state economic management.

The approach to economics as a scientific discipline and, at the same time, as a sphere of human activity, is possible only if a systematic knowledge is ensured, i.e. it is necessary to take into account the achievements of other scientific disciplines that allow the economy to harmoniously integrate into the general structure of modern scientific research. It is very difficult to change economic reality – whether it is low wages in poor countries, tax shelters serving super-rich people, excessive corporate power, or an overly complex financial system. Sometimes difficulties are caused by the active efforts of those who benefit from existing mechanisms.

The hope that economics can help to cope with poverty and support the conditions in which free people can prosper is its most inspiring mission and greatest achievement. It is economics that is always aimed at changing the structure of the world. The very first economists were advisers to the absolute monarchs in the early period of modern Europe. And today, economists continue the tradition of changing the structure of the world.

The process of modernization of economic science, in our opinion, should be carried out based on changes in economic life. One of the most important factors that ensured the success of the Chinese reforms was the gradual, evolutionary nature of the reform process and, at the same time, the “new” modernized economic theory of the XXI century about how science should find answers to modern challenges of the time – questions that arise in the global and national economies, functioning at a qualitatively new level of development.

It is also necessary to take into account the concept of interdisciplinarity, which is especially important for economists. It is the dialogue between representatives of both various social sciences and various scientific fields that will contribute to the socio-economic development of the world system.

Since the last financial crisis for an increasing number of economists (and practitioners) it has become obvious that we need other theories and models, and not those that are associated with perfect agents and mechanisms aimed at smoothing economic processes to ensure equilibrium. The developing complexity economics is incompatible with the historical message of the mainstream that the market economy seeks a general and relatively optimal equilibrium, which is the only way, vanishing point, and end of human history.

A feature of economic science is its direct relationship mainly with human beings, who are forced to move along the path of progress and implement changes, whatever they bear.

The modernization of economic science should be aimed at a pragmatic solution to modern problems, taking into account the simultaneously occurring processes of regionalization, globalization, and glocalization.

## **SUMMARY**

The article attempts to systematize economic ideas because economic science arose based on practical and philosophical studies in various fields of different time periods. Indeed, the understanding of the subject-matter of economics has changed, and the definition has changed over time. First of all, economics is seen as the science of the creation and distribution of wealth. The paper analyses the need for modernization of economics since there is a discrepancy between theoretical developments and the real economy. Despite the wide and varied interpretation of the definitions of economic science, the main

attention is paid there to the problems of a market economy. The paper defines the specifics of the modern stage of development, which consists of the effective implementation of already existing theories; we need not discoveries independently but innovations on how to apply existing discoveries. The main directions of modernization of science are proposed while it should be implemented, first of all, with a clear understanding and formulation of interests. The paper concludes on the modernization of economic science of the XXI century to find answers to the challenges of the time, functioning at a qualitatively new level of development.

### REFERENCES

1. Smit, A. (1962). *Issledovanie o prirode i prichinah bogatstva narodov* [Research on the nature and causes of the wealth of peoples]. Moskva: Sotsekgiz. (in Russian)
2. Marshall, A. (1983). *Printsiipy politicheskoy ekonomii* [Principles of Political Economy]. Moskva: Progress. (in Russian)
3. Poisk nauki o bogatstve [Wealth Science Search]. *21 Biz.ru Zhurnal o biznese i blagosostoyanii*. URL: <http://21biz.ru/poisk-nauki-o-bogatstve/> (accessed 11 July 2019) (in Russian)
4. Gary S. Becker. (1993). *Economic Analysis and Human Behavior*. THESIS, 1, 24–40.
5. Schumpeter J.A. *Epochen der Methoden- und Dogmengeschichte*.
6. Layonel Robbins (1993). *Predmet ekonomicheskoy nauki* [Subject of economics]. THESIS, 1. 10–23. (in Russian)
7. Deniel Hausman (2012). *Filosofiya ekonomiki – Antologiya* [Philosophy of Economics – Anthology]. Moskva: Izd. Instituta Gaydara. (in Russian)
8. Pigu, A. S. (1985). *Ekonomicheskaya teoriya blagosostoyaniya* [Economic Theory of Welfare]. Moskva: Progress. (in Russian)
9. L. Robbins (1935). *An Essay on the Nature and Significance of Economic Science*. 2nd ed. London: Macmillan, 1, 1–23.
10. Pareto, V. (1897). *Cours d'économie politique professé à l'université de Lausanne*. Lausanne: Rouge.
11. Evgeniy Balatskiy. *Ekonomicheskaya nauka na sovremennom etape: krizis ili proryiv? Kapital stranyi* [Economic science at the present stage: crisis or breakthrough? Country Capital]. URL: [http://kapital-rus.ru/articles/article/ekonomicheskaya\\_nauka\\_na\\_sovremennom\\_etape\\_krizis\\_il\\_i\\_proryiv/](http://kapital-rus.ru/articles/article/ekonomicheskaya_nauka_na_sovremennom_etape_krizis_il_i_proryiv/) (accessed 10 July 2019) (in Russian)



12. Hermann Heinrich Gossen (1983). *The Laws of Human Relations and the Rules of Human Action Derived Therefrom*. Nicholas Georgescu-Roegen MIT Press.
13. Feynman, R. (1987). *Harakter fizicheskikh zakonov* [Характер физических законов]. Moskva: Nauka. (in Russian)
14. Puankare, A. (1990). *O nauke* [About Science]. Pod red. L. S. Pontryagina. Moskva: Nauka. (in Russian)
15. Marshall, A. (1993). *Printsipyi ekonomicheskoy nauki* [Principles of Economic Science]. Moskva: Progress. (in Russian)
16. Barr, R. (1995). *Politicheskaya ekonomiya* [Political Economy]. Moskva: Mezhdunarodnyie otnosheniya. (in Russian)
17. Piketty, T. (2014). *Capital in the twenty-first century*, translated by Arthur Goldhammer. The Belknap Press of Harvard University Press, Cambridge, Massachusetts, London, England.
18. Marx, K. (1960). *Capital. Criticism of political economy* / In: Marx K., Engels F. *Coll. papers*, vol. 23. Moscow: State Publishing House of Political Literature. (in Russian)
19. Evgeny V. Balatsky (2017). The effect of Piketty: a comment to new concept. *Terra Economicus*, 15(2), 40–56.
20. Arrighi, G. (1994). *The Long Twentieth Century: Money, Power, and the Origins of Our Times*. London: Verso.
21. *Obzornyy doklad o modernizatsii v mire i Kitae (2001–2010)* [Overview report on modernization in the world and China (2001–2010)] / pod red. He Ch. i Lapina N. I. Moskva: «Ves mir», 2011. (in Russian)
22. *Reformy Den Syaopina: analiz opyita Kitaya* [Deng Xiaoping Reforms: An Analysis of China's Experience]. *21 Biz.ru Zhurnal o biznese i blagosostoyanii*. URL: <http://21biz.ru/reformy-den-syaopina-analiz-opyta-kitaya/> (accessed 11 July 2019) (in Russian)
23. Khaykin, M. M. (2013). Evolution of economic theory as science: the challenge of time. *Nauchno-tehnicheskie vedomosti SPbGPU. Ekonomicheskije nauki*, 6–1(185), 48–53.
24. Arthur B. *Complexity economics: A different framework for economic thought*. SFI Working Paper. URL: <http://tuvalu.santafe.edu/~wbarthur/Papers/Comp.Econ.SFI.pdf> (accessed 05 July 2019)
25. Kirman A. (2011). *Complex economics: Individual and collective rationality*. London, New York: Routledge.
26. Grinberg, R. S. (2016). *Poiski novyih ekonomicheskikh modeley kak otvet na vyzovy XXI veka*. Geografiya mirovogo razvitiya [The search for new economic models as an answer to the challenges of the

XXI century. Geography of world development]. Vyipusk 3: Sbornik nauchnyih trudov / pod red. L.M. Sintserova. Moskva: Tovarischestvo nauchnyih izdaniy KMK. (in Russian)

27. Derkach, T. V. (2015). Liberalizatsiya VED v kontekste revitalizatsii ekonomik integriruyuschihnya stran [Liberalization of foreign economic activity in the context of the revitalization of the economies of integrating countries]. *Science and Education Studies*, Volume III. “Stanford University Press”, 2(16), 166–173.

28. Derkach, T. V. (2014). Strategiya konkurentnoy liberalizatsii v torgovle kak sostavlyayuschaya razvitiya natsionalnoy ekonomiki [The strategy of competitive liberalization in trade as a component of the development of the national economy]. *Visnyk Khersonskoho derzhavnoho universytetu, Seriya: Ekonomichni nauky*, 8(5), 34–38. (in Russian)

29. Kene, F. (1960). Izbrannyye ekonomicheskie proizvedeniya [Selected Economic Works]. Moskva: Sotsekgiz. (in Russian)

30. Nikolskiy, A. F. (2010). Rezervyi i uzkie mesta ustoychivogo razvitiya v mirovoy ekonomicheskoy sisteme. Geografiya mirovogo razvitiya [Reserves and bottlenecks of sustainable development in the global economic system. Geography of world development]. Vyipusk 2: Sbornik nauchnyih trudov / pod red. L. M. Sintserova. Moskva: Tovarischestvo nauchnyih izdaniy KMK. (in Russian)

**Information about the author:**

**Derkach T. V.**

Doctor of Economic Sciences,  
Head of the Department of Management,  
International Humanitarian University, Ukraine

## **CHAPTER 5**

### **ASSESSMENT OF THE RISK PROFILE OF UKRAINIAN BANKS BY THE METHOD OF STRUCTURAL-FUNCTIONAL GROUPS**

**Zarutska O. P.**

#### **INTRODUCTION**

Improving risk management systems in the banking system is an important scientific and practical task. The complexity of risk assessment tools has increased significantly over the past years. Banks use modern mathematical approaches to study loss statistics and identify the greatest risks in their activities. The profile of risks is determined by the specific conditions of the activity of each particular bank. The profile of risks may vary significantly between different banks. The factors of forming the profile of risks are at the margin level and the micro level.

The National Bank of Ukraine defines a profile of risks as an assessment of the bank's vulnerability to risks in aggregated form and in the context of all types of risks carried out on a certain date based on current or projected assumptions. Requirements for risk management systems are set forth in the Regulation on the organization of a risk management system in banks of Ukraine and banking groups<sup>1</sup>.

According to the requirements of the National Bank of Ukraine, each bank should determine the risk level (Risk Capacity) in its internal documents. The permissible level of risk characterizes the maximum risk that the bank can assume for all types of risks. This level depends on the size of the bank's capital and risk management systems.

Each bank determines its own risk appetite using risk-appetite indicators. The risk appetite is defined as the aggregate value for all types of risks and separately for each of the risks. Risk appetite is calculated in advance within the acceptable level of risk. The individual level of risk appetite for each type of risk is the basis for setting limits.

---

<sup>1</sup> Polozhennia pro organizatsiu systemy upravlinnia rizikamy v bankah Ukrainy ta bankivskih grupah: Postanova Natsionalnogo banku Ukrainy vid 11.06.2018 № 64 [Requirements for risk management systems are set forth in the Regulation on the organization of a risk management system in banks of Ukraine and banking groups].

Each bank decides on the appropriateness of accepting individual risks in order to achieve strategic goals and business plan. The overall level of risk appetite should also be in line with the bank's business model. Risk appetite for each type of risk is determined by quantitative indicators that depend on the type of risk. Risk appetite is also affected by qualitative requirements: banking documentation on risk management, description of bank processes that determine the key points, in which the bank may be exposed to significant risks, qualifications of the bank's staff. Banks choose models and risk assessment tools, taking into account business needs, the volume of operations, peculiarities of activity.

Each bank must develop an appropriate risk management culture to implement the established conditions of activity. The risk management culture determines approaches to compliance with the bank's principles, rules, norms of the bank for taking risks and managing risks. According to the established requirements, banks are obliged to create effective information systems and qualitative statistical data for evaluation and support of processes.

Banks organize risk management systems based on the division of responsibilities between bank units using the model of three protection lines. The first line of defence is at the level of business units of the bank and support units of the bank. These departments take risks and bear responsibility for them and report on the current management of such risks. The second line is at the level of the risk management unit and the compliance control unit. The third line of defence is at the level of the internal audit unit for verifying and evaluating the effectiveness of the risk management system.

Approaches to the definition of the profile of risks are actively formed in 2019 after the introduction of new regulatory requirements. In our opinion, the particulars of a business model of a particular bank should determine the approaches of banking supervision to the profile of risks. It is necessary to classify banks by the nature of business models. We suggest using the self-organized map Kohonen (SOM)<sup>2</sup> to formalize the characteristics of the banking system and identify the profile of risks of Ukrainian banks.

---

<sup>2</sup> Kohonen, T. (2013). Essentials of the self-organizing map. *Neural Networks*, Vol. 37, 52–65.

### **5.1. The main risks in the activities of banks of Ukraine**

The classification of bank risks in the regulatory documents of the National Bank of Ukraine has changed over the past years. The nine main types of bank risks are defined in the Methodological Recommendations on the Organization and Functioning of Risk Management Systems in Banks of Ukraine<sup>3</sup>.

Six types of risks are called quantitative and are measured using mathematical methods. Quantitative risks are called financial risks. The system of financial risks includes the following types: credit risk, liquidity risk, interest rate risk, market risk, currency risk, and operational-technological risk. Qualitative risks cannot be investigated with accuracy as quantitative. Qualitative (non-financial risks) includes the following types: reputational risk, legal risk, strategic risk.

In 2018, the risk classification has changed slightly.

According to the current regulatory requirements, each bank must carry out a comprehensive assessment of the following essential types of risks:

- 1) credit risk;
- 2) liquidity risk;
- 3) interest rate risk of the bank book;
- 4) market risk;
- 5) operational risk;
- 6) compliance risk;
- 7) other significant types of risks.

Currency risk was not included in the list of major risks. Currency risk is measured due to non-compliance of assets and liabilities in foreign currency. It is determined by elements of credit risk, liquidity risk, and other risks. Banks may include currency risk in the list of major risks if it significantly affects financial stability. Reputation risk, legal risk, and strategic risk are combined in compliance risk in the new classification. Next, we will consider individual risks in the banking system of Ukraine.

Credit risk is defined as the probability of occurrence of losses or additional losses as a result of the failure of the debtor to assume obligations in accordance with the terms of the contract. Credit risk is the greatest risk for most banks. The credit risk of modern banks is

---

<sup>3</sup> Metodichni rekomendatsii shchodo organizatsii ta funktsionuvannia system rizik-menedzhmentu v bankah Ukrainy: Postanova Natsionalnogo banku Ukrainy vid 02.08.2004 № 361 [Methodological Recommendations on the Organization and Functioning of Risk Management Systems in Banks of Ukraine].

associated with the accumulation of non-performing loans (NPL) in the balance sheets of banks. During the last years of crisis, many borrowers of banks have not fulfilled their obligations. The size of non-performing loans was also influenced by the rapid drop in the national currency rate. Borrowers who did not have foreign currency earnings were unable to pay for loans in foreign currency.

According to the Financial Stability Report of the National Bank of Ukraine, at the end of 2017, NPL accounted for 54.6% of the total assets of banks<sup>4</sup>. Banks are working with programs for restructuring loans, ways of settling the accumulated debt. The reduction in NPL occurs at a very slow pace. The cost of collateral, as a rule, is insignificant and cannot compensate damages from non-repayment of loans.

The high interest rate on loans damages the further provision of new qualitative loans. The analysis of the indicators of the banking system is carried out using statistical data on the website of the National Bank of Ukraine<sup>5</sup>. According to the reporting at the beginning of 2019, the interest rate on individual loans is 28.6%. Loans to individuals are provided in national currency exclusively. For corporate clients, in national currency, the interest rate is 20.5%. Rates for foreign currency loans are 6%. These loans are available only to clients with currency earnings. Demand for business loans is very limited.

Lending to the population in Ukraine grew by more than 35% in 2018. Banks provide loans to households for the purchase of consumer goods. Overdraft loans for payment cards are developing the fastest. Over the past two years, the average loan size has increased by 60%, and the number of loans issued has increased by only 18%. The circle of borrowers is expanding slowly. Specialists associate the development of consumer lending with a reduction in the solvency of the population. High interest rates hinder the development of mortgages.

The main problem of credit risk is the concentration of assets in the three largest state-owned banks: PRIVATBANK, OSCHADBANK, UKREXIMBANK. The assets of these banks occupy almost half of the assets of the entire banking system.

As of the beginning of 2019, the share of PRIVATBANK's assets amounted to 21% of the total assets of the system. The share of NPL of PRIVATBANK is up to 83%. The share of non-performing loans in the

---

<sup>4</sup> Zvit pro finansovu stabilnist za gruden 2018 (Natsionalnii bank Ukrainy) [Financial Stability Report].

<sup>5</sup> Statystyka Natsionalnogo banku Ukrainy (za danymy ofitsiinogo sait) [Statistics of the National Bank of Ukraine].

entire banking system is reduced to 45% without taking PRIVATBANK into account. The share of assets of OSCHADBANK is 16%. UKREXIMBANK, the third-largest state bank, holds 12% of the total assets of the banking system. The share of NPL for banks OSCHADBANK and UKREXIMBANK is 55%. The problem of a large proportion of problem assets of state-owned banks is an important challenge for the banking system development strategy.

A significant part of the assets of Ukrainian banks is concentrated in government securities of domestic government bonds. Government securities are considered to be highly liquid assets in the world. The risks of Ukrainian bonds of an internal state loan are determined by high risks of the country. The concentration of bank assets in this instrument is high and is constantly increasing. At the beginning of 2019, the share of government bonds is an average of 30% of the total assets of the banking system.

The level of dollarization of the banking sector in Ukraine remains high in recent times. During the past decade, the share of deposits and loans in foreign currency was not lower than 31%. The population retains a significant portion of foreign currency savings. Banks have a lot of free currency funds. The level of dollarization differs considerably in groups of banks. Leading banks with state Russian capital have the highest value. The foreign currency loans of these banks reach 90% of the portfolio.

Ukrainian banks do not have high liquidity risks in recent years. Liquidity risk is defined as the probability of occurrence of losses or additional losses as a result of the bank's failure to provide financing for the growth of assets and fulfilment of its obligations in due time. Most banks have a high volume of highly liquid assets, cash balances and resources on a correspondent account with the National Bank of Ukraine. Banks do not have the ability to develop credit operations.

The problem of liquidity of Ukrainian banks is the lack of long-term resources. In 2014–2017, there was a significant decrease in the number of banks. At the same time, the volume of funds of individuals has decreased. The banking system has lost the trust of depositors and restores it gradually. To assess the liquidity of banks, it is necessary to analyse the structure of the resource base.

Households are the main net lender of the banking sector. The volumes of funds of individuals in banks are increasing but the terms of their placement have decreased significantly. The balances on current

accounts form the bulk of the increase in population funds in banks. The deposit base of individuals is growing more slowly than the balances on loans issued. The ratio of loans and deposits (loan-to-deposit ratio, LtD) is 36%. The aggregate debt burden on households is only 6% of gross domestic product.

Short-term resources dominate the structure of the banks' liabilities. Funds with a maturity of up to 1 month occupy 62% of the resource base. Commitments up to 1 month in UAH amount to as much as 75%. The structure of liabilities differs from the structure of assets. Assets with maturity over 1 month exceed 64%. Assets in the national currency for more than 1 month make up 67%. At the expense of short-term funds, banks are loaned for much longer periods. Banks provide long-term loans at short-term funds. Balances on salary and social payments are growing at a higher pace.

The funds of the business entities are also volatile. Almost 70% of all funds are balances on current accounts. Since 2014, their share in total business has increased substantially. The breakdown of the maturity between assets and liabilities puts banks at risk of liquidity. In periods of stability, banks can rely on short-term funds, but in crisis situations, such a structure is extremely risky. The flow of funds from current accounts can take place almost instantaneously.

The gap between the dates of assets and liabilities affects the interest rate risk. Interest rate risk is defined as the probability of occurrence of losses or shortfall of the planned revenues as a result of the effect of unfavourable changes in interest rates on the bank book. The interest rate risk of a bank book affects the economic value of the bank's capital and the net interest income of the bank.

When rates in the economy begin to increase, then the cost of most resources increases during the month. It takes much longer to increase the value of banks' assets. Unbalanced resource base reduces interest spread, net interest income and net profit of banks. Banks need to create more incentives to attract long-term customers. The difference between the rates for long-term and short-term deposits should be greater.

Analysis and comparison of the structure of assets and liabilities allow us to assess liquidity risk, interest rate risk, and operational risk. Operational risk is defined as the probability of occurrence of losses or lack of planned revenue due to defects or errors in the organization of internal processes, intentional or unintentional actions of bank



employees or other persons, failures in the work of information systems of the bank or as a result of the influence of external factors.

Some banks have traditionally large residues of highly liquid assets. An increased share of cash in assets and current liabilities may indicate an increased risk of legalization and laundering of proceeds from crime. A large share of cash transactions requires increased attention of banks. The profile of risks of some banks is associated with a high proportion of interbank assets or liabilities.

The market risk of a bank can be estimated by calculating the share of funds in securities, income and expenses associated with market instruments. Market risk is defined as the probability of occurrence of losses or lack of planned revenues as a result of unfavourable changes in foreign exchange rates, interest rates, and the value of financial instruments.

An important role is played by the distribution of assets and liabilities by type of currency. The level of dollarization of Ukrainian banks is decreasing very slowly. The high share of foreign currency loans creates risks of a sharp deterioration in the quality of the loan portfolio and the receipt of significant losses under adverse conditions.

The following is a set of indicators used to assess the risk profile of the bank using the method of structural-functional groups. The choice of indicators is determined and limited by the parameters of the published statistical reporting of banks. The National Bank of Ukraine periodically publishes aggregated balance data of banks. By 2018, the balance sheet statistics were posted on the National Bank of Ukraine website quarterly. Subsequently, the reporting is updated on a monthly basis.

We will investigate the risk profile of banks using the system of indicators presented in Table 1. Individual indicators characterize one type of risk, others reflect different aspects of financial sustainability and risk.

The ratio of the net asset value of the bank to the total assets of the system ( $A-s$ ) is calculated as the ratio of the net assets of the bank to the net assets of the system. Indicator characterizes the bank's position in the banking market. The size of the bank's assets significantly affects the characteristics of its business model and risk profile.

The ratio of assets in foreign currency to net assets (VCA) characterizes the level of dollarization of the balance sheet and currency risk of the bank. The ratio of the difference between assets and liabilities in foreign currency to net assets (VL) characterizes the discrepancy of

attracted and allocated resources in foreign currency and the currency risk of the bank. Foreign exchange risks are manifested through various aspects of banks' operations and increase credit risk, liquidity risk, interest, and other risks.

Table 1

**The system of indicators for studying the risk profile of banks**

<b>№</b>	<b>Indexes</b>	<b>Indicator content</b>
1	A-s	The share of net assets of the bank in total assets of the system
2	VCA	The share of assets in foreign currency
3	VL	The share of currency position in assets
4	ROA	Return on assets
5	RA	The ratio of provisions for credit risk to assets
6	VR	The ratio of expenses for the formation of provisions for assets
8	SAUN	The share of corporate loans in national currency in assets
7	SAUI	The share of corporate loans in foreign currency in assets
9	SAFN	The share of retail loans in national currency in assets
10	SAFI	The share of retail loans in foreign currency in assets
11	SAMN	The share of interbank loans in national currency in assets
12	SAMI	The share of interbank loans in foreign currency in assets
13	SAV	The share of cash and balances on correspondent accounts in assets
14	SAC	The share of securities in assets
15	SPUS	The share of fixed-term funds of legal entities in liabilities
16	SPUP	The share of current assets of legal entities in liabilities
17	SPUN	The share of legal entities in national currency in liabilities
18	SPUI	The share of legal entities in foreign currency in liabilities
19	SPFS	The share of fixed-term funds of personal funds in liabilities
20	SPFP	The share of current funds of personal funds in liabilities
21	SPFI	The share of personal funds in national currency in liabilities
22	SPFN	The share of personal funds in foreign currency in liabilities
23	SPMN	The share of interbank loans in national currency in liabilities
24	SPMI	The share of interbank loans in foreign currency in liabilities
25	VA	The ratio of administrative costs to assets
26	KD	The ratio of net commission income to assets
27	TD	The ratio of trade income to assets
28	PD	The ratio of interest income to interest-bearing assets
29	PV	The ratio of interest expense to interest obligations
30	PM	Net interest margin
31	CA	Balance sheet assets ratio

The profitability of assets (ROA) is calculated as the ratio of the bank's net income to assets. The indicator characterizes the overall performance of the bank. This is one of the most important indicators of a successful business model selection.

The ratio of provisions for credit risk to assets (RA) characterizes the quality of assets of the bank. This indicator is also an important characteristic of the financial stability of the bank. The ratio of expenses on the formation of reserves to assets (VR) characterizes the quality of assets in the current year. This indicator differs from the previous one and takes into account only the current expenses for the formation of reserves. To measure asset quality, we use both indicators.

Characteristics of the loan portfolio we can get by structural indicators. The aggregated reporting of banks shares loans of individuals and business entities in national and foreign currencies. On the basis of this information, the following indicators are calculated: the share of corporate loans in national currency in assets (SAUN), the share of corporate loans in foreign currency in assets (SAUI), the share of retail loans in national currency in assets (SAFN), the share of retail loans in foreign currency assets (SAFI).

To assess credit risk and liquidity risk, it is important to examine all assets of banks. Insufficient development of credit operations forms a group of banks with significant assets located on the interbank market. The indicator of the share of interbank loans in national currency in assets (SAMN) characterizes the business models of banks with surplus funds in the national currency. The funds of banks are directed to the interbank market, and not to the real economy. Indicator of the share of interbank foreign currency loans in assets (SAMI) allocates banks with another risk profile. Often such banks are participants of foreign banking groups.

The share of cash and cash balances on correspondent accounts in assets (SAV) characterizes the share of highly liquid assets of banks. The low level of this indicator indicates the risk of instant liquidity. The high level of the indicator testifies to the ineffective policy of asset and liability management.

The share of assets in securities (SAC) reflects the problem of concentration of assets in the bonds of the domestic state loan. A significant part of the assets in securities provides the bank with a stable profit, but it can cause losses in the long run.

The assessment of the resource base of banks requires a detailed study of the structure of liabilities. We will use the following indicators: the share of fixed-term funds of legal entities in liabilities (SPUS), the share of current assets of legal entities in liabilities (SPUP), the share of legal entities in national currency in liabilities (SPUN), the share of legal entities in foreign currency in liabilities (SPUI), the share of fixed-term funds of personal funds in liabilities (SPFS), the share of current assets of personal funds in liabilities (SPFP), the share of personal funds in national currency in liabilities (SPFN), the share of personal funds in foreign currency in liabilities (SPFI).

The parity of the share of interbank loans in national currency in liabilities (SPMN) and the share of interbank loans in foreign currency in liabilities (SPMI) characterize the feature of the bank's resource base. Banks with foreign shareholders for a long period of time had a significant amount of borrowed interbank resources. Interbank lending in the national currency cannot function as a stable resource base.

We research the business model of the bank and the profile of risks, taking into account the main sources of income and the direction of expenditure. The following indicators are used for the major factors of profit generation: the ratio of administrative costs to assets (VA), the ratio of net commission income to assets (KD), and the ratio of trade income to assets (TD). Banks with significant amounts of retail loans often have an increased level of administrative and commission income.

The parameters of interest policy determine the place of the bank in the market and the profile of its risks. The ratio of interest income to interest assets (PD) allows you to estimate the level of the average rate of allocation of resources.

The ratio of interest expense to interest-bearing liabilities (PV) characterizes the rate of attraction of resources. The net interest margin (PM) is calculated as the ratio of net interest income to average assets. This indicator characterizes the devaluation of the bank's interest rate policy.

The ratio of balance capital to assets (CA) characterizes the degree of security of the bank. Capital is the main source of coverage of bank risks. The largest value of this indicator is observed in small banks. Their ability to increase the size of assets is limited, compared to large banks.

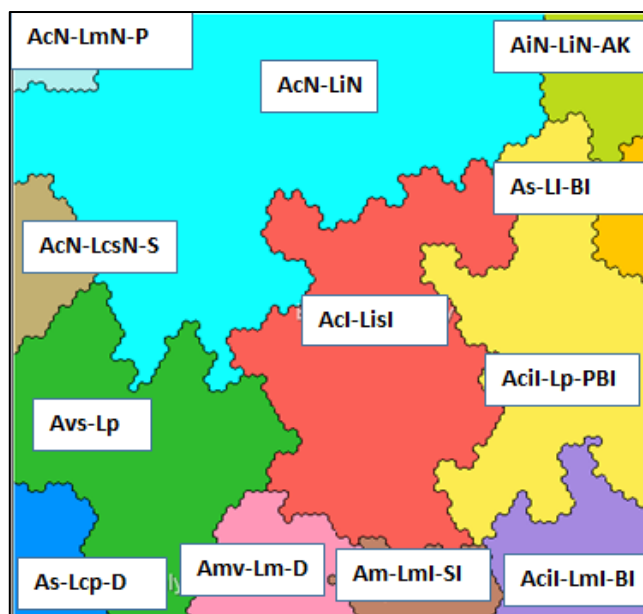
The system of indicators describes the structural features of assets and liabilities of each bank for each reporting date. We used an array of data to build the self-organized map Kohonen (SOM). Mapping is done

using the Viscovery SOMine software package. More information on the use of maps can be found in the literature<sup>6 7 8</sup>.

## 5.2. Distribution of risks by structural-functional groups of banks

The essence of the method of structural-functional groups is the formation of homogeneous groups of banks according to the values of financial indicators. At the same time, the value of all indicators of a multidimensional database is taken into account. The results are presented in the form of a geographic map. Neighbouring banks on the map have many common features. Remote groups combine banks that are significantly different. Homogeneous objects are automatically merged into groups.

We found stable bonds between banks within structural and functional groups according to research data from 2003. The formats of the financial statements are systematically changing. The current database has been formed since 2009. The position of groups on the map as of 01.01.19 is shown in Fig. 1.



**Fig. 1. Placement of structural-functional groups on the SOM as of 01.01.2019**

<sup>6</sup> Kohonen, T. (2001). *Self-Organizing Maps*. Berlin Heidelberg: Springer-Verlag.

<sup>7</sup> Severin, E. (2010). Self-organizing maps in corporate finance: Quantitative and qualitative analysis of debt and leasing. *Neurocomputing*, 73 (10–12), 2061–2067.

<sup>8</sup> Zarutskya, O. P. (2018). Structural-functional analysis of the Ukraine banking system. *Financial Markets, Institutions and Risks*, vol. 2, pp. 79–96.

Each map point represents the location of one or more banks for the entire study period. Banks with homogeneous characteristics are combined into groups with the corresponding colour. The presented map includes twelve groups of different sizes and number of banks.

The most balanced indicators are banks in the centre of the map. The banks at the diagonal distance are most different. Characteristics of each group are presented in Table 2.

Table 2

**Characteristics of structural-functional groups as of 01.01.2019**

<b>№</b>	<b>Groups</b>	<b>Brief description</b>
1	AcN-LiN	The small banks with average characteristics, corporate business with retail financing in the national currency
2	AcI-LisI	The small banks with average characteristics, corporate business with retail financing in foreign currency
3	Acil-Lp-PBI	The large banks with currency and credit risks
4	As-LI-BIP	The largest banks with credit and currency risks and securities in assets
5	AiN-LiN-AK	The banks of retail lending in the national currency
6	Acil-LmI-BI	The large banks with foreign currency liabilities
7	Am-LmI-SI	The small banks with increased interbank assets and liabilities in foreign currency
8	Amv-Lm-D	The small banks with interbank operations
9	AcN-LmN-P	The troubled banks
9	AcN-LcsN-S	The small banks with a limited range of customers
8	As-Lcp-D	The banks with short-term liabilities and securities in assets
4	Avs-Lp	The banks with securities in assets

The group of small banks with average characteristics, corporate business with retail financing in the national currency (AcN-LiN) occupies the centre of self-organization map. Usually, this group includes a large number of small banks. Many banks have left the central group of the map over the past two years. Some banks were liquidated. Some banks went to another group of banks with a significant amount of securities.

The group AcN-LiN includes 9 banks with aggregate assets of 3% of the total assets of the banking system as of 01.01.2019. The number of banks in this group is 11.5% in the banking system. Banks do not have significant differences from the average. Most of the banks are

owned by Ukrainian shareholders, attracting household funds and providing small business loans.

The group of small banks with average characteristics, corporate business with retail financing in foreign currency (AcI-LisI) is also located in the centre of the map. The group included many banks in past periods. As of 01.01.2019, this group includes only 9 banks with assets in the amount of 1% of total assets of the banking system. The group includes banks of Ukrainian and foreign shareholders. Banks provide loans in national and foreign currencies. The indicators of the structure of banks of this group do not differ significantly from the average system indicators.

The group of large banks with currency and credit risks (AcI-Lp-PBI) combines banks with a high share of assets and liabilities in foreign currency. The credit risks of these banks were reflected in the poor quality of assets and losses. The share of current liabilities is increased. The group includes 9 banks with assets in the amount of 11% of the total assets of the banking system.

The banks of the eastern part of the map have increased the share of assets in foreign currency (VCA). Banks of the eastern part of the map have more importance of the share of corporate loans and current liabilities in foreign currency. Instead, banks with a high level of corporate deposits and loans in the national currency are in the western part of the map. This characteristic of the risk profile is one of the key features of placing on the map of self-organization.

The largest banks (As-LI-BIP) are located on the north-eastern boundary of the map. The A-s value takes the maximum value in the corresponding segment of the map. As-LI-BIP group constantly includes the following banks: PRIVATBANK, OSCHADBANK, and UKREXIMBANK. The assets of these banks occupy 48% of the assets of the entire banking system. The banks of this group have low-quality assets and a high share of assets and liabilities in foreign currency. Funds in government bonds occupy a high share in the assets of banks. The largest banks differ significantly from others. They have their own risk profile settings.

Banks of the northern part of the map have a smaller share of free cash in the form of cash and balances on correspondent accounts. Most of these banks' assets are located in loans and securities. Credit risks of banks in the northern part of the map are elevated. For the southern banks, there is a greater risk of liquidity.

The group of retail lending banks in the national currency (AiN-LiN-AK) has declined significantly over the past ten years. In this segment of the map is the maximum value of the SAFN, VA, and KD indicators. Group banks have an increased share of retail loans in the national currency, administrative expenses and commission income. Only 3 banks are included in this group as of 01.01.2019. The aggregate assets of these banks are 1% of the total assets of the banking system.

The group of large banks in foreign currency (AciI-LmI-BI) includes foreign-owned banks. Banks are located in the south-east of the map. The percentage of interbank foreign currency liabilities (SPMI) reaches the maximum value in this segment of the map. The group includes only 2 banks with assets in the amount of 3.5% of the total assets of the banking system. The size of the group has declined in recent years. Banks of this part of the map are developing lending operations insufficiently.

Along with this group, there is a group of small banks with increased interbank assets and liabilities in foreign currency Am-LmI-SI. The maximum value of the SAMI index matches the position of the Am-LmI-SI group. The group includes a single bank with assets in the amount of 0.1% of the total assets of the banking system. The number of banks was significant in past periods.

In the group of banks Amv-Lm-D, the volume of interbank loans exceeds the average level of the banking system. Banks work with a limited number of clients. The interest rate policy of such banks is not balanced: the level of rates differs from other banks. This group does not include any bank as of 01.01.2019.

The maximum value of the SPMN of interbank loans raised in the national currency is at a diagonal distance from the SPMI indicator, in the northwest of the map. At this location, there is a group of troubled banks AcN-LmN-P. The banks of this group have high losses and reserves for RA credit risks. A group of troubled banks serves as an indicator of the crisis in the banking system. Many banks went to this group during a significant deterioration of the financial stability of the system. Banks at the stage of temporary administration and liquidation also often fall into the group of troubles. As of 01.01.2019, the group AcN-LmN-P consisted of a single bank with total assets of 1% of the assets of the system.



The SAV indicator takes the maximum value in the northwest corner of the map. The corresponding segment is the As-Lsp-D group. Banks attract a lot of current funds. The assets of these banks are dominated by government securities. The yields of interest-bearing assets exceed average values in the market. The group includes 9 banks with aggregate assets of 3% of the total assets of the system.

A group of banks with a high share of securities assets (Avs-Lp) is also located in the southwest corner of the map. A large number of banks have recently joined this group. The group includes 32 banks with aggregate assets of 30% of the total assets of the system. Given a large number of banks in this group, it can be assumed that the characteristics of the structure of assets and liabilities of these banks affect the risk profile of the system.

The method of formation of homogeneous structural-functional groups allows estimating the risk profile of each bank on the basis of information about its position on the self-organizing map. Neighbouring banks have similar characteristics of the structure of assets, liabilities, income, expenses. The risk profile of such banks has many common features. The analysis of the risk profile must be carried out within a certain period. For such an analysis, it is useful to use the trajectory of the bank on a self-organizing map.

The trajectories of most small banks are volatile as they are more affected by current changes in balances on balance sheets. Changes in the trajectory of any bank are objective and are due to changes in the values of indicators. The change of strategies and business plan is always reflected in the trajectory of the bank. The close situation of liquidated banks of past periods on the map indicates that there are problems. Banks can use the positive and negative experience of neighbouring banks on a self-organizing map.

The method of structural-functional groups is useful for banking supervision. The study of changes in the size and characteristics of groups allows us to assess the state of the general banking system, the situation of individual groups and individual trajectories of banks. The toolkit of self-organizing maps provides simultaneous consideration of structural characteristics of banks and the visual representation of large data arrays consisting of a large number of parameters.

Modern banking supervision is based on the methodology SREP (Supervisory Review and Evaluation Process). This model is a developed and revised version of the ICAAP (Internal Capital Adequacy

Assessment Process). ICAAP was created in the framework of Pillar II and directed to research of internal procedures and processes in the bank in order to determine the level of capital adequacy in the long-run to cover all possible risks.

The SREP analysis is based on nine interrelated areas of analysis:

1. The classification of financial institutions (banks) according to the results of cluster analysis.

2. Monitoring of key indicators.

3. Analysis of business model.

4. Assessment of internal governance, as well as an internal control system (ICS).

5. Capital risks and adequacy (ICAAP).

6. Liquidity risks and adequacy.

7. Summarizing total assessment.

8. Definition and communication of regulatory measures.

9. Early intervention of supervision<sup>9 10</sup>.

For a modern system of supervisory measures, a transition from unified to differentiated control methods is required. For larger risks, detailed checks are required. The choice of the supervision regime for a particular bank should be determined by the risks of its activities and the effectiveness of management systems for these risks. Problems of the activities should be equally understandable for bank oversight supervisors and bank managers. The proposed method contributes to the objective assessment of bank risks.

The position of the bank on the organizational chart describes a number of aspects of its problems and risks. Particular attention is needed by groups of banks with high risks. The largest assets of Ukrainian banks are concentrated in As-LI-BI, Asi-Lp-RBI, Avs-Lr groups. Banks of these groups require increased attention to banking supervision. The main risks are credit and interest risk. The growth of the number of banks in the Avs-Lr group is characterized by features of business models in a particular period, or systemic risk profile. The concentration of banks' assets in government bonds is a significant challenge for the development of the banking system.

---

<sup>9</sup> European Central Bank, ECB (2017). SSM SREP Methodology Booklet. Available at: [https://www.bankingsupervision.europa.eu/ecb/pub/pdf/\\_/ssm.srep\\_methodology\\_booklet\\_2017.en.pdf?508ca0e386f9b91369820bc927863456](https://www.bankingsupervision.europa.eu/ecb/pub/pdf/_/ssm.srep_methodology_booklet_2017.en.pdf?508ca0e386f9b91369820bc927863456)

<sup>10</sup> Basel Committee on Banking Supervision, BCBS (2008). Principles for sound liquidity risk management and supervision. Available at: <http://www.bis.org/publ/bcbs144.pdf>

## **CONCLUSIONS**

The methodology of structural-functional groups of banks provides important advantages for quantitative description of qualitative changes in the financial condition of the banking system and individual banks. An important advantage of the method is the ability to take into account the value of many indicators. We proposed to use indicators of the structure of assets, liabilities, income, and expenses. We also used qualitative performance indicators, reserves for credit risk, asset coverage of capital.

The characteristics of each group can be used to assess the risk profile of banks. Distribution of banks is objective and transparent. The method provides a convenient visualization of the data. Structural-functional groups are formed automatically based on the quantitative characteristics of the financial condition of banks. The analysis of the risk system can be used in the banking supervision system.

Each bank can use the published data and calculate its place in the banking system using the method of structural-functional analysis. The bank's path on the self-organizing map reflects changes in the risk profile over time. Each bank can compare its performance with neighbouring banks and model their improvement. The bank's development strategy can be implemented by simulating the future position on the map.

The modern banking system requires the development of lending. The loan portfolios of most banks have a high proportion of non-performing loans. These banks are on the north side of the map. Major risks are the concentration of assets in government securities. The largest number of relevant banks is located on the north-western part of the map. Some banks have high currency risks. These banks are on the eastern part of the map. The high risks of the banking system are the lack of long-term resources. An increased share of current funds is concentrated on the southern part of the map.

The development of the method of structural and functional groups of banks is possible with the expansion of the list of indicators. We only used data from publicly reported banks. Banking supervision has a more complete structural risk profile of banks.

## **SUMMARY**

The article is intended to study the main risks of the banking system of Ukraine. The profile of the risks of the banking system and each bank depends on many external and internal factors. The National Bank of

Ukraine determines the rules for risk management and requirements for the system of internal control. Each bank must understand the main risks of the activity and apply adequate methods of managing them. To determine the risk profiles of banks, we suggest using the method of structural-functional groups. The method allows taking into account the specific conditions of the banking system. The method ensures the formation of homogeneous groups of banks using Kohonen self-organizing maps (SOM). For the construction of homogeneous groups, the reporting data of banks is used. We have found characteristics of the risk profile of banks according to research data in the last fifteen years. The position of the bank on SOM characterizes its risk profile. Stable deviations from the average values indicate the specialization of the bank, its business model, and risk profile.

## REFERENCES

1. Polozhennia pro organizatsiu systemy upravlinnia rizikamy v bankah Ukrainy ta bankivskih grupah: Postanova Natsionalnogo banku Ukrainy vid 11.06.2018 № 64 [Requirements for risk management systems are set forth in the Regulation on the organization of a risk management system in banks of Ukraine and banking groups]. URL: <https://bank.gov.ua/document//download?docId=71600453> (in Ukrainian).
2. Kohonen, T. (2013). Essentials of the self-organizing map. *Neural Networks*, vol. 37, pp. 52–65.
3. Metodychni rekomendatsii shchodo organizatsii ta funktsionuvannia system rizik-menedzhmentu v bankah Ukrainy: Postanova Natsionalnogo banku Ukrainy vid 02.08.2004 № 361 [Methodological Recommendations on the Organization and Functioning of Risk Management Systems in Banks of Ukraine]. URL: <https://zakon.rada.gov.ua/laws/show/v0361500-04> (in Ukrainian).
4. Statystyka Natsionalnogo banku Ukrainy (za danymy ofitsiinogo сайту) [Statistics of the National Bank of Ukraine]. URL: [https://bank.gov.ua//control/uk/publish/article?art\\_id=34661442&cat\\_id=34798593](https://bank.gov.ua//control/uk/publish/article?art_id=34661442&cat_id=34798593).
5. Zvit pro finansovu stabilnist za gruden 2018 (Natsionalnii bank Ukrainy) [Financial Stability Report]. URL: [https://bank.gov.ua/control/uk/publish//category?cat\\_id=32236491](https://bank.gov.ua/control/uk/publish//category?cat_id=32236491)(in Ukrainian).
6. Kohonen, T. (2001). *Self-Organizing Maps*. Berlin Heidelberg: Springer-Verlag.

7. Severin. E. (2010). Self-organizing maps in corporate finance: Quantitative and qualitative analysis of debt and leasing, *Neurocomputing*, 73 (10–12), 2061–2067.

8. Zarutskya O.P. (2018) Structural-functional analysis of the Ukraine banking system. *Financial Markets, Institutions and Risks*, vol. 2, pp. 79–96.

9. European Central Bank, ECB (2017). SSM SREP Methodology Booklet. Available at: [https://www.bankingsupervision.europa.eu/ecb/pub/pdf//ssm.srep\\_methodology\\_booklet\\_2017.en.pdf?508ca0e386f9b91369820bc927863456](https://www.bankingsupervision.europa.eu/ecb/pub/pdf//ssm.srep_methodology_booklet_2017.en.pdf?508ca0e386f9b91369820bc927863456).

10. Basel Committee on Banking Supervision, BCBS (2008). Principles for sound liquidity risk management and supervision. Available at: <http://www.bis.org/publ/bcbs144.pdf>.

**Information about the author:**

**Zarutskya O. P.**

Doctor of Economic Sciences,  
Head of Banking and Financial Services Department,  
University of Customs and Finance, Ukraine

## **CHAPTER 6**

### **COMPETITIVENESS OF THE BUILDING INDUSTRY POTENTIAL AS THE COMPONENT OF THE NATIONAL ECONOMY'S COMPETITIVENESS**

**Kovalenko-Marchenkova Ye. V.**

#### **INTRODUCTION**

Today the actual task for the national economy is increasing its competitiveness that is provided by the competitiveness of the potential of different industries, including the construction one. The construction industry is particularly interesting because it is one of the most important branches of the national economy. The competitiveness of the Ukrainian economy as a whole depends on the level of development of the construction industry, its competitiveness. Today different scientists study the categories of potential, competitiveness, and competitiveness of potential. The essence of potential is discussed in the works of many scientists, N. Poberezhna, I. Lukinov, A. Onishchenko, B. Paskhaver, E. Figurnov, V. Gusakov, A. Anchishkin, L. Kostyrko, L. Abalkin, K. Vobliy, A. Voronov, O. Fedonin, I. Repin, O. Oleksik, I. Olenko, I. Dolzhanska, T. Zagorna, S. Radko, I. Ansoff, O. Getman, V. Shapoval, G. Gerasimchuk, R. Marushkov, L. Sosnenko, V. Kovalev, O. Volkov, M. Ivanov, Yu. Odegov, K. Andreev, B. Mochalova, L. Revutsky, E. Lapina, B. Bachevsky, I. Zablotskaya, O. Reshetnyak, and others are among them. A lot of researches work under the definition of the category “competitiveness”: V. Khomyakov, T. Vyatkina and P. Vyatkin, M. Gelvanovsky, V. Zhukovsky, I. Trochimov, B. Gunsy, N. Pedchenko, K. Kuznetsova, R. Fatkhuddinov. Competitiveness of the potential was studied in works by N. Krasnokutskaya, A. Voronkova, A. Kvasko. Therefore, it is important to analyse the approaches that study these economical categories.

#### **6.1. An overview of theoretical and methodological approaches to the definition of the essence of potential and components of industry potential**

Studying the essence of any concept, it is necessary to pay proper attention to its etymology. Concerning the term “potential”, most

scientists agree that it is derived either from the Latin word “potensia”, which means “power”, “opportunity”, “voltage”, or from the French word “potential”, which is translated as “capable”. Thus, the term “potential” means the presence of somebody or something hidden opportunities that still are not detected or the ability to act in certain spheres<sup>1</sup>.

In the Great Interpretative Dictionary, potential is defined as “means, stocks, sources that are available and can be mobilized, put into operation, used to achieve a certain goal, implementation of a plan, solution of any what tasks; the possibility of an individual, society, state in a certain area”<sup>2</sup>. An interpretive dictionary of the Ukrainian language understands this term as “hidden opportunities, forces for any activity that may turn out to be under certain conditions”<sup>3</sup>.

Such a broad interpretation of the essence of the potential makes it possible to apply it in various fields of science and human activity, depending on which the means, stocks and sources, hidden opportunities and forces are in mind<sup>4</sup>. From this point of view, in the modern scientific literature, the notion of “potential” has found wide application. Yes, today there is practically no object for which no definition of potential would be used. It used both in the natural sciences and the humanities, and in the economy<sup>5</sup>.

As it is noted, in the works of scientists, economics borrowed the term “potential” from physics where it means the amount of energy that has accumulated the system and which it is able to implement in the work<sup>6</sup>.

For the first time, this term in economic science was used at the beginning of the last century; however, it is widely used among economists only in the 80s and 90s. It was this period that was distinguished by the elevated attention of scholars to various aspects of this concept<sup>7</sup>. Research on the opinions of scientists about the essence of

---

<sup>1</sup> Толковый словарь. URL: <http://www.rulib.info/default.htm>.

<sup>2</sup> Большой энциклопедический словарь / за ред. А. М. Прохорова. Москва : Большая Российская Энциклопедия; Санкт-Петербург : Норинт, 2004. С. 92.

<sup>3</sup> Великий тлумачний словник сучасної української мови / За ред. В. Т. Бусел. Київ, Ірпінь : ВТФ Перун, 2005. С. 286.

<sup>4</sup> Економічний словник / За ред. П. І. Баргія, С. І. Дорогунцова. Київ : Головна редакція УРЕ, 1973. С. 152.

<sup>5</sup> Степанов А. Я. Категория «потенциал» в экономике. URL: <http://www.marketing.spb.ru/read/article/a66.htm>

<sup>6</sup> Игнатенко Н. Г. Природно-ресурсный потенциал территории: Географический анализ и синтез. 1986. С. 125–140.

<sup>7</sup> Гуляк Р. Е. Розробка методологічних принципів економічної діагностики та їх застосування при створенні механізму діагностики розвитку ресурсної компоненти економічного потенціалу міста. *Економіка та держава*. 2011. № 6. С. 84–88.

the concept of “potential” presented in modern economic literature makes it possible to highlight the main five approaches to its interpretation.

The first and most widespread approach to the interpretation of the “potential” concept is a resource approach, according to which potential represents a set of available resources, which has a certain socio-economic system. Representatives of this approach are I. Lukinov, A. Onishchenko, B. Paskhaver, E. Figurnov, V. Gusakov, A. Anchishkin, L. Kostyrko, L. Abalkin, D. Chernikov, S. Belov, V. Avdeenko, V. Kotlov, V. Arkhipov, V. Weiz, D. Shevchenko, V. Arkhangelsky, V. Khomyakov, I. Bakum, I. Repin, S. Shumskaya, V. Nemchinov, I. Gunina, N. Krasnokutska, Yu. Sazonov, N. Zavierne, B. Rayzberg, L. Lozovsky, E. Starodubtseva, O. Goryacha.

I. Lukinov, giving a definition of the potential, emphasizes the fact that it is characterized by the quantity and quality of resources that one or another economic system possesses. A. Onishchenko and B. Paskhaver adhere to the same idea about the essence of the potential<sup>8</sup>. A representative of the first approach E. Figurnov treats the potential as a characteristic of production resources, quantitative and qualitative parameters that determine the maximum possibilities of society for the production of material goods at each given moment. Similar definitions are given by L. Abalkin and V. Gusakov<sup>9</sup>.

By definition of A. Anchishkin, potential can be considered a set of resources, which in the process of production take the form of factors of production. L. Kostyrko interprets the potential as an organic combination of technical, organizational, managerial, and productive factors of production<sup>10</sup>.

D. Chernikov and S. Belov define potential as a set of resources without considering their real interconnections, which are formed in the process of production<sup>11</sup>. Instead, V. Avdeenko and V. Kotlov interpret the potential as a complex system of production resources, which are interconnected and interdependent.

---

<sup>8</sup> Чаленко А. О. неопределенности понятия «потенциал» в экономических исследованиях. Луганск. *Проблемы экономической теории*. 2011. С. 39–40.

<sup>9</sup> Абалкин Л. И. Новый тип экономического мышления. Москва : Экономика, 1987. 192 с.

<sup>10</sup> Цимбал О. І. Сутність та підходи щодо оцінювання трудових ресурсів потенціалу промисловості в контексті регіону. *Держава та регіони. Серія: Економіка та підприємництво*. 2010. № 5. С. 78–84.

<sup>11</sup> Черников Д. А. Эффективность использования производственного потенциала и конечные народнохозяйственные результаты. *Экономические науки*. 1981. № 10. С. 88–96.



As a generalized description of the system of resources, which includes production funds, personnel, resources management, and production organization, as well as scientific and technical information, V. Arkhipov determines the potential. It is similar to the definition of the potential made by V. Veits and O. Goryachaya.

A little wider is the definition proposed by D. Shevchenko, according to which the potential characterizes the totality of production resources combined in the production process and those with certain potential opportunities in the field of the production of material goods and services. Close is the definition of the potential provided by V. Arkhangelsk, V. Khomyakov, and I. Bakum.

B. Rayzberg, L. Lozovsky, E. Starodubtseva note that the potential – is the existing and prospective production opportunities, the presence of factors of production, the provision of its determinants of resources.

The most widespread definition of potential within the framework of the first approach is given by I. Repin. In her opinion, the potential is a set of resources (labour, material, technical, financial, innovative, etc.), skills and capabilities of managers, specialists and other categories of personnel in the production of goods, the provision of services (works), obtaining the maximum income (profit) and ensuring the sustainable operation and development of the enterprise<sup>12</sup>.

S. Shumskaya defined the potential as a set of accumulated resources and their used and unused potential opportunities in the production of material goods and services in order to fully meet the needs of society. V. Nemchinov determines the potential as the resource potential of the national economy for economic growth<sup>13</sup>.

The first approach may include the interpretation of the potential proposed by N. Krasnokutskaya, I. Gunina, Y. Sazonov, N. Zavienne, E. Gorbunov, and A. Sheremet.

The advantage of the resource approach to the interpretation of the essence of “potential” is that it takes into account its resource component as the basis for the formation of the potential. At the same time, the resource approach neither considers other components of the potential nor specifies the results that can be obtained in the long term.

---

<sup>12</sup> Краснокутська П. Е. Дефініція поняття «потенціал підприємства» в контексті розвитку мікроекономічної теорії. *Вісник КНТЕУ*. 2008. № 5. С. 54–64.

<sup>13</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.

The second approach to the interpretation of the essence of the “potential” concept can be conventionally called functional. In this approach, potential represents the ability to perform certain functions (to carry out production activities, to make material goods, to satisfy social needs). Representatives of this approach are K. Vobly, A. Voronov, O. Fedonin, I. Repin, O. Oleksik, I. Olenko, I. Dolzhanska, T. Zagorna, S. Radko, I. Ansoff, O. Getman, V. Shapoval, G. Gerasimchuk.

K. Voblij determines potential as a potential country’s ability to produce material goods to meet the needs of the population. According to A. Voronkova, the potential is a set of cost and natural-material characteristics of the production base, which is expressed in the potential opportunities to produce products of a certain composition, technical level, and quality in the required volume<sup>14</sup>.

O. Fedonin, I. Repin, and O. Oleksyuk interpret the potential as an integral reflection (assessment) of the current and future possibilities of the economic system to transform the input resources through its inherent entrepreneurial abilities for economic benefits, thus maximizing the satisfaction of corporate and social interests.

I. Otenko characterizes the potential not only as a dialectical unity of possibilities but also as processes of their realization. According to this author, the potential reflects the ability of the enterprise workers to learn and create opportunities by integrating into space and time processes of transformation of all kinds of resources for the production of material goods and services<sup>15</sup>.

I. Dolzhanska and T. Zagorna argue that potential represents a real or probable ability to carry out purposeful work. According to S. Radko, the potential is a reflection of the collective capacity of the labour collective to perform the tasks set before it. I. Ansoff defines the potential as the ability of a complex of resources of the economy to fulfil the tasks set before him<sup>16</sup>.

O. Hetman and V. Shapoval define the production potential as possibilities of an enterprise to produce products of a certain range, nomenclature, and quality in the right quantity of consumers. G. Gerasimchuk defines the potential as the maximum possibilities of

---

<sup>14</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.

<sup>15</sup> Краснокутська П. Е. Дефініція поняття «потенціал підприємства» в контексті розвитку мікроекономічної теорії. *Вісник КНТЕУ*. 2008. № 5. С. 54–64.

<sup>16</sup> Цимбал О. І. Сутність та підходи щодо оцінювання трудових ресурсів потенціалу промисловості в контексті регіону. *Держава та регіони. Серія: Економіка та підприємництво*. 2010. № 5. С. 78–84.

the object of functioning, taking into account the factors of influence through the rational use of all kinds of resources to achieve the potential goals<sup>17</sup>.

The advantage of the second approach is that it considers the capabilities of the economic system, which gives it the ability to perform a specific, specified function. At the same time, within the framework of this approach, the resource component of the potential is ignored.

According to the third approach, which can be called target, the potential is characterized by the ability to achieve the goals. Representatives of this approach are R. Marushkov, L. Sosnenko, V. Kovalev, A. Volkov, M. Ivanov, Yu. Odegov, K. Andreev.

R. Marushkov defines the potential as the ability of the enterprise to ensure its long-term functioning and achievement of strategic goals based on the use of the system of available resources. A similar definition is given in the works of L. Sosnenko.

V. Kovalev and O. Volkov characterize the potential as the ability of an enterprise to achieve its goals, using existing material, labour, and financial resources. M. Ivanov, Yu. Odegov, and K. Andreev determine potential as a system of material and labour factors that ensure the achievement of the goal of production.

The advantage of the third approach is the target orientation of the potential. However, this approach often does not specify the resources and capabilities that are necessary to achieve the goals and possible outcomes.

The fourth approach involves consideration of potential in terms of potential in certain conditions for obtaining a result in the future. Representatives of this approach can be considered Boris Mochalov, L. Revutsky, E. Lapin, B. Bachevsky, I. Zablotsky, O. Reshetnyak.

Thus, B. Mochalov argues that the potential of the country, industry, enterprise is characterized by the volume of production of material goods and services that can be achieved in the long term, with optimal use of available resources<sup>18</sup>.

L. Revutsky, studying the nominal production potential, interprets it as the volume of work in the reduced unit of measurement of labour costs (norm-hours), which can be done for a certain period (for example,

---

<sup>17</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.

<sup>18</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.

a year) by the main production workers based on existing production assets at two-three-variable mode of operation and optimal organization of labour and production<sup>19</sup>.

E. Lapin argues that the economic potential of the enterprise reflects the real, actual capacity to create the maximum volume of material goods, considering specific resource constraints, the balance of labour and material resources.

B. Bachevsky, I. Zablotsky, O. Reshetnyak define the potential as its property to provide the positive (or negative) result expected by the subject of evaluation in the existing system of external restrictions, considering the ability of the carrier to develop<sup>20</sup>.

The advantage of the fourth approach is that it outlines the results that can be obtained in the long run. However, attention is not paid to its components.

According to the fifth approach, the potential is determined by a set of relations between economic entities regarding the creation of material goods and services. Representatives of this approach are L. Samokin, who treats the potential as industrial relations that arise between individual workers, labour collectives, as well as the managerial apparatus for the full utilization of their abilities for the creation of material goods and services. M. Chumachenko defines potential as relations arising in the enterprise on achieving the maximum possible financial result<sup>21</sup>.

Advantage of the fifth approach is in the relationship in the formation and use of potential. The disadvantage is the non-consideration of potential components as in the previous one.

If we understand the potential as the set of components, from the point of our research, it is interesting to determine the potential by industry characteristic. According to this feature, traditionally distinguish industrial, transport and communication, scientific, construction, agricultural, service sector potential, etc.

According to the elemental composition, the potential of the main production assets (means) is distinguished, the potential of working

---

<sup>19</sup> Матковський Р. Б. Виробничий потенціал. Київ : Видавничий центр «Академія», 2001. Т.1. С. 196.

<sup>20</sup> Краснокутська П. Е. Дефініція поняття «потенціал підприємства» в контексті розвитку мікроекономічної теорії. *Вісник КНТЕУ*. 2008. № 5. С. 54–64.

<sup>21</sup> Бикова В. Г. Фінансово-економічний потенціал підприємств загальнодержавного значення – оцінка та управління. *Фінанси України*. 2005. № 6. С. 56–61.

capital (funds), land potential, information potential, technological potential, personnel (labour) potential, etc.

The potential classification can be supplemented by the following features: the type of interaction with the external environment (conditionally isolated and dependent potential), the variation of the properties when the conditions change (divergent, having invariant properties under different conditions, latent, with hidden properties, unchanged potential); by volume of functions performed (narrow-profile and multi-purpose potential); by the source of formation (renewed and attracted potential); by the way of combination (aggregate, consolidated, and network potential); by type of business processes (main, auxiliary, providing and supporting potential)<sup>22</sup>. Also, there are features concerning the creation of additional value or profit, which allocates a permanent part of the resource potential that does not change its value and does not create additional value, and the variable part of the resource potential, to which the author relates labour, intellectual, and entrepreneurial potential. Depending on the natural environment and the will of the person, it is possible to identify the objective components of the potential, that is, natural and climatic conditions, demographic situation, existing fixed assets and working capital and other resources and subjective components – mainly organizational, which contribute to improving the efficiency of management and depend from managerial decisions. By types of efficiency, economic and social potential are distinguished. The economic potential provides high output figures at the lowest cost. As for social potential, it ensures that the results of economic activity meet the needs of people. According to the type of economic relations allocated organizational and economic, socio-economic and technical and economic potential. Organizational and economic potential is formed under the influence of organizational measures, socio-economic – determined by property relations, and techno-economic – depends on the level of technology development<sup>23</sup>.

The list of types of potential for economic and functional purposes is divided into productive; stock; non-productive; organizational and managerial; labour (human); personnel; qualifying (educational); creative; financial; investment; tax; resource scientific and technical

---

<sup>22</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.

<sup>23</sup> Краснокутська П. Е. Дефініція поняття «потенціал підприємства» в контексті розвитку мікроекономічної теорії. *Вісник КНТЕУ*. 2008. № 5. С. 54–64.

(scientific); technological, technical; intellectual (industrial and intellectual property); innovative; informative; export; natural resource; ecological; assimilation potential<sup>24</sup>.

Potentials of any level do not function separately, isolated from each other. In addition, there is the interaction of potentials of different levels, which leads to increasing the potential of the system, which is at a higher level.

Even though the potential is determined by the resources, which are available to this subject and the possibilities that can be used to achieve a certain goal, this category is much wider than the categories of “resources”, “opportunities”, “power”.

Considering that the potential of the industry is the aggregated potential of the enterprises that are part of it, it is possible to present it as a general structural model of the potential of enterprises.

At the same time, the main characteristics of the potential of the industry as a system are the close interrelations of its individual components, the change of which affects the functioning of others and the complexity.

Industry potential determines the ability of the industry to self-development on a more qualitative basis, depending on the stage of its lifecycle and the quality of influence on it of the prevailing or unformed technological structure of the macroeconomic system. The components of the potential are represented by the following elements, in particular:

- a natural potential characterized by the natural resources that are available or can be mobilized, in combination with the natural conditions that affect the functioning of the industry;

- the scientific and technical potential of the industry, characterized by the ability to produce innovative resources for implementation at enterprises of the industry;

- industry resource potential as an ability to ensure the requirements for the development of enterprises and the industry as a whole with the help of such key components as aggregate; available raw materials and materials (working capital); information resources, free financial resources accumulated by the industry; human resources;

---

<sup>24</sup> Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 41–70.

- infrastructure potential of the industry, including industrial, innovative, and social infrastructure;
- intellectual potential as the achieved ability of the human resources of the industry to carry out various activities, initiate, implement innovations, carry out the innovation process;
- consumer potential of the industry as an opportunity to preserve and increase the market segment serviced by the industry.

The potential of the industry can only be realized in specific conditions, and therefore, there is no sense in considering it outside of these conditions. Indeed, the complex of these conditions depends on the characteristics of its volumes, location, the efficiency of use and especially competitiveness.

We offer to classify the industry's potential by the following components:

- natural resource potential;
- investment potential;
- scientific and technical potential;
- infrastructure potential;
- intellectual potential.

The mentioned above classification allows determining indicators that meet the criteria for assessing the competitiveness of the construction industry potential for each component of the potential of the construction industry.

## **6.2. Definition of the essential characteristics of the concept “competitiveness and competitiveness of the industry potential”**

Exploring the problem of the competitiveness of the potential of industries, it is worth to note that there is no general definition of it. To begin with, it's worth determining the essence of the notion of competitiveness in its overall form.

V. Khomyakov, T. Vyatkina, and P. Vyatkin give a definition of the concept “competitiveness”, presented in the works of scientists<sup>25</sup>:

- competitiveness as owning of the properties that create advantages for the subject of the economic competition was considered by M. Helvanovsky, V. Zhukovsky, I. Trokhimov;

---

<sup>25</sup> Хомяков В. І. Формування конкурентоспроможності підприємницького потенціалу підприємств (теоретичні аспекти). *Прометей: зб. наук праць з економіки*. Донецьк : ДЕГІ. 2006. № 1. С. 163–166.

– competitiveness, characterised by economic, social, and political factors, the stable position of the country or commodity producer in the domestic and foreign markets is determined in the work of B. Gunskey;

– competitiveness as a comparison of competitive positions of business entities in one market is covered in the works of N. Pedchenko<sup>26</sup>.

K. Kuznetsova determines competitiveness by focusing on the availability of certain advantages (resources) and the ability and ability to use them correctly in a rivalry with other “players” to achieve their goals.

Accepting all the above definitions, we would like to note that the most suitable, in our opinion, definition of competitiveness is proposed by R. Fatkhutdinov, in which competitiveness is the property of an object that characterizes the degree of real or potential satisfaction of specific needs in comparison with similar objects, presented in this market<sup>27</sup>.

Most scientists agree that competitiveness is a relative concept, which reflects the difference in the development of this research subject from other actors acting as its competitors. It is an important generalized indicator of the assessment of financial, industrial and economic, organizational activities of the economic entity, which reflects the development of the subject of competition<sup>28</sup>.

Talking about the competitiveness of potential, among the researchers involved in its research, there is no consensus on the definition of this concept’s essence. It should be noted that in the scientific literature, the notion of competitiveness has different interpretations, interpreted differently depending on which economic object it is used. Such an object is a national economy, industry, region, enterprise, product or service.

Thus, N. Krasnokutskaya, considered competitiveness of the potential at the microeconomic level and defined it as a complex comparative characteristic of the potential, which reflects the level of advantage of the aggregate of indicators of the quality of resource usage and the organization of interrelations between them, which determine the

---

<sup>26</sup> Педченко Н. С. Деякі аспекти конкуренції і конкурентоспроможності в ринковій економіці. *Регіональні перспективи*. 2000. №4(11). С. 48.

<sup>27</sup> Фатхутдинов Р. А. Конкурентоспособность: экономика, стратегия, управление. *Серия «Высшее образование»*. Москва : ИНФРА-М. 2000. 312 с.

<sup>28</sup> Реутов В. Е., Вельгош Н. Э. Управление конкурентоспособностью : монография. Симферополь : Таврия. 2005. 200 с.



effectiveness of the potential in a particular market at a certain time in relation to aggregate of indicators of analogue enterprises<sup>29</sup>.

The definition of the competitive potential of the company is given in the works of A. Voronkova, which interprets this concept as a set of production-financial, intellectual and labour opportunities of the enterprise, provides it with stable competitive positions in the market<sup>30</sup>.

A. Kvasko notes that the competitiveness of the enterprise's potential provides a comparative characteristic and reflects the level of the advantage of a set of indicators based on the results of the analysis of relevant marketing research. If we transform this definition, we can formulate a general idea of the essence of the competitiveness of the potential of particular research. Competitiveness of the potential of an object is its generalized comparative characteristic, which reflects the level of the advantage of a set of indicators reflecting the market situation<sup>31</sup>.

At the same time, at the level of the economic entity (enterprise) and at other levels (industry, region, national economy), the characteristics and criteria of the competitiveness of the potential vary somewhat. This can be explained primarily by the different nature of these objects.

Turning to the "competitiveness of the industry potential" concept, it should be noted that it involves the existence of the rational industry structure of a group of highly competitive leading enterprises, which are guides for other enterprises in the industry, established research and development, production and technology base, flexible industry infrastructure and exhaust system industrial, scientific, technical, logistical, and commercial cooperation within the industry, as well as with other branches of the country and beyond.

Thus, we are able to say that the competitiveness of potential of the industry as a complex socio-economic system lies in the complex ability to use highly productive resources within this system, determined by the properties of its elements and the nature of their interconnections, which provides it with higher investment attractiveness than other branches of the national economy.

---

<sup>29</sup> Краснокутська Н. С. Потенціал підприємства: формування та оцінка : навч. посіб. Київ : Центр навчальної літератури, 2005. 352 с.

<sup>30</sup> Воронкова А. Діагностика стану підприємства: теорія і практика : монографія. Харків : ВД «ІНЖЕК». 2006. 448 с.

<sup>31</sup> Піддубна Л.І. Конкурентоспроможність економічних систем: теорія, механізм регулювання та управління : монографія. Харків : ВД «ІНЖЕК». 2007. 368 с.

That is, the competitiveness of the potential of enterprises is only one of the conditions of the competitiveness of the industry's potential, which, in its turn, is the key to the competitiveness of a higher-level potential. Consequently, it can be argued that the presence of highly competitive industries is necessary to ensure the competitiveness of the potential at the macro level, at the same time, is not an exclusive condition for it.

Proceeding from the above, we can propose the following definition of the competitiveness of the national economy potential – a general comparative characteristic of the industry, which reflects the level of the benefits of a set of indicators for assessing the state of its resources and capabilities relative to similar indicators of other industries in a specific segment of the market over a period of time.

Such a definition is fair because competitiveness must be viewed not as a bipolar concept of “competitive – uncompetitive” but rather as having a certain degree of competitiveness, which in the simplest gradation can be defined as “low, medium, high”. If necessary, it is possible to further differentiate it. In this regard, not the victory in the competitive struggle but the ability to achieve the goals set. In addition, a non-competitive industry is not able to compete: physically, enterprise-makers in it may be present in the market but cannot achieve the desired result.

However, from a strategic point of view, an industry that owns a product that provides an apparent inviolability of its position should conduct continuous monitoring in the event of the appearance of competitors in order to be able to take preventive measures.

It is advisable to use the term “competition” rather than “struggle” because, firstly, the struggle between competitors is not always an irreconcilable antagonistic nature: in recent times, not only the world but also national practice, competing market actors agree on an agreed price policy, on the distribution of market segments, etc.; and secondly, the term “competition” involves exclusively affiliate, equal relationships: the methods of competition are not always conscientious, the creation of a negative image for competitors, etc.

At the same time, the competitiveness of the industry's potential is relative: the degree of implementation of competitive advantages is possible at different levels in different markets, it is able to change over time<sup>32</sup>.

---

<sup>32</sup> Большой экономический словарь / под ред. А. Н. Азриляна. Москва : 5-е изд., доп. и перераб. 2002. 1280 с.

The statement of V. Khomyakov, T. Vyatkina, and P. Vyatkin that the elements of the competitiveness of a company's potential should be in line with the concept of its development, supplement and improve it, in our opinion, can be equally applied to the competitiveness of the industry's potential<sup>33</sup>.

This is logical because all components of the competitive potential of the enterprise are interconnected, and their combination characterizes the state and capabilities of the industry to create, strengthen, and develop their own competitive advantages. Consequently, the weakness of one of the elements is a source of risks and requires additional costs to match growth opportunities.

Competitiveness of the industry's potential is formed under the influence of many factors, which can be defined as the property of the economic environment or the particular subject of the economy, can influence the process and results of the operation of this entity in a competitive environment<sup>34</sup>.

## CONCLUSIONS

Analysing the studied materials, the works of the scientists who considered the category of "potential", we can indicate that potential is the available or hidden cumulative possibilities, resources, stocks or sources that are used or can be used to achieve a certain goal. On the one hand, the potential is the available capabilities and resources and, on the other hand, these are unused opportunities. Summarising the existing approaches to the definition of the essence of the "potential" concept we can agree that the main criterion and an integral part of the interpretation of "potential" is resources or their system; general characteristics of the potential as economic categories change over time, expand, and transform. The industry potential is an aggregated potential of enterprises that work inside of it. Consequently, the potential of the construction industry determines its ability to self-development on a more qualitative basis in specific conditions of space and time, characterized by the action of certain factors. "Competitiveness of the industry's potential" we can determine as the multidimensional complex property of using certain resources, which is defined by its components

---

<sup>33</sup> Хомяков В. І. Формування конкурентоспроможності підприємницького потенціалу підприємств (теоретичні аспекти). *Прометей: зб. наук праць з економіки*. Донецьк : ДЕГІ. 2006. № 1. С. 163–166.

<sup>34</sup> Савчук С. І. Основы теории конкурентоспособности / ИПРЭЭИ НАН Украины. Мариуполь : Рената. 2007. 520 с.

and the nature of their interconnections, characterized by investment attractiveness, formed under the influence of factors. The competitiveness of the Ukrainian economy as a whole depends on the level of construction industry development, its competitiveness. That is why the maintenance of the competitiveness of potential of the Ukrainian construction industry is the priority task at the present stage of development of the national economy of the country.

### **SUMMARY**

The research is devoted to studying the construction industry potential and its competitiveness, which is the component of the competitiveness of the national economy. For this purpose, we analyse the theoretical approaches to the definition of the category of potential. The advantages and disadvantages of the five main approaches are studied. The essence, particularly, of the branch potential is explored. Potential is presented as a set of components, which are discussed. The article summarizes the main approaches to the definition of “competitiveness” as well as “competitiveness of potential”. The work explores the essence of industry potential competitiveness and determines the understanding of the competitiveness of construction industry potential.

### **REFERENCES**

1. Абалкин Л. И. Новый тип экономического мышления. Москва : Экономика, 1987. 192 с.
2. Березюк Ю. Б. До питання аналізу сутності економічної категорії потенціалу. *Економіка АПК*. 2011. № 1. С. 73–77.
3. Бикова В. Г. Фінансово-економічний потенціал підприємств загальнодержавного значення – оцінка та управління. *Фінанси України*. 2005. № 6. С. 56–61.
4. Большой экономический словарь / под ред. А. Н. Азриляна. Москва : 5-е изд., доп. и перераб. 2002. 1280 с.
5. Большой энциклопедический словарь / под ред. А. М. Прохоров. Москва : Большая Российская Энциклопедия; Санкт-Петербург : Норинт. 2004. С. 92.
6. Великий тлумачний словник сучасної української мови / За ред. В. Т. Бусел. Київ, Ірпінь : ВТФ Перун. 2005. С. 286.
7. Воронкова А. Діагностика стану підприємства: теорія і практика. Монографія. Харків : ВД «ІНЖЕК». 2006. 448 с.

8. Гуляк Р. Е. Розробка методологічних принципів економічної діагностики та їх застосування при створенні механізму діагностики розвитку ресурсної компоненти економічного потенціалу міста. *Економіка та держава*. 2011. № 6. С. 84–88.
9. Економічний словник / За ред. П. І. Баргія, С. І. Дорогунцова. Київ : Головна редакція УРЕ, 1973. С. 152.
10. Игнатенко Н. Г. Природно-ресурсный потенциал территории: Географический анализ и синтез. 1986. С. 125–140.
11. Краснокутська Н. С. Потенціал підприємства: формування та оцінка: навч. посіб. Київ : Центр навчальної літератури, 2005. 352 с.
12. Краснокутська П. Е. Дефініція поняття «потенціал підприємства» в контексті розвитку мікроекономічної теорії. *Вісник КНТЕУ*. 2008. № 5. С. 54–64.
13. Матковський Р. Б. Виробничий потенціал. Київ : Видавничий центр «Академія». 2001. Т. 1. С. 196.
14. Педченко Н. С. Деякі аспекти конкуренції і конкурентоспроможності в ринковій економіці. *Регіональні перспективи*. 2000. № 4(11). С. 48.
15. Піддубна Л. І. Конкурентоспроможність економічних систем: теорія, механізм регулювання та управління : монографія. Харків : ВД «ІНЖЕК», 2007. 368 с.
16. Реутов В. Е., Вельгош Н.Э. Управление конкурентоспособностью : монография. Симферополь : Таврия, 2005. 200 с.
17. Савчук С. И. Основы теории конкурентоспособности / ИПРЭЭИ НАН Украины. Мариуполь : Рената, 2007. 520 с.
18. Степанов А. Я. Категория «потенциал» в экономике. URL: <http://www.marketing.spb.ru/read/article/a66.htm>
19. Толковый словарь ruLib.info. URL: <http://www.rulib.info/default.htm>.
20. Фатхутдинов Р. А. Конкурентоспособность: экономика, стратегия, управление. *Серия «Высшее образование»*. Москва : ИНФРА-М., 2000. 312 с.
21. Хомяков В. І. Формування конкурентоспроможності підприємницького потенціалу підприємств (теоретичні аспекти). *Прометей: зб. наук праць з економіки*. Донецьк : ДЕГП. 2006. № 1. С. 163–166.
22. Цимбал О. І. Сутність та підходи щодо оцінювання трудових ресурсного потенціалу промисловості в контексті регіону.

*Держава та регіони. Серія: Економіка та підприємництво.* 2010. № 5. С. 78–84.

23. Чаленко А. О. неопределенности понятия «потенциал» в экономических исследованиях. Луганск. *Проблемы экономической теории.* 2011. С. 39–40.

24. Черников Д. А. Эффективность использования производственного потенциала и конечные народнохозяйственные результаты. *Экономические науки.* 1981. № 10. С. 88–96.

**Information about the author:**

**Kovalenko-Marchenkova Ye. V.**

Ph.D. in Economics, Associate Professor,

Department of Accounting, Economics

and Personnel Management of Enterprise,

Prydniprovsk State Academy of Civil Engineering

and Architecture, Ukraine

## **CHAPTER 7**

### **THE CHOICE OF DEVELOPMENT MANAGEMENT DRIVERS OF THE SOCIO-ECONOMIC SYSTEM OF THE NATIONAL AND INTERNATIONAL LEVEL BASED ON THE RESULTS OF FORECASTING**

**Kononova I. V.**

#### **INTRODUCTION**

Any country is a complicated social and economic system that has a tendency to develop. However, to achieve the goals, development must be managed with appropriate mechanisms. Development control drivers are such mechanisms designed to intensify the impulses of development, transforming their impact from potential to real. Such management should be proactive, that is why it should be based on the forecasting results. From the point of view of Ukrainian economic science, the importance of the problem research is on the advance because of strengthening the integration processes with the European Union have been declared in Ukraine recently. In this regard, today's Ukrainian economy is closely dependent on the European Union, and internal plans and trends of the western neighbours are directly reflected at the level of the national economy's development. Taking this into account, in the current context, the implementation of the forecasting of the EU countries' economic development is extremely relevant.

#### **7.1. Determination of the main tendencies of the parameters of the functioning of the European Union and Ukraine as the basis for the choice of a development management system**

As some scholars have rightly pointed out, a good standard of living, social and economic well-being, and environmental preservation are European strategic goals (Kranjac, Sikimić, Tomić, Vapa-Tankosić, 2017)<sup>1</sup>. According to studies, the European Union intends to build the growing and stable European economy, the most competitive and dynamic

---

<sup>1</sup> Kranjac, M., Sikimić, U., Tomić, S., & Vapa-Tankosić, J. (2017). The Contribution of EU Funds to Wellbeing and Sustainable Development in Central European Countries. *European Journal of Sustainable Development*, 6 (1), 85–102. doi: <https://doi.org/10.14207/ejsd.2017.v6n1p85>

knowledge-based economy in the world. This intention should be accompanied by the appropriate optimization and decision support system (Brauers, Baležentis & Baležentis, 2012)<sup>2</sup>. A number of scholars have devoted their research to problems of forecasting the economy functioning indicators. For example, some of them (Simionescu, Dobeš, Brezina, Gaal, 2016)<sup>3</sup> suggested using modelling based on group data models for this purpose, others (Bruno, 2005<sup>4</sup>; Gayer, 2006<sup>5</sup>) suggested dynamic unbalanced models of panel data. At the same time, analytical alignment models are most often used for forecasting with correlation and regression analysis methods (Schneider, Hommel, & Blettner, 2010)<sup>6</sup>, which make it possible to construct the dependence of the certain indicator change on the time factor and, on this basis, to determine the indicator forecast values.

Although a lot of attention in economic research is devoted to economic and mathematical forecasting problems, certain aspects of forecasting economic and mathematical models need to be refined as the basis for improving development management not only of the individual country but also of supranational entities, which is the European Union.

To achieve this objective, methods of dynamic analysis should be used to outline the main trends of change in key functioning parameters of Ukraine and the European Union as the system, methods of analytical alignment on the basis of correlation-regression modelling should be used to formalize the revealed trends.

The main objective of the study is to identify the main tendencies of the European Union functioning parameters, to predict the indicators of its development as the complex dynamic socio-economic system and, on this basis, to decide on EU development management drivers. To achieve this objective, it is necessary to analyse the main indicators of the European Union functioning parameters, to use analytical

---

<sup>2</sup> Karel, W., Brauers, M., Baležentis, A. & Baležentis T. (2012). European Union member states preparing for EUROPE 2020. An application of the MULTIMOORA method, *Technological and Economic Development of Economy*, 18 (4), 567–587. doi: <https://doi.org/10.3846/20294913.2012.734692>

<sup>3</sup> Simionescu, M., Dobeš, K., Brezina, I., & Gaal, G. (2016). GDP Rate in The European Union: Simulations Based On Panel Data Models. *Scientific Papers Journal of international studies*, 9 (3), 191–202. doi: <https://doi.org/10.14254/2071-8330.2016/9-3/15>

<sup>4</sup> Bruno, G. S. F. (2005). Estimation and inference in dynamic unbalanced panel-data models with a small number of individuals. *The Stata Journal*, 5, 473–500. Retrieved from <http://www.statajournal.com/article.html?article=st0091>

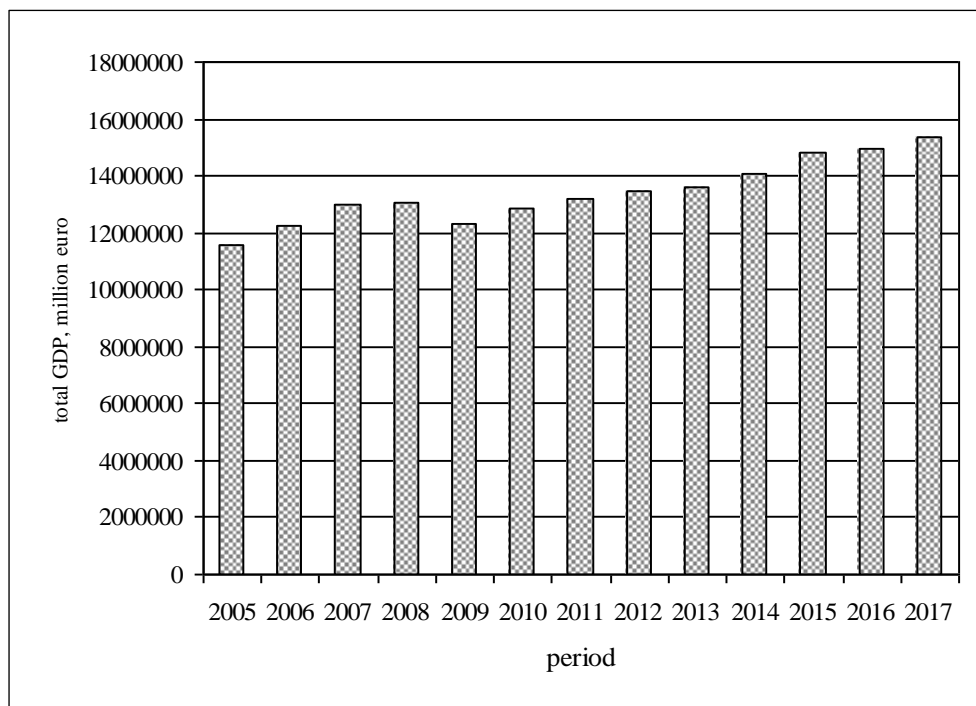
<sup>5</sup> Gayer, C. (2006). Forecast Evaluation of European Commission Survey Indicators, *Journal of Business Cycle Measurement and Analysis*, 2005/2. doi: <https://doi.org/10.1787/jbcma-v2005-art2-en>

<sup>6</sup> Schneider, A., Hommel, G., & Blettner, M. (2010). Linear Regression Analysis – part 14 of a series on evaluation of scientific publications. *Dtsch Arztebl Int*, 107 (44): 776–82. doi: <https://doi.org/10.3238/arztebl.2010.0776>



equalization methods based on correlation-regression modelling of forecasting the development indicators of the European Union as a system and, on this basis, to develop recommendations for improving the management of European Union development using the most appropriate type of management drivers.

The European Union is a complex supranational entity that has all of the signs of a complex open socio-economic system. In this regard, the functioning of the European Union, like any other system, can be characterized by a number of parameters, the main of which are functioning results. In turn, determining the functioning results at the level of such entities as the European Union means assessing the level and dynamics of the total GDP as a whole, the average GDP in the countries that are part of EU, and the GDP per capita. That is, the last two indicators that create the basis for the comparison between European Union countries and other countries in order to identify the level of development of these countries and to determine future directions for their development management. The dynamics of the total GDP in the European Union (million euro) for 2005–2017 is shown in Fig. 1.



**Fig. 1. The dynamics of total GDP in the European Union (million euro) for 2005–2017<sup>7</sup>**

<sup>7</sup> Eurostat (2018). *Your key to European Statistic*. Retrieved from: <https://ec.europa.eu/eurostat/data/database>.

As can be seen from Figure 1, the total GDP in the EU countries had a rather pronounced upward trend. The reduction of this indicator had been observed only in 2009, which by most researchers is associated with the crisis processes' dominance in the world economy. Some scientists, in particular, find the origins of crisis process development in the financial sector, which, in their opinion, plays the decisive role in the economy, acting as a link between the part of the economy that requires funds and the part that can provide them in the form of investments (Acharya, Philippon, Richardson, & Roubini, 2009)<sup>8</sup>. That is the exceptional role of the financial sector that had led to the problems that appeared in the financial sphere and spread to other spheres of economic life with lightning speed. This position is no exception. For example, other scientists (Zych, Ortega-Ruiz, López, & Llorent, 2015)<sup>9</sup>, using the expert survey methodology while researching factors leading to the global crisis, found out that the crisis arose primarily in the financial sphere and had been caused by weaknesses in financial institution management (both internal and external) and financial institution functioning.

The causes and consequences of the global economic crisis had been considered by other scientists (Rapoport & Gerts, 2010)<sup>10</sup> as well. In their researches, authors consider the recent global crisis as a combination of several regional crises that occurred simultaneously but for different reasons. However, these crises have a common cause, which lies in the fact that developed countries, as a rule, maintain a certain level of social security without increasing real output. That had been this policy that led to a trade deficit and partial destruction of market mechanisms and stimulated the crisis process development. Some scientists' opinion should be accepted that a deep financial crisis had been not only a period of capital loss but also a process of adaptation, manifested in price changes (in particular, the deployment of deflationary processes) and the real consequences associated with recession and low employment (Vieira 2011)<sup>11</sup>. In addition, this period

---

<sup>8</sup> Acharya, V., Philippon, T., Richardson, M., & Roubini, N. (2009). The Financial Crisis of 2007-2009: Causes and Remedies. *Financial Markets, Institutions & Instruments*, 18 (2), 89–137. doi: [https://doi.org/10.1111/j.1468-0416.2009.00147\\_2.x](https://doi.org/10.1111/j.1468-0416.2009.00147_2.x)

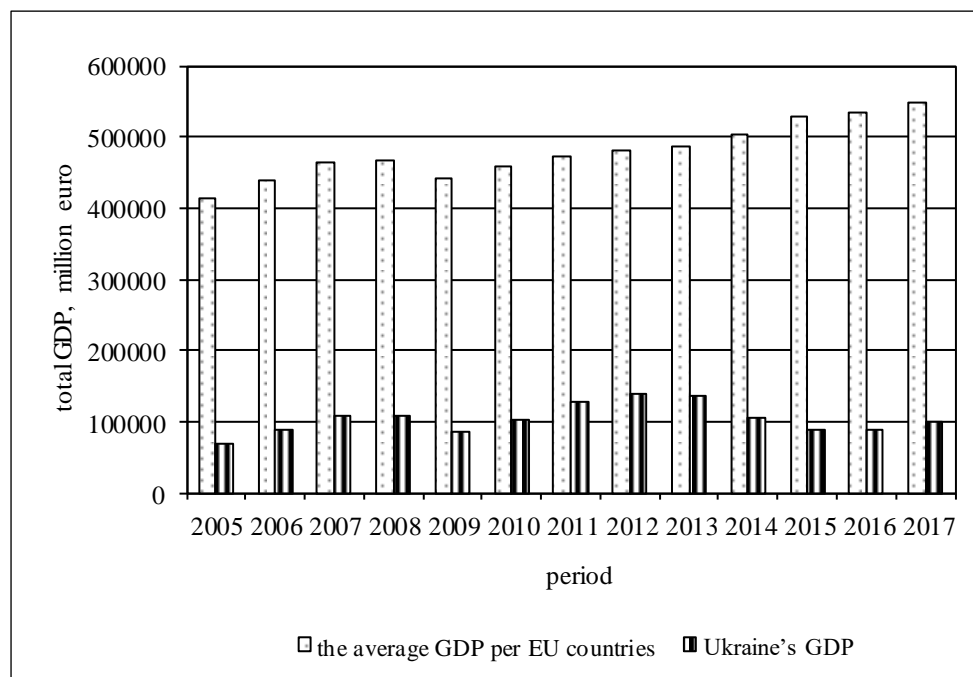
<sup>9</sup> Zych, I., Ortega-Ruiz, R., López, M. M., & Llorent, V. J. (2015). Causes and Solutions for the Economic Crisis According to the International Scientific Community. *Universitas Psychologica*, 14 (1), 367–379, doi: <https://doi.org/10.11144/Javeriana.upsy14-1.csec>

<sup>10</sup> Rapoport, A., & Gerts, A. (2010). The Global Economic Crisis of 2008-2009, Problems of Economic Transition, 53:6, 45-62. doi: <https://doi.org/10.2753/PET1061-1991530603>

<sup>11</sup> Vieira, F. V. (2011). The new international financial crisis: causes, consequences and perspectives, Brazilian Journal of Political Economy, 31 (2 (122)), 217-237. doi: <https://doi.org/10.1590/S0101-31572011000200003>

can be described as a period of anxiety and the end of illusions, including those that associated with the state’s opposition to the market, the rejection of the regulatory role of the state in modern economic processes. It was the awareness of the need for at least moderate government intervention in market processes and that became the basis for the reorientation of the political course of developed countries, including countries of the European Union, in order to bring their economies out of the crisis. Such a reorientation allowed overcoming the crisis processes and putting the economy of the European Union countries on the path of sustained long-term growth. Such growth was manifested in GDP raise, the total value of which in the European Union countries for the study period (2005–2017) increased to 3,759,891,700,000 Euros or to 32.44%. The last year of the study period had been marked by the growth of total GDP in the EU countries. So, this indicator increased by 413,455.1 million euros or by 2.77% in comparison to the previous year.

It is interesting to compare the dynamics of Ukraine’s GDP with the dynamics of average GDP within EU countries (study period).



**Fig. 2. Comparison of Ukraine’s GDP with the average GDP per EU countries for 2005–2017**<sup>12 13</sup>

<sup>12</sup> Eurostat (2018). *Your key to European Statistic*. Retrieved from: <https://ec.europa.eu/eurostat/data/database>.

As can be seen from Fig. 2, Ukraine's GDP is significantly less than the average level of the European Union countries' GDP and, moreover, it differs considerably. So, if during the study period, the average value of GDP in the EU countries had a tendency to rise (with a slight decrease in 2009 due to a number of the reasons discussed above), then there was no clear trend in GDP in Ukraine. The reason for this is significant fluctuations of the indicator that reflected visually in Fig. 2. Not only 2009 was characterized with the fall but also 2014–2016 when the serious domestic political situation in the country led to the annexation of the Autonomous Republic of Crimea and the occupation of certain regions of the country.

In many ways, the lack of tangible improvements in the country depends on the policies of the strongest players in the political arena (Nix, 2014<sup>14</sup>; Nitoiu, 2016<sup>15</sup>). Thus, the first one among these scientists emphasizes the need for active intervention by the world community in response to Russia's actions in the Crimea and eastern Ukraine (Nix, 2014). But some scientists believe that the root cause of the conflict in the east of Ukraine was precisely the mutual reinforcement of the European Union and Russia presence in the post-Soviet space. Both players seek to retain their influence in the region to maintain their status. Therefore, instead of searching for a mutually beneficial and stable agreement that would give decisive importance to the interests of Ukraine, the EU and Russia entered the stage of hidden resistance, which only increases differences and deepens the conflict (Nitoiu, 2016). Considering the position of Ukraine as a participant in the political game of titans (Russia, the United States, the European Union) on the world stage, it should be noted that, for a long time, Ukraine had a cautious policy of balancing between East and West. Thus, despite the European benchmark proclamation for Ukraine, a policy of deepening economic, energy, and political dependence on Russia was pursued, and the conflict was further developed (Wolczuk, 2016)<sup>16</sup>. The author emphasizes that the escalation of the conflict to a certain extent contributed to the self-

---

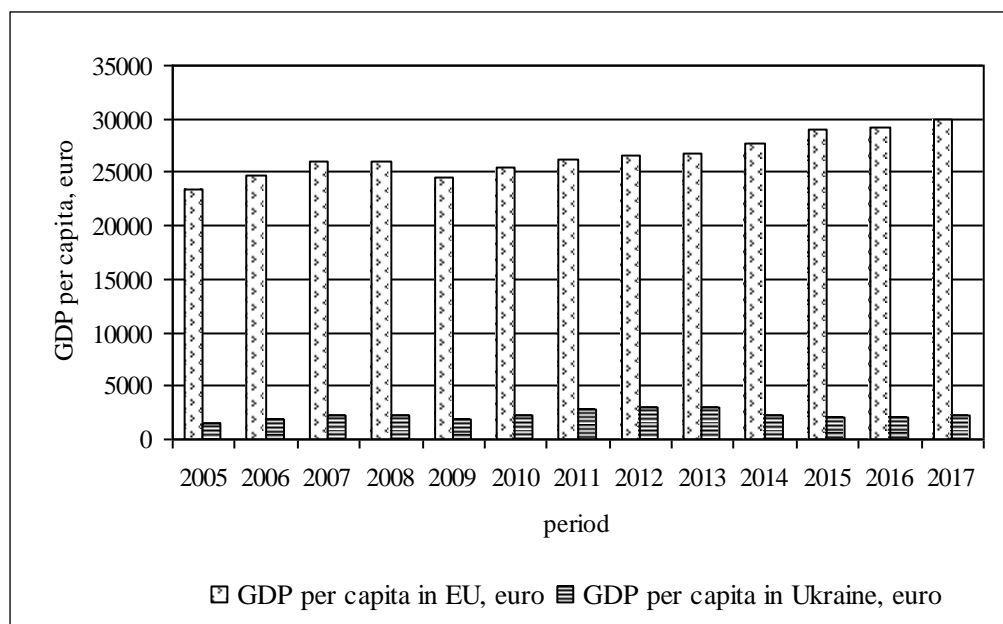
<sup>13</sup> State Statistics Service of Ukraine (2018). *Statistic Information*. Retrieved from: <http://www.ukrstat.gov.ua> (in Ukrainian)

<sup>14</sup> Nix, S. B. (2014). Responding to the Russian Invasion of Crimea: Policy Recommendations for US and European Leaders. *European View*, 13 (1), 143–152. doi: <https://doi.org/10.1007/s12290-014-0297-3>

<sup>15</sup> Nitoiu, C. (2016). Russia and the EU's quest for status: the path to conflict in the post-Soviet space, *Global Affairs*, 2:2, 143–153, doi: <https://doi.org/10.1080/23340460.2016.1163775>

<sup>16</sup> Wolczuk, K. (2016). Ukraine and Europe: Reshuffling the boundaries of order. *Thesis Eleven*, 136 (1), 54–73. doi: <https://doi.org/10.1177/0725513616667666>

identification of Ukraine as a state oriented towards Europe. However, she notes that against the background of reducing cultural differences between Ukraine and the EU countries, geopolitical and economic barriers to Ukraine integration into the European community are still tangible. To support this conclusion, it is possible to cite at least the fact that at the beginning of the study period, the average GDP in the European Union countries exceeded the level of Ukraine's GDP by 344,603,200,000 euros, while at the end of the study period, the excess amounted to 447,460,200,000 euros. That obviously had an impact on the well-being of EU and Ukraine residents, the level of which can be compared based on the analysis of the level and dynamics of GDP per capita (Fig. 3).



**Fig. 3. Comparison of GDP per capita in Ukraine and EU countries for 2005–2017**

As can be seen from the data of Fig. 3, Ukraine's lagging behind the level of welfare from the EU countries can be considered catastrophic because the GDP per capita in the EU countries exceeds the level of the similar indicator in Ukraine 14-16 times. Overall, the survey showed that the EU countries are developing with a much higher level of stability than Ukraine. Thus, according to our calculations, the adaptability of the national economy of Ukraine as a socio-economic system to the environmental changes is 0.817, while for the EU countries it is 1,101.

Regardless of what is the situation in the analysed socio-economic system, development management may be one of the three styles of management decision-making that is recommended to be chosen depending on the adaptability of the socio-economic system. So, if the adaptability of the system is low, then it is more appropriate to follow the cautious style of making managerial decisions; under the condition of normal adaptability of the system optimal style is optimal; under the condition of sufficient adaptability of the system, the style of making managerial decisions can be adventurous (risky).

The decision-making style influences which of the scenarios of development in the forecast period will serve as a benchmark for determining the reaction rate of the system and selecting the appropriate type of driver for it.

So, if we talk about development management for the EU countries, then it, as well as the management of the development of the national economy of Ukraine, should take place on the basis of management drivers. But, as the calculations showed, the level of adaptability of the European Union is sufficient, then the choice of the type of a management driver should be based on the optimistic development scenario (for the national economy of Ukraine, it is recommended to take the pessimistic scenario as the base one).

## **7.2. Justification of the choice of the driver for development management and its structural elements**

Any driver requires the definition of methods that should be used to achieve the best performance. As noted earlier, such methods are divided into three groups:

- legal – a set of ways of influencing the subject of management on the object of management through the establishment and legislative consolidation of rules (including legal norms, legal relations, legal acts);
- economic – a set of tools and tools that purposefully affect the creation of conditions for the functioning and development of entrepreneurship (including pricing, financing, lending, taxation);
- administrative – a system of methods and techniques of organizational and administrative actions, which is used for the organization and coordination of management objects in order to perform the tasks (including organizational regulation, organizational regulation, organizational and methodological instruction, binding requirements, conciliation actions, recommendations).

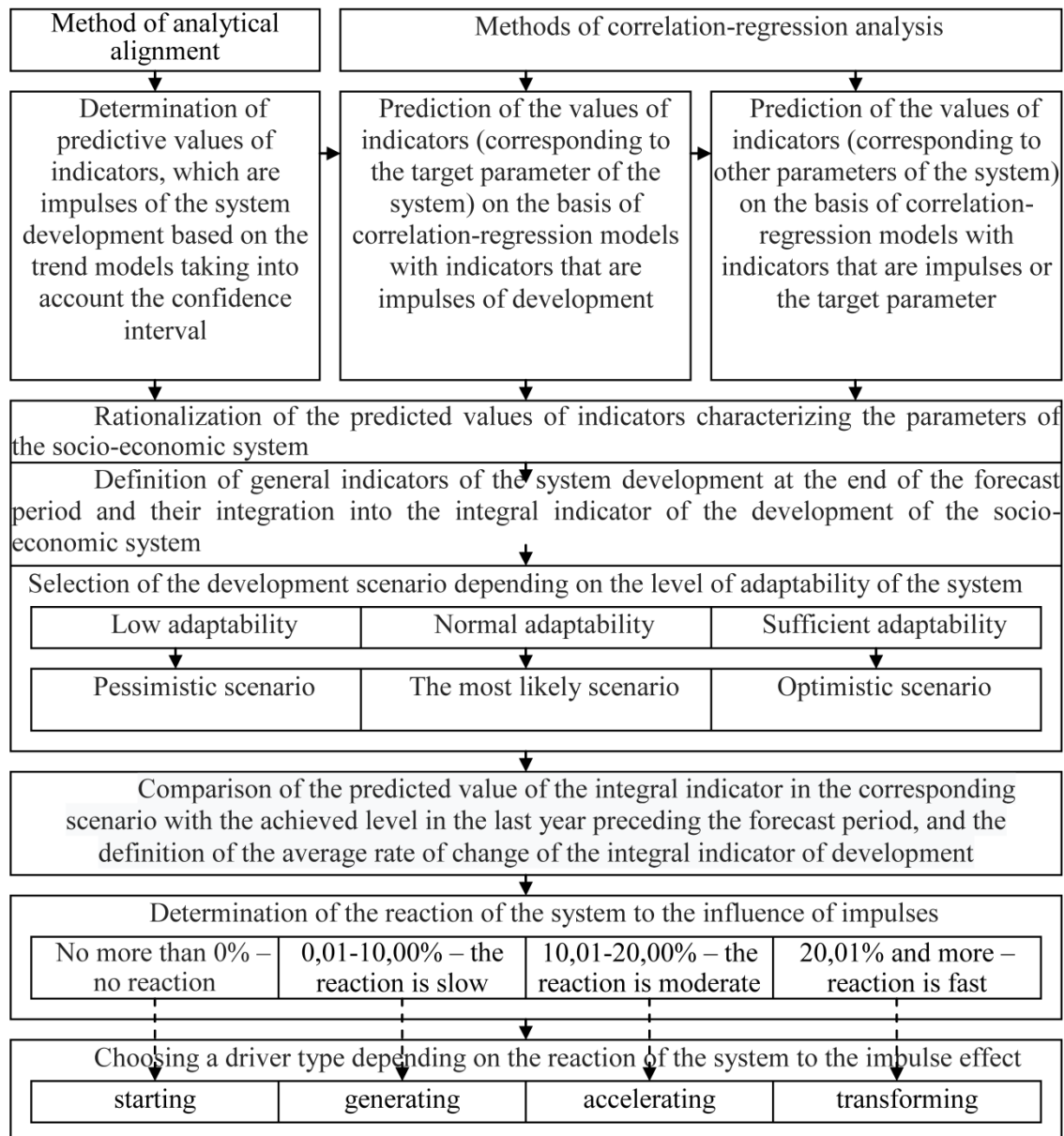
Different types of drivers are dominated by different methods:

- for starting – all three types of methods (legal, administrative, economic), the combination of these methods allow the system to operate;
- for the generating – administrative and economic, as a slow reaction of the system is possible only if the legal framework of its functioning has already been created and needs only a certain correction, while the administrative and economic methods allow forming the necessary reaction to the impulses of development;
- for accelerating – economic methods since the moderate reaction is possible only in the formation of the regulatory environment and the high level of organization of the system while the need for stimulating development, which can be achieved by economic methods, is at the forefront;
- for the transforming – all of three types of methods since that is used in the rapid reaction system, in which the regulatory framework and established organizational communications quickly lose their relevance, and therefore, this type of driver, as well as the startup leads the system not only into action but already on a new qualitative level).

We have developed an approach to the choice of the type of control drivers for the development of the socio-economic system (starting, generating, accelerating, transforming), based on the results of forecasting, taking into account the degree of adaptability of the system in the chosen scenario of development and determining the speed of its reaction to the impact of impulses, which allows choosing the appropriate kind of the management driver, the application of which is most appropriate in the prevailing conditions (Fig. 4).

An approach to choosing a driver type (starting, generating, accelerating, transforming) based on the results of the forecasting for the selected scenarios, taking into account the degree of system adaptability of the system, is developed and empirically tested on the national and international level, and it allows choosing the appropriate type of management driver, the application of which is the most acceptable in the prevailing conditions.

A reason for the choice of the type of development management driver includes forecasting. In order to obtain a more accurate forecast, a model of analytical alignment was built for general indicators of the economic, social, and environmental development of the European Union countries using various dependence functions:



**Fig. 4. An approach to the choice of the type of management drivers for the development of the socio-economic system**

- linear;
- logarithmic;
- degree;
- exponential;
- polynomial.

The built models passed tests for adequacy and reliability with respect to standard criteria; all the built models which demonstrate better connectivity between the output indicator and the indicator influenced by (in this case, the time factor) have been chosen:



### 1. Economic Development Trend Line Model

$$y_1 = 0,1076 \cdot \ln x + 0,6564, \quad (1)$$

$y_1$  – indicator of the European Union economic development ;

$x$  – a conditional number of the study period.

The proposed model has a correlation coefficient of 0.861. It means that there is a strong link between the output indicator and the time factor, which explains its change.

### 2. Social Development Trend Line Model:

$$y_1 = -0,0011 \cdot x^2 + 0,0152 \cdot x + 0,7584, \quad (2)$$

$y_1$  – indicator of the European Union social development;

$x$  – a conditional number of the study period.

The proposed model has a correlation coefficient of 0.856. It means that there is a strong link between the output indicator and the time factor, which explains its change.

### 3. Ecological Development Trend Line Model

$$y_1 = 0,342 \cdot x^{0,1252}, \quad (3)$$

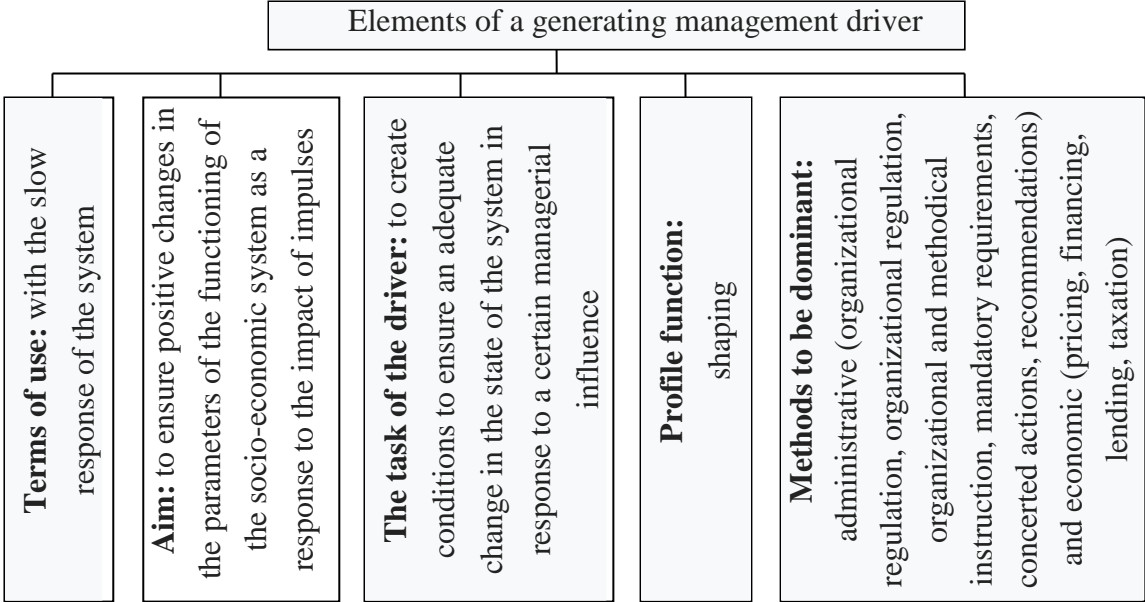
$y_1$  – indicator of the European Union ecological development;

$x$  – a conditional number of the study period.

The proposed model has a correlation coefficient of 0,856. It means that there is a strong link between the output indicator and the time factor, which explains its change.

Through the built models, European Union's economic, social, and environmental development forecast values by 2020 have been determined and it was found that according to the optimistic scenario, the integrated development indicator calculated on their basis will grow by an average 10.5%. The choice of the driver also depends on the socio-economic system reaction rate to changes in the external environment. So, if the value of the average rate of change of the integral development indicator is 0, it means that there is no reaction (you should choose a starting driver), if it is from 0 to 10% it means a slow reaction (you should choose a generating driver), from 10 to 20% it means a moderate reaction (you should choose an accelerating driver), if it is more than 20% it means quick response (you should choose a supporting driver). According to calculations of the average rate of change in the integral development indicator in Ukraine, there is a slow reaction to the change in the external environment, and therefore, there

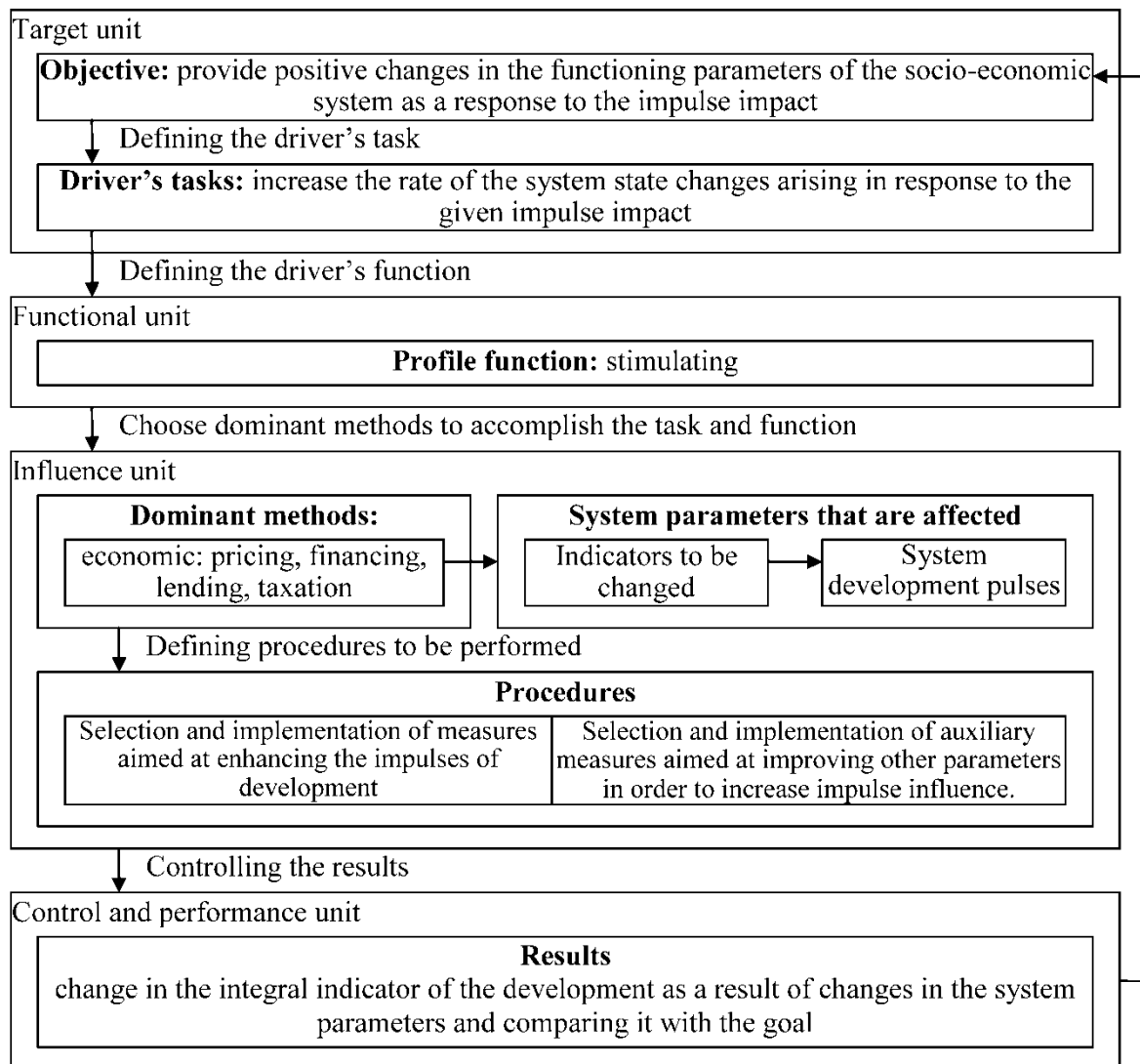
is a need to use a generating driver. Generating management driver is the key to developing a strategy for managing the development of the national economy of Ukraine. The structure of the generating driver is shown in Figure 5.



**Fig. 5. The structure of the generating driver for managing the development of the national economy**

At the same time, for the EU countries, an accelerating driver should be used because, unlike the national economy of Ukraine, for the European Union as a system, a moderate reaction is typical according to the interpretation of the average rate of change of the integral development indicator, and therefore, it is necessary to use an accelerating development management driver.

The structure of the accelerating development management driver is presented in Fig. 5. The main difference between the accelerating and the generating drivers is in the influence, target, and functional units. The generating driver for development management is mainly aimed at creating conditions to ensure the timely change of the system in response to a certain influence. At the same time, the main function of this type of development management driver is formative, and the methods that should dominate to accomplish the task and functions are mainly administrative and economic, with a significant advantage of the first. But the main function of the accelerating development management driver is promotional.



**Fig. 6. Accelerating Development Driver Pattern**

*Source: developed by the author*

As can be seen from Fig. 6, the main objective of the accelerating control driver is to ensure positive changes in the parameters of the socio-economic system functioning as a result of accelerating the reaction rate to the impact of development impulses. At the same time, it is generally acknowledged that a combination of investment and innovation should be the impetus for the development of GDP. Thus, a number of scientists (Kacprzyk, & Doryń, 2017)<sup>17</sup> confirm in their research that, despite the relatively high level of performance indicators

<sup>17</sup> Kacprzyk, A., & Doryń, W. (2017). Innovation and economic growth in old and new member states of the European Union, *Economic Research-Ekonomska Istraživanja*, 30 (1), 1724–1742. doi: <https://doi.org/10.1080/1331677X.2017.1383176>

of the European Union, the differences in the gross domestic product (GDP) per capita remain significant in all European countries. This raises the question of possible measures that can be taken to narrow this gap. Although the discussion of the determinants of development is quite a popular topic, there is a growing consensus between economists and politicians that it is the investment in knowledge that is the centre of the endogenous growth process that is the prerequisite for achieving consistently high growth rates. The hypothesis about the role of innovation in ensuring high rates of growth, which is a sign of accelerated economic development of the country, has been confirmed in the work of other scholars (Madsen, 2008<sup>18</sup>; Ang, & Madsen, 2011<sup>19</sup>). Scientists, using data from six Asian economic countries, demonstrated an amazing pace of economic development in the second half of the twentieth century, investigated how much their rate of change in indicators was based on research and development. Research has proven that Schumpeter's ideas about recognizing innovation as the determining factor for development are fully fair. In another research paper (Sterlacchini, 2008<sup>20</sup>), the author, although he recognizes the role of innovation as one of the development factors, claims that it plays a big role in developed countries with a high level of GDP.

Paying tribute to the role of innovation and investment in the economy, some scientists tried not only to confirm it using various methods of economic and mathematical modelling but also to determine the factors affecting the success of their implementation. Empirical results obtained by individual scientists (Rodríguez-Pose, & Crescenzi, 2008<sup>21</sup>) show the meaning in this context of the interaction between local and external research, on the one hand, with local and external socio-economic and institutional conditions, on the other. They also point to the importance of transferring economically productive knowledge since it is the diffusion of innovations that has the greatest effect. It is with these impulses that development management must be exercised.

---

<sup>18</sup> Madsen, J. B. (2008). Economic growth, TFP convergence and the world export of ideas: A century of evidence. *The Scandinavian Journal of Economics*, 110, 145–167. doi: <https://doi.org/10.1111/j.1467-9442.2008.00530.x>

<sup>19</sup> Ang, J. B., & Madsen, J. B. (2011). Can second-generation endogenous growth models explain the productivity trends and knowledge production in the Asian miracle economies? *Review of Economics and Statistics*, 93, 1360–1373. doi: [https://doi.org/10.1162/REST\\_a\\_00126](https://doi.org/10.1162/REST_a_00126)

<sup>20</sup> Sterlacchini, A. (2008). R&D, higher education and regional growth: Uneven linkages among European regions. *Research Policy*, 37, 1096–1107. doi: <https://doi.org/10.1016/j.respol.2008.04.009>

<sup>21</sup> Rodríguez-Pose, A., & Crescenzi, R. (2008). Research and development, spillovers, innovation systems, and the genesis of regional growth in Europe. *Regional Studies*, 42, 51–67. doi: <https://doi.org/10.1080/00343400701654186>

## **CONCLUSIONS**

Thus, it has been found that the characteristics of economic development in the context of the influence of global processes are determined by the presence of positive aspects. The calculations showed that key indicators on the parameter of the functioning results of the EU countries as a socio-economic system have pronounced upward trends. This is obviously a manifestation of the stability of the pace of development of the European Union countries, especially in comparison with the unstable situation in Ukraine. Through the method of analytical alignment based on the correlation-regression modelling, trend models were built summarizing the economic, social, and environmental development of the EU countries. The results of the built models use allowed justifying the use of an accelerating driver for managing the development of the European Union and noting the differences from the generating driver, which is recommended for Ukraine.

Based on the results of forecasting, a further development strategy for the European Union can be developed, in which the need to use a management driver focused on stimulating development by increasing investments and innovations, which act as development impulses, should be taken into account.

## **SUMMARY**

The article generalizes arguments and counter-arguments within scientific discussion concerning the problems of the choice based on the results of forecasting of development management drivers as a specific mechanism of development management of national and international systems.

The main purpose of the research is identifying the main trends of parameters of Ukrainian and European economies functioning, development of indicators forecasting as complicated dynamic economic and social system and establishing priorities of development management of the national economy compared with European Union based on proposed development management drivers.

The scientific problem solution is of great urgency because development providing spontaneous or controlled crossing from one unique condition (state) to another through change process is an important essential characteristic of any social and economic system of Ukrainian and European national economies.

The purpose of development should be harmonization of its three components: economic, social, and ecological. In order to achieve this purpose, it is necessary to improve development management based on forecasting.

The structure of management drivers that are to be used in different conditions was examined. The choice of driver type of development management for the European Union and Ukraine was made based on forecasting; the main impulses of their development were determined.

The research empirically confirmed and theoretically proved that for European Union countries, it is necessary to use the accelerating driver of development management aimed at stimulating function while managing their development.

The results of the research can be useful for further forecasting of the European Union development as a social and economic system and designing of the European Union's development strategy. Using accelerating driver of management should become its compulsory instrument allowing activating impetus of their development such as investment and innovation.

## REFERENCES

1. Kranjac, M., Sikimić, U., Tomić, S., & Vapa-Tankosić, J. (2017). The Contribution of EU Funds to Wellbeing and Sustainable Development in Central European Countries. *European Journal of Sustainable Development*, 6 (1), 85–102. doi: <https://doi.org/10.14207/ejsd.2017.v6n1p85>
2. Karel, W., Brauers, M., Baležentis, A. & Baležentis T. (2012). European Union member states preparing for EUROPE 2020. An application of the MULTIMOORA method, *Technological and Economic Development of Economy*, 18 (4), 567–587. doi: <https://doi.org/10.3846/20294913.2012.734692>
3. Simionescu, M., Dobeš, K., Brezina, I., & Gaal, G. (2016). GDP Rate In The European Union: Simulations Based On Panel Data Models. *Scientific Papers Journal of international studies*, 9 (3), 191–202. doi: <https://doi.org/10.14254/2071-8330.2016/9-3/15>
4. Bruno, G. S. F. (2005). Estimation and inference in dynamic unbalanced panel-data models with a small number of individuals. *The Stata Journal*, 5, 473–500. Retrieved from: <http://www.statajournal.com/article.html?article=st0091>

5. Gayer, C. (2006). Forecast Evaluation of European Commission Survey Indicators, *Journal of Business Cycle Measurement and Analysis*, 2005/2. doi: <https://doi.org/10.1787/jbcma-v2005-art2-en>
6. Schneider, A., Hommel, G., & Blettner, M. (2010). Linear Regression Analysis – part 14 of a series on evaluation of scientific publications. *Dtsch Arztebl Int*; 107 (44): 776–82. doi: <https://doi.org/10.3238/arztebl.2010.0776>
7. Eurostat (2018). *Your key to European Statistic*. Retrieved from: <https://ec.europa.eu/eurostat/data/database>.
8. Acharya, V., Philippon, T., Richardson, M., & Roubini, N. (2009). The Financial Crisis of 2007-2009: Causes and Remedies. *Financial Markets. Institutions & Instruments*, 18 (2), 89–137. doi: [https://doi.org/10.1111/j.1468-0416.2009.00147\\_2.x](https://doi.org/10.1111/j.1468-0416.2009.00147_2.x)
9. Zych, I., Ortega-Ruiz, R., López, M. M., & Llorent, V. J. (2015). Causes and Solutions for the Economic Crisis According to the International Scientific Community. *Universitas Psychologica*, 14 (1), 367–379. doi: <https://doi.org/10.11144/Javeriana.upsy14-1.csec>
10. Rapoport, A., & Gerts, A. (2010). The Global Economic Crisis of 2008-2009, *Problems of Economic Transition*, 53:6, 45–62. doi: <https://doi.org/10.2753/PET1061-1991530603>
11. Vieira, F. V. (2011). The new international financial crisis: causes, consequences and perspectives, *Brazilian Journal of Political Economy*, 31 (2 (122)), 217–237. doi: <https://doi.org/10.1590/S0101-31572011000200003>
12. Eurostat (2018). *Your key to European Statistic*. Retrieved from: <https://ec.europa.eu/eurostat/data/database>.
13. State Statistics Service of Ukraine (2018). *Statistic Information*. Retrieved from: <http://www.ukrstat.gov.ua> (in Ukrainian)
14. Nix, S. B. (2014). Responding to the Russian Invasion of Crimea: Policy Recommendations for US and European Leaders. *European View*, 13 (1), 143–152. doi: <https://doi.org/10.1007/s12290-014-0297-3>
15. Nitoiu, C. (2016). Russia and the EU's quest for status: the path to conflict in the post-Soviet space, *Global Affairs*, 2:2, 143–153. doi: <https://doi.org/10.1080/23340460.2016.1163775>
16. Wolczuk, K. (2016). Ukraine and Europe: Reshuffling the boundaries of order. *Thesis Eleven*, 136 (1), 54–73. doi: <https://doi.org/10.1177/0725513616667666>

17. Kacprzyk, A., & Doryń, W. (2017). Innovation and economic growth in old and new member states of the European Union, *Economic Research-Ekonomska Istraživanja*, 30 (1), 1724–1742. doi: <https://doi.org/10.1080/1331677X.2017.1383176>
18. Madsen, J. B. (2008). Economic growth, TFP convergence and the world export of ideas: A century of evidence. *The Scandinavian Journal of Economics*, 110, 145–167. doi: <https://doi.org/10.1111/j.1467-9442.2008.00530.x>
19. Ang, J. B., & Madsen, J. B. (2011). Can second-generation endogenous growth models explain the productivity trends and knowledge production in the Asian miracle economies? *Review of Economics and Statistics*, 93, 1360–1373. doi: [https://doi.org/10.1162/REST\\_a\\_00126](https://doi.org/10.1162/REST_a_00126)
20. Sterlacchini, A. (2008). R&D, higher education and regional growth: Uneven linkages among European regions. *Research Policy*, 37, 1096–1107. doi: <https://doi.org/10.1016/j.respol.2008.04.009>
21. Rodríguez-Pose, A., & Crescenzi, R. (2008). Research and development, spillovers, innovation systems, and the genesis of regional growth in Europe. *Regional Studies*, 42, 51–67. doi: <https://doi.org/10.1080/00343400701654186>

**Information about the author:**

**Kononova I. V.**

PhD in Economic Sciences, Associate Professor,  
Department of Accounting, Economics  
and Personnel Management of Enterprise,  
Prydniprovskaya State Academy of Civil Engineering  
and Architecture, Ukraine



## **CHAPTER 8**

### **PROCESSES OF ECONOMIC GLOBALIZATION AND THEIR EFFECT ON DIVERSIFICATION**

**Korinko M. D.**

#### **INTRODUCTION**

In the current economic development of Ukraine, diversification should be considered in connection with the processes of globalization of the world economy. There have become popular ideas on the need for concentration of efforts in key areas of economic activity. The reason for this has become the processes of spreading the factors of the geographical and financial impact on the state of production and the desire of product manufacturers to reduce costs, using the effect of the economy on the scale of production. This is exactly what determines the fact that enterprises define their areas of activity focusing on key business areas that are in line with the state of development of globalization processes.

The current stage in the development of international business is characterized by profound changes throughout its system. Its essential feature is globalization, which involves strengthening the interdependence and mutual influence of different areas of international business. Globalization processes predetermine the state where no phenomenon in a society, regardless of its nature, either economic, political or legal, cannot be considered in isolation from others.

Globalization of the economy introduces changes to traditional views on the quality of goods and services, their level of production costs, productivity, production time, etc. This forces the founders and senior executives to develop draft decisions on changes in the business of companies, adapting it to new conditions and creating new competitive advantages. Competition between companies is more often more acute than it is at the national level as fundamentally different methods of competition are used. Most companies were originally engaged in only one industry, one business area. Even if they did not avoid the diversification process in other sectors, a significant part of the income from their activities continues to flow from the previously developed industry. Diversification is a promising strategy in the

situation when the company exhausts all the opportunities for further growth in its business (including any integration opportunities to strengthen its competitive position).

### **8.1. Globalization processes in the development of international entrepreneurship**

The most important factor determining the further development of the world economy of the modern period is the globalization of the world economy. It is based on the growing interdependence of national economies and their closer integration. The process of globalization covers not only the level of interstate relations but all levels of the economy.

Primarily globalization is considered to be an important source of new opportunities; on the other hand, it is the cause of many troubles and even conflicts within individual states, as well as between countries (regions). It is expedient to assess globalization as the highest stage of internationalization. In the broader context, it should mean a combination of processes and phenomena such as cross-border flows of goods, services, capital, technology, information, and cross-border movement of people, predominant orientation in the world market in trade, investment and other transactions (at the level of companies), territorial and institutional integration of markets, as well as the emergence of global problems in terms of environmental degradation or excessive population growth, for which global cooperation is required. A characteristic feature of globalization is the existence of international flows, which under liberalization conditions are almost or completely not controlled by national legislation. Basically, these are the streams of capital and information. Globalization originates from the process of internationalization, which, from the standpoint of individual countries develops in two directions – inward and outward. Inward development means that the process goes through the expansion of the use of foreign goods, capital, services, technology, and information in the sphere of domestic consumption of this country. Outward development is characterized by the predominance of the country's orientation to the world market and the global expansion of companies in trade, investment, and other transactions. The main consequence of this process along with the growing interdependence of states is the spatial and institutional integration of markets, which stimulated economic progress.

According to a more in-depth analysis of the current definitions of this term, three main general methodological approaches are identified. Within the framework of the first approach, globalization is considered as a modern manifestation of processes of internationalization deepened and modified under the influence of the technological and innovation component of international business. This approach in the relevant definitions is presented by N. Dumnaia<sup>1</sup>, A. Nekipelov<sup>2</sup>, I. Osadchaia<sup>3</sup>. The similar approach is presented in the Ukrainian economic encyclopaedia as follows “Globalization is a category that reflects the process of exchange of goods, services, capital, and labour force that extends beyond the borders of the state and from the 60s of the twentieth century acquires the forms of constant and steady growing interstate binding of national economies”<sup>4</sup>.

Such a theoretical approach to the interpretation of globalization actually brings it to the next evolutionary stage of the development of internationalization in the world economy. The presence of another definition largely determines the need for other approaches to the interpretation of the phenomenon of globalization rather than reducing its evolutionary forms to reflection using a different category. That is why most economists do not share the idea of the evolutionary succession of globalization of internationalization processes. Such succession may have a chronological character while at the substantive level it may differ from the phenomenon – the chronological predecessor, even if its precondition represents the most complete and vivid forms. For example, E. Kochetov introduces another intermediate stage between multinationalization and internationalization – mondialization. Accordingly, internationalization presupposes the presence of relatively isolated national economies linked to each other through the world market. Mondialization provides the integrity of the world economy on the basis of integration-reproductive links, whereas globalization, in his opinion, is “not so much as the strengthening of economic interrelations and interpenetrations as the creation of economic relations that ensure

---

<sup>1</sup> Думная Н. Глобальная экономика – новая среда международного бизнеса. *Интернационализация и глобализация на бизнеса*. Свищов, 1998. С. 2–16.

<sup>2</sup> Некипелов А. Обзор: Глобализация как вызов национальным экономикам. Понятие глобализации. *Свободная мысль*. 1999. №1. С. 117.

<sup>3</sup> Осадчая И. Глобализация и государство: новое в регулировании экономики развитых стран. МЭиМО. 2002. №11. С. 3–14.

<sup>4</sup> Глобалізація / Економічна енциклопедія: У трьох томах. Т. 1. Київ : Видавничий центр «Академія». 2000. С. 264–265.

survival and development in the context of the evolution of man and nature”<sup>5</sup>. S. Moiseyev and K. Mikhailenko raise the issue to a more restricted verification framework for economic analysis, arguing that “the term ‘internationalization’ largely reflects the situation when operations in foreign markets are increasing while ‘globalization’ means more and more integration of national economies, including financial markets, which ultimately leads to the creation of a single market”<sup>6</sup>.

Formation of the unity of the world in the process of globalization, through which the world economy acquires completed holistic forms, is the methodological basis of alternative approaches to the interpretation of globalization. They rely on a broader conceptual vision of globalization processes that creates the preconditions for convergence and homogeneity of societies, countries, cultures, world outlook, etc. For example, V. Havel defines globalization as “a process that reduces diversity”<sup>7</sup>. W. Anderson regards globalization as “the flow of forces that provide convergence that creates a real single world”<sup>8</sup>.

Convergence and rapprochement by extrapolation to the epistemological contours of economic discourse are divided into two aspects, each of which is represented by appropriate approaches. According to one of them, globalization is considered in the context of increasing interdependence and interpenetration, diffusion of economic systems, and integration at the micro and macro levels. From this very angle, globalization is considered by the experts of the International Monetary Fund<sup>9</sup>. The mentioned is supported by A. Filippenko who defines globalization as “a postmodern product, a transition from an industrial to a post-industrial stage of economic development,” from which it reveals the signs of this process, emphasizing the growing “interdependence of the economies of different countries, increasing the integrity and unity of the world economy...”<sup>10</sup> J. Stiglitz notes the integration-convergence nature of globalization. He argues that

---

<sup>5</sup> Кочетов Э. Геоэкономика. Москва : БЕК. 1999. 480 с.

<sup>6</sup> Моисеев С. Михайленко К. Terra Incognita: глобализация финансовых рынков. *Вопросы экономики*. 1999. №6. С. 123–135.

<sup>7</sup> Что требует осмысления в процессе глобализации. Резюме выступления президента Чехии Вацлава Гавела, а также результаты обсуждения, состоявшегося на конференции в Университете штата Мичиган. *Трансформация*. 2000. Август-сентябрь. С. 4.

<sup>8</sup> Anderson W. All Connected Now. Life in the First Global Civilization. N.Y.: Westview Press. 2001. 320 p.

<sup>9</sup> World Economic Outlook. Wash. (D.C.): IMF. 1997. P. 44–48.

<sup>10</sup> Глобалізація економічних процесів. Світова економіка : Підручник / А.С. Філіпенко, О.І. Рогач, О.І. Шнирков та ін. Київ : Либідь, 2000. С. 51–66.

globalization is “ever closer integration of countries and peoples generated by a gigantic decline in transport and communications costs and the removal of artificial barriers to the movement of goods, services, capital, knowledge, and to a lesser extent people across national borders”<sup>11</sup>.

Within the framework of this conceptual direction but with some difference in emphasis, the third approach to the definition of globalization is based on the fact of convergence and integration of markets. Without neglecting the fundamental essential and integrative principle of globalization, Ch. Hill also focuses on the primacy of market integration into a holistic system: “...we call the process of globalization a move towards a more integrated and interconnected world economy. This process has two main components: the globalization of markets and the globalization of production. The globalization of markets is the process of uniting historically separate and distinct national markets into one large market space”<sup>12</sup>. G. Kolodko states that globalization lies in “the creation of a single world-wide capital market type” or “is the process of creating a liberalized and integrated world market of goods and capital, as well as the formation of a new international institutional system that serves the development of production, trade, and financial flows in worldwide scale”<sup>13</sup>.

Concerning two interpretative trends, which emphasize either the growth (strengthening) of the interdependence of national economies, or the formation of a single market as a result of their integration and association, it can be argued that these processes reflect particular aspects of one phenomenon and cannot claim the role of defining self-sufficiency. Thus, the integration of markets that are geographically and historically united in one economic and practical space reflects the aspect of the formation of holistic business communication networks, which, of course, do not take into account fragmentation of such space by affiliation to a separate political state. This very idea reflects the fact that as a result of such integration, the interdependence of individual states and separate sectors of national economies increases, as the formation of their elements and components at the micro level takes place on a cross-cutting basis and under the influence of the ongoing market-based allocation processes. Accordingly, it is these aspects in

---

<sup>11</sup> Stiglitz J. *Globalization and Its Discontents*. N.Y.: W.W. Norton&Co, 2002. 300 p.

<sup>12</sup> Гіл Ч. *Міжнародний бізнес*. Київ : Основи, 2001. 854 с.

<sup>13</sup> Колодко Гж. *Глобалізація і перспективи розвитку постсоціалістичних країн*. Київ : Основні цінності, 2002. 248 с.

their totality should serve as a reference point for the verification of globalization processes.

Economists P. Hirst and G. Thomson argue that globalization is fundamentally different from the phenomenon of internationalization; it should be understood as “the formation of a new economic structure and not only as a conjuncture shift towards the intensification of international trade and investment within the existing system of economic relations”<sup>14</sup>.

In general, this trend is not new: the process, which was previously taken to be called “internationalization of economic life”, has been going on for decades. It is difficult to disagree with this, but at the same time, in recent years, the accumulated quantitative changes have led to a qualitative leap, to a new status of economic life in general, new content for such seemingly self-evident, established concept as the “world economy”. The undeniable fact is that there have taken place qualitative changes in the structure and dynamics of the world economy since the 90s. The 20th century is the growth of the openness of national economies, which is bordered by the erosion of national borders, which has led to more accelerated growth in the world trade and investment; the emergence of global standards of production, consumption, trade, and finance. On the other hand, globalization is not an objectively determined and uncontrolled process, in any case, not so much that national governments and countries could not consciously find their place in the global economy.

Transnationalization is an important component of the internationalization process and one of the main sources of globalization, within which a certain share of production, consumption, export, import, and income of the country depends on the decisions of international centres outside the country. The process of globalization of the economy has accelerated in recent decades when different markets, in particular, capital, technology, and goods, and to a certain extent, labour, are becoming increasingly interconnected and integrated into a multilayer network, creating new connections in production, product development, design, commodity universalisation, and marketing. The main area of globalization is the international economic system (world economy), that is global production, exchange, and consumption, carried out by enterprises within national economies and in the world market. The international economic system has grown into a complex structure that

---

<sup>14</sup> Герст П., Томсон Г. Сумніви в глобалізації. Пер. з англ. Київ : К.І.С., 2002. 306 с.

has about 200 political units, including 187 states. All of them are, to some extent, involved in the production of the aggregate product and are trying to build and regulate their national markets. This is due to an extremely difficult situation in terms of the internationalization process, and not only in connection with the emergence of new political and economic centres involved in decision-making. New industries based on modern technologies have created the need for designing relevant international structures. The scientific and technological progress that underlies technological change is by its nature an international process.

Production and consumption in many countries depend decisively on whether they can provide the import of raw materials and energy carries. A number of countries in support of their economic growth are in urgent need of the import of capital and consumer goods and sometimes of skilled labour. Such international interconnections necessitate the intensification of financial flows and services, the network of international freight transportation and communications.

The result of deepening the internationalization process is the interdependence and interaction of national economies. It can be perceived and interpreted as the integration of states into a structure close to a single international economic system. Although the bulk of the global product is consumed in producing countries, national development is increasingly aligned with global structures and is becoming multi-faceted and diverse.

The modern world is developing towards a global economy in which goods, services, financial capital, people, information, knowledge, ideas freely overcome the geographical boundaries of states. There are essentially new essences (such as the global market, global company) and phenomena (global competition, global cooperation, etc.). The global economy is a completely different way of global economic management, based on the subordination of both domestic and international economic processes to unified laws.

A comprehensive analysis of world trends in the global market for services in the conditions of globalization, transnationalization, and regionalization, conducted by G.O. Voroshilova, provided an opportunity to identify topical issues of globalization and its impact on the development of the world market for services<sup>15</sup>.

---

<sup>15</sup> Ворошилова Г. О. Концептуальні засади дослідження глобалізації та її впливу на розвиток світового ринку послуг. Глобальні та національні проблеми економіки. 2017. №16. С. 38–42. URL: [http://global-national.in.ua/archive/16-2017/16\\_2017.pdf](http://global-national.in.ua/archive/16-2017/16_2017.pdf)

Globalization processes are connected with a qualitatively new era in the development of international entrepreneurship. The technological gap, income gap, and inequality between regions, countries and in the midst of countries are increasing. This suggests that further integration of the world economy will continue, but this process will remain rigid in terms of competition, asymmetric in terms of inequality between winners and losers.

Analysis of the problematic aspects and positive effects of globalization and integration processes on the Ukrainian economy was made by N.O. Botvyna. It is determined that globalization touches on all the aspects of the socio-economic life of practically all countries of the world and that this process is objective and irreversible<sup>16</sup>.

International activity is expanding through the acquisition or creation of new companies, organization of joint ventures or entering into other types of associations. For international, by the nature of corporations, the most typical concentration is the kind of economic activity that is associated with international exchange. The growth of exports is the result of deepening of specialization, which in turn contributes to an increase in production volumes. In economic theory, the link between the development of export specialization and the country's economic growth is characterized by the following: an increase in exports by 1% leads to a 0.1% increase in the Gross Domestic Product. The structure of the industry is characterized by such categories as the number and size of companies, the degree of product diversification, barriers to penetration into the industry. When it comes to international industries, an important parameter is the degree of internationalization of companies that comprise it.

The globalization of the economy forces companies to completely determine their development strategy in a new way. It becomes increasingly difficult to divide the strategy into internal and external, competitive and structural. Goods and services are produced as a result of the transformation of capital, which at the same time has material and monetary, labour and intellectual forms. The presence of all these forms of capital at the disposal of the company is a prerequisite for its business activity.

---

<sup>16</sup> Ботвіна Н. О. Вплив глобалізаційних та інтеграційних процесів на економічну безпеку України. *Економічний аналіз*: зб. наук. праць. Тернопіль : Видавничо-поліграфічний центр ТНЕУ «Економічна думка», 2014. Том 16. № 1. С. 28–33. URL: [https://www.econa.org.ua/index/econa/article/.../pdf\\_35](https://www.econa.org.ua/index/econa/article/.../pdf_35).



Monetary and material capital has become relatively more affordable, despite the reduction in the share of savings in industrialized countries. In the modern world, there is no competition, and cooperation of companies becomes the basis of their business success and prosperity. Cooperation and collaboration give companies immeasurably more significant strategic competitive advantages than the competition itself. Just like the war, it is probably the most competitive of all conceivable forms of behaviour, and its success most often depends on participating in the right alliance.

The economy of the modern period of development of society, in which the strategic positions of business increasingly depend on its cooperative ties in the business environment, makes the managers constantly ask themselves: who can I unite with, how I can unite with those, who share my interests and goals to achieve our common goals? Managers can make their companies more competitive by creating coalitions with those who share common interests with workers, managers, suppliers, buyers, and even fierce rivals.

The study provided an opportunity to highlight at least three reasons why cooperation in the modern world becomes more important for business success than the competition.

Cause 1 is the globalization of the economy. In a globalized world, it is strategically more important for any business to be a part of the world (global) economic system than to oppose it. Becoming a part of the global economic system (this can only be achieved through cooperation and collaboration, and in no way through competition), the business will develop synchronously with the world economy.

Cause 2 deals with intellectualization of business. Production of goods and services is increasingly in need of the use of intellectual capital – knowledge. Products and services are becoming more complex and require the use of a portfolio of well-known technologies for their production. This, in turn, is possible only as a result of cooperation, and not as a result of struggle and confrontation in the market.

Cause 3 denotes that the depth of specialization in society has reached the level at which the appearance of the final product or service is possible only if all members of the value chain are interested in it. If in the early stages of the development of industrial production, the value chain was essentially double-sided (supplier and manufacturer), and ready for sale in the market, the cost appeared from the manufacturer, in

the modern world the number of such links is much larger, and thus it is practically impossible to distinguish the main one.

According to the results of the study, it is worthwhile to note that the global trend of the world economic development is the globalization of the world economy, the basis of which is the growth and complication of interconnections between the economies of individual countries.

## **8.2. Diversification under the conditions of globalization processes**

According to the study of the essence of diversification, its purpose is to increase the value of equity capital. This occurs when several companies merger and can achieve better results under the guidance of one parent company than if they acted alone. This diversification gives an opportunity to increase equity capital provided that the criteria of attractiveness, entry costs, and additional benefits are met.

The study established the existence of two main ways of diversification:

- diversification in related industries;
- diversification is non-core.

The basis for implementing the first mode of diversification is a strategic perspective. The merging of companies with strategic relevance leads to the emergence of additional competitive advantages, the use of which ultimately provides an opportunity to increase the value of equity. Areas of activity are strategically matched when their value chain offers the potential for:

- 1) the implementation of economies of scale or reduction of production costs associated with the sharing of technologies, production capacities, distribution network or brand;
- 2) the transfer of innovation (experience or technology);
- 3) additional differentiation.

The reason for the managerial decision to diversify into an unrelated industry is the fact that any company that has high returns and can be acquired on favourable terms deserves attention regardless of which industry it belongs to. That is, this kind of diversification takes place mainly for financial results, and not for compliance with a strategic match. The benefits of such diversification are as follows:

- 1) the distribution of risk between companies that are members of different industries;
- 2) the ability to quickly obtain a financial return (in the case when the company being acquired has a large potential of opportunities,

including an appropriate management system, or needs the support of a stronger company for the implementation of profitable projects);

3) it is theoretically assumed that the third advantage of diversification in an unrelated industry is to reduce dependence on changing the phases of the cycle and obtaining greater financial stability.

However, the achievement of these three benefits leads to the need for constant attention of corporate governance to the management of the company in order to avoid possible negative consequences of non-core diversification.

The number of companies in the conglomerate and the level of their diversification necessitate a significant amount of information provision of corporate governance and each company with the aim of: determining the profitability of purchasing, selecting the most suitable managers for each company, obtaining sufficient knowledge about their strategic goals.

If the top management of the corporation lacks exceptional management capabilities, non-core diversification of companies belonging to different industries may be less successful compared to diversification in related industries.

As a result of the aforementioned diversification, the objective of corporate management is managing the economic portfolio of companies, which are a part of the corporation, with the maximum possible prediction of the prospects for their development.

According to the results of the study, six strategic approaches have been identified which contribute to the improvement of the diversified company's activities:

1) to purchase new companies;

2) to get rid of enterprises whose performance has appeared to be unsuitable for certain purposes or those that do not have long-term development prospects;

3) to restructure the economic portfolio if the results of the enterprise activity are low and growth prospects are not monitored;

4) switch to diversification on a different basis;

5) use multinational diversification;

6) get rid of unprofitable enterprises with potentially low activity.

The main way to get rid of an unattractive or non-profit business is to sell it. Sometimes such enterprises are transformed into financially independent companies, in which the parent company may retain a part of the shareholding.

Corporate strategy for restoring, saving, and restructuring the portfolio is used when corporate management has decided: to make efforts to “cure the sick business portfolio.” Low performance of companies may be caused by large losses in one or more industries, which affects the activities of the entire corporation, the presence of too many enterprises in unsustainable industries, the growth of non-payment companies, the acquisition of enterprises that did not meet the original expectations.

The corporate strategy of recovery aims to increase the profitability of loss-making enterprises.

The corporate strategy of saving involves reducing the number of enterprises entering the corporation. In this situation, the subject of sale is small companies that do not make a tangible contribution to the activities of the corporation, as well as those that do not meet the criteria stipulated by corporate governance, as the most significant for the further development of the corporation.

Under the restructuring strategy, we mean radical changes in the company’s business portfolio, sales and purchases of companies to create a group of companies with high production rates.

Multinational diversification strategies include penetration into other sectors of the economy and different national markets. In spite of all the difficulties encountered in identifying and implementing such a large number of strategies (at least one for each industry, taking into account the specificities of national markets), multinational diversification creates significant competitive advantages for the company. Diversified multinational corporations can take advantage of the first type of diversification (economies of scale, experience transfer, and trademark sharing) to gain strong positions in several indigenous global industries. These advantages will subsequently enable a diversified multinational corporation to win competitive advantages for those companies engaged in business activity in just one industry in the national market, as well as in multinational corporations that operate in just one business. Companies that operate in one industry in the national market have only one source of profit – the consumer market of their country. An international company that deals with one type of activity may have sources of income from different countries, but they all depend on the situation in one industry. A diversified multinational corporation can use its advantage of low costs generated by economies of scale to lower its product prices until competitors’ prices are lower than the cost of their

products, thus gaining new market shares. But even without the advantage of low costs, a diversified transnational corporation can lower its products to win over competitors, and compensate for possible losses through profits gained from activities in other industries. A well-funded and effectively managed diversified transnational corporation can undermine the financial and competitive position of a company that operates in one industry in its national and/or global markets. Diversified multinational corporations can receive the most significant competitive advantage in those areas where significant economies of scale can be achieved, where there are obvious benefits to the common use of trademarks, as well as opportunities for technological exchange.

According to the results of the research and analysis of competitive strategies of transnational corporations in the context of the development of globalization processes, it has been established that globalization is the determining factor in the development of the world economy at the present stage, which is the growth of the interconnection and interdependence between the national economies of individual countries. The modern economic system is developing towards a global economy, in which goods, services, financial capital, people, information, knowledge, and ideas freely overcome the geographical boundaries of states. Under the influence of the aforementioned process, fundamentally new essences and phenomena in the global economy, such as the global market, the global company, global competition, etc., arise. The global economy is a fundamentally new way of managing the economy on a global scale, which is based on the subordination of both domestic and international economic processes to unified laws. The main economic entities of such an economy on a global scale are not the country, but transnational corporations – international by the nature of their activities of companies that own or control the production of products (or services) outside the country of origin, in different countries of the world, opening their branches there, which operate in accordance with the global strategy developed by the parent company.

At the current stage of economic development, decisions and strategies of multinational corporations are conditioned, firstly, by competition, and secondly, by market conditions. Based on the nature and extent of competition, as well as the conditions and dynamics of international markets, multinational corporations generally enjoy such competitive advantages as comparative advantages of individual countries, economies of scale, global business experience, economies of

scale of logistics, marketing, procurement, as well as patented production technologies.

In a multinational environment, in contrast to the global one, dominate local (regional) traditions in consumption, especially consumer preferences and legal norms, characteristic of a particular country. Such an environment is characteristic, in particular, for the food and light industry, when the tastes and preferences of buyers largely affect their consumer choice and behaviour at the time of purchase. The multinational environment necessitates the use of an adaptive marketing strategy, in which the decentralization relationship should be the most optimal mechanism for interaction between the parent company and its affiliated subsidiaries.

Diversification of production in agriculture, unlike other sectors of the economy, has its own characteristics, due to the specifics of agricultural production. These features can be called objective preconditions for the application of diversification<sup>17</sup>. Taking into account the peculiarities of diversification are dictated, above all, by the diversity of soils in each, even a small farm. Properties of a specific soil are favourable for some crops and quite unfavourable for others, which are an objective basis for the cultivation of various crops, including fodder, as well as the development of the livestock sector.

Another feature of the application of diversification in the field of agriculture is the need for biologization of agriculture, which manifests itself in the alternation of crops in a rational, scientifically grounded system of crop rotation, which provides for the maximum supply of culture with nutrients. Thus, any farm has several types of raw materials of its own production (that is, relatively cheap). The above determines the formation of diversification projects in terms of creating their own processing. The incentive for the organization of processing, as well as its own product sales channels, is also a very large discrepancy in the prices of raw materials and finished products. Serving and processing enterprises are usually monopolists, which dictate their will to agricultural enterprises. This leads to the fact that agricultural commodity producers are forced to sell their products at low prices, and much of the profit remains in the sphere of processing and marketing.

---

<sup>17</sup> Зоренко О. В. Деякі аспекти диверсифікації сільськогосподарських підприємств. *Економіка: проблеми теорії і практики*: зб. наук. пр. Вип. 204: в 5 т. Том IV. Дніпропетровськ : ДНУ, 2005. С. 1028–1034.

The precondition for self-processing is the location of agricultural enterprises, their remoteness from the district and regional centres, and consequently, significant transportation costs. The conditions for own processing provide an opportunity not only to realize the finished products among the local population but also to issue them for the salary of employees of the enterprise.

To the peculiarities of agriculture, which should be taken into account in the process of development of diversification projects, the seasonal use of labour can be referred. Periods of intense work alternate with relatively calm, which makes it possible to use workers at this time in other areas of diversified production, and thus increase the efficiency of labour resources utilization, the level of productivity, the income of the population. The possibility of manoeuvring by the directions of production gives the agricultural producers simple types of labour that do not require considerable time for special training of workers.

The seasonal nature of the production process in agriculture also leads to the fact that enterprises do not have enough material to start it. The implemented project of diversification of production will ensure the equal income of the enterprise, provide the opportunity to use as little as possible the borrowed banking capital, which in today's conditions is unavailable for many agrarians due to high rates of loans, disparities in prices for agricultural products and resources for its production.

The peculiarities of agriculture, which should be taken into account in the process of developing diversification projects, include instability associated with natural factors (natural conditions). Unfavourable weather conditions lead to highly specialized enterprises not only to losses but also to bankruptcy. This feature predetermines the need for management to combine the main activity with the spheres where the result of the activity does not depend on the climatic factor (for example, provision of transport services, construction works, repair of equipment, services to the population, etc.).

Projects of diversification in the field of agro-industrial production should include: expansion of the nomenclature and assortment, change of the type of products produced by the enterprise, development of new types of industries for improving the efficiency of the economy, obtaining economic benefits, preventing bankruptcy, taking into account the ecological state and social needs of the population.

## **CONCLUSIONS**

The modern world is developing towards a global economy in which goods, services, financial capital, people, information, knowledge, ideas freely overcome the geographical boundaries of states. The basis of globalization is the growth of the interdependence of national economies and their closer integration. Formation of the unity of the world in the process of globalization is the methodological basis for the interpretation of globalization. The global economy is a fundamentally new way of managing the economy on a global scale, which is based on the subordination of both domestic and international economic processes to unified laws. Globalization is an important source of new opportunities and the cause of many disadvantages and even conflicts within individual states, as well as between countries (regions).

The processes of globalization have an impact on all the aspects of social and economic life in all countries of the world. It is determined that the process of globalization is objective. It has been established that globalization opens up more opportunities for the development of the world and national economies but the pace of its spread is uneven. The process of integration into the world economy is carried out by individual states more quickly. The mentioned provides them with higher rates of growth of the national economy, in particular, due to the diversification of activities of companies and corporate associations of the international level. Improving living standards in these countries creates additional opportunities for the development of democracy and the resolution of issues related to economic security. Enterprises define their areas of activity, focusing on key business areas that are in line with the state of development of globalization processes. The reason for the managerial decision to diversify into an unrelated industry implies that the company is highly profitable and can be acquired on advantageous terms, regardless of the industry it belongs to. Diversification of the industry should take into account its specifics, as well as specifics of activities of its companies and corporate formations.

## **SUMMARY**

The article deals with the actual problems of globalization. The questions of the influence of processes of globalization on diversification of activity of companies and corporate associations are covered. Economic “globalization” is a historical process, which is the result of innovation in society and technological progress. The author



presents the results of the analysis of global trends in the development of the world economy in conditions of globalization, internationalization, transnationalization, and regionalization. The available approaches of well-known economists to the definition of globalization are explored. The results of the analysis of problem aspects and positive effects of globalization and integration processes on the Ukrainian economy are highlighted. The possibilities of corporate associations that are created by the results of globalization processes are revealed. The main features of diversification of activities by sectors of the economy are presented; in particular, such features are highlighted for agriculture.

### REFERENCES

1. Думная Н. Глобальная экономика – новая среда международного бизнеса. *Интернационализация и глобализация на бизнеса*. Свищов, 1998. С. 2–16.
2. Некипелов А. Обзор: Глобализация как вызов национальным экономикам. Понятие глобализации. *Свободная мысль*. 1999. № 1. С. 117.
3. Осадчая И. Глобализация и государство: новое в регулировании экономики развитых стран. МЭиМО. 2002. № 11. С. 3–14.
4. Глобалізація / Економічна енциклопедія: У трьох томах. Т.1. Київ : Видавничий центр «Академія». 2000. С. 264–265.
5. Кочетов Э. Геоэкономика. Москва : БЕК. 1999. 480 с.
6. Моисеев С. Михайленко К. Terra Incognita: глобализация финансовых рынков. *Вопросы экономики*. 1999. № 6. С. 123–135.
7. Что требует осмысления в процессе глобализации. Резюме выступления президента Чехии Вацлава Гавела, а также результаты обсуждения, состоявшегося на конференции в Университете штата Мичиган. *Трансформация*. 2000. Август-сентябрь. С. 4.
8. Anderson W. All Connected Now. Life in the First Global Civilization. N.Y.: Westview Press. 2001. 320 p.
9. World Economic Outlook. *Wash. (D.C.): IMF*. 1997. P. 44–48.
10. Глобалізація економічних процесів. Світова економіка: Підручник / А. С. Філіпенко, О. І. Рогач, О. І. Шнирков та ін. Київ : Либідь, 2000. С. 51–66.
11. Stiglits J. Globalization and Its Discontents. N.Y.: W.W. Norton & Co, 2002. 300 p.
12. Гіл Ч. Міжнародний бізнес. Київ : Основи, 2001. 854 с.

13. Колодко Гж. Глобалізація і перспективи розвитку постсоціалістичних країн. Київ : Основні цінності, 2002. 248 с.

14. Герст П., Томсон Г. Сумніви в глобалізації. Пер. з англ. Київ : К.І.С., 2002. 306 с.

15. Ворошилова Г.О. Концептуальні засади дослідження глобалізації та її впливу на розвиток світового ринку послуг. Глобальні та національні проблеми економіки. 2017. № 16. С. 38–42. URL: [http://global-national.in.ua/archive/16-2017/16\\_2017.pdf](http://global-national.in.ua/archive/16-2017/16_2017.pdf)

16. Ботвіна Н. О. Вплив глобалізаційних та інтеграційних процесів на економічну безпеку України. *Економічний аналіз*: зб. наук. праць. Тернопіль : Видавничо-поліграфічний центр ТНЕУ «Економічна думка», 2014. Том 16. № 1. С. 28–33. URL: [https://www.econa.org.ua/index/econa/article/.../pdf\\_35](https://www.econa.org.ua/index/econa/article/.../pdf_35).

17. Зоренко О. В. Деякі аспекти диверсифікації сільсько-господарських підприємств. *Економіка: проблеми теорії і практики*: зб. наук. пр. Вип. 204: в 5 т. Том IV. Дніпропетровськ : ДНУ, 2005. С. 1028–1034.

**Information about the author:**

**Korinko M. D.**

Doctor of Economics, Professor,

Head of Department of Audit and Entrepreneurship,

National Academy of Statistics, Accounting and Audit, Ukraine

## CHAPTER 9

### ISSUES OF PROFESSIONALIZATION OF MANAGERIAL ACTIVITY IN THE CONDITIONS OF THE MODERNIZING ECONOMY

**Kuznietsov E. A.**

#### INTRODUCTION

The process of the innovation economy formation is impossible without the effective development of modern universities. The universities' role is traditionally considered as defined in the system of the scientific and technological advance and the society's innovative development. Namely the level of the society's development is considerably determined by the quality of the universities' position in general.<sup>1,2</sup> In a poor society, the existence of rich universities is impossible. Without the development of science and educational system, universities are doomed to degradation.

Nowadays the activity of the modern classic universities is intended to represent the multifunctional direction. *First of all, universities train specialists of different spheres of knowledge, directions, and profiles.* Such activity is traditional but the conditions of its realization have considerably changed. The market for educational services appeared. In this market, the purchasers' expectations do not always coincide with universities' possibilities to provide qualitative educational and qualifying services. The variety of practical need in specialists has more considerable dynamics than the possibilities of universities to rebuild in accordance with the market motion. The new courses of the professional education, which had formed new branches of knowledge (for example, management and administration) appeared and required the development of the new research, scientific and analytical bases of the professional activity. The professional knowledge has to be adequate to the processes of the practical activity and, moreover, to outpace them building the

---

<sup>1</sup> Moskovskaia, A. A. (2011). Professionalizatsiia menedzmenta: tseli, barery, perspektivy [Professionalization of management: goals, barriers, prospects]. Sociological research. Issue 7. Pp. 26–37. (in Russian)

<sup>2</sup> Prigozhyn, A. I. (2007). Dezorganizatsiia: prichiny, vidy, preodolenie [Desorganization: reasons, types, overcoming]. Moskva. (in Russian)

strategy of further development. In such conditions, the question of the accordance of the university's educational programs to the research facilities, levels of the professional practical activity, and training of the academic staff appeared. It has changed the character of the academic staff's activity in a considerable way. So they need not only to be teachers that are possessed of the certain training procedures, but also scientific researchers systematically carrying out their own high-quality scientific projects.<sup>3</sup>

Undoubtedly, the universities' physical facilities should be strengthened and developed, but those universities that did not do it are late. Nowadays it is necessary to invest in the development of innovative training procedures, training of the universities' academic staff and the universities' administrative system. Every university defines the qualitative characteristics by means of the possibilities of the innovative technologies of the educational and research processes development, its efficient management and academic staff. Nowadays there is an urgent need not in the specialists of the industrial epoch, but in the specialists of the knowledge economy, which are able to form the new system of the innovative society's development on the basis of innovations of the fundamental science.

### **9.1. The creativeness of the scientist's personality and science development**

Some features of the scientific researches' quality and the figure of the modern scientist's type formation excite us. Our considerations of this we would like to realize in our published project, but we of course understand all the complexity of this task. Nevertheless, the vigorous, purposeful, and stable motion can overcome obstacles.

The necessity of search for the innovation factors of modern society development supposes the reconsideration of many managerial activities' conceptions of the modern era. Management appeared in the conditions of the modernist stage of human development lasted almost over the XX century transforms into the new layout of the post-industrial development.<sup>4</sup> The universality of the developed management approaches and technologies must be at least supplemented, as maximum

---

<sup>3</sup> Kuznietsov, E. A. & Safonov, Y. N. (2015). Improvement of the management professionalization mechanism in Ukraine. *Economical herald of the university. Scientific collection of scientists and post-graduates*. Issue 27/1. Pp. 112–116.

<sup>4</sup> Kammings, S. (2010). *Rekonstruktsiia strategii [Reconstruction of a strategy]*. Kharkov. (in Russian)

changed into the technologies of the innovation nature, creative thinking, and managerial behaviour. This task is difficult; it must be structured and examined in detail both in the direction of the managerial science and its practice.

Fairly, the innovation process is the supporting frame of the science's development on the whole. Of course, the scientist's personality and his/her creative thinking are crucial for science. Such a researcher creates the qualitative incensement of the science by the cut-and-try approach and obligatory finding new forms of the development.

In this context, Albert Einstein is one of the most outstanding scientific researchers. It is noted in "Einstein's Mistakes: The Human Failings of Genius" by Hans Ohanian that "the ways Einstein followed up were tortuous, full of unexpected turns and twists. His followers were patient and had more perfect mathematical tool. Instead of his confusing roads, they built broad and straight ones." There is an opinion that owing to the numerous mistakes crushing Albert Einstein's logic of evidence his main theories were created. Nowadays Einstein's personality is the striking example of creative thinking in science.

For the recent years when I visited some European universities I found that in many campuses, there were photos and pictures of Albert Einstein. Then I noticed a similar one in the different cafes where students meet. The modern universities in their search of fundamental science investigations and innovative ways of the further society's development choose Albert Einstein as the leader because his creativeness, intuition, and purposefulness in science are impressing.

Another example of the scientist's achievement of scientific research quality is "Capital" by Karl Marx. Nowadays, probably durante absentia of the investigations of such level, this book appeared in the expensive bookshops with expensive calf bound and high-quality paper that corresponds with a high price. It is evident that the book is not aimed at the investigation and meticulous work. Marx's complicated research is noted by the influential business representatives in their interviews because owing to Marx's theory they achieved great success in business. The veracity of this question we will remain on the conscience of oligarchs. In our case, the question is that besides the importance of Marx's economic theory, the essential attributes of the research are its structure, logic, methodology, and systemacity. These features of scientific research create the objective base of the economic theories' quality. It is supposed that particularly the systemacity of the

activity across the spectrum creates opportunities for the successful business. Nowadays it is impossible to work out the innovative stimulus of the growth and the adequate mechanisms of the managerial maintenance without the systemacity and structural logic of the economic development.<sup>5</sup>

Viewing the different problems of economics and management, we hope to find the possibility to show the real innovative feature of the scholarly debate, to propose the practical variants of the innovation implementation, and to discuss the critical points of the scientific progress. Creativeness in science cannot appear based on the “scientific activities’ slum”.<sup>6</sup> The systematic scientific knowledge, its fundamental principles of development and at last scientist’s personality in its socially important positive improvement are necessary.

It is necessary to remember that the scientist’s genius is defined by the power of his/her contradictions and the way how he/she succeeded to use them. These words were told by German astronomer Johannes Kepler (XVII century), who has disclosed the law of planetary motion moving from mistake to mistake till he achieved his goal. Fairly, you start to think about the significant productiveness of the scientific mistake, which necessarily leads to the discovery.

In management, a mistake in the managerial process causes a number of problems named critical points of management. Positive reaction and decision of critical points is the objective base of the management system development. The level and complexity of the critical points in the large multisectoral economic patterns and the opportunity of innovative and effective problem solving show the level of the management development, its level of scientific research and analytical scientific basis.

## **9.2. Process of management science and practice cooperation**

Taking into account the demand of the society for the movement to the innovation economics and mechanisms of knowledge management formation, it is necessary to notice attention of management researchers at the process of management science and practice cooperation defining the qualitative stages of this development. Herein the most important

---

<sup>5</sup> Gvishiani, D. M. (2007). *Izbrannye trudy po filosofii, sotsiologii i sistemnomu analizu* [Selected papers presented at philosophy, sociology and systemic analysis]. Moskva. (in Russian)

<sup>6</sup> Prigozhyn, A. I. (2007). *Dezorganizatsiia: prichiny, vidy, preodolenie* [Desorganization: reasons, types, overcoming]. Moskva. (in Russian)

question is the innovative cycle analysis.<sup>7</sup> It should be noted some features defining the essence of this problem. They are the following:

1. The process of management science and practice cooperation is multivendor and has qualitative stages of development. The fundamental logical scheme of the process is the following: “isolation – co-optation – integration – organic synthesis” of management science and practice. It should be noted that each stage is characterized both by the level of management scientific and practical development, as well as the certain mechanism of their cooperation. The characteristics of each stage are necessary for the understanding of the objectivity of the management professional system formation and development and its efficiency. The process moves in such a way that the first accidental and chaotic relations outgrow into the relations of the integrative feature. Further, the qualitative conditions of the organic synthesis stage are gradually formed. The practice becomes the continuation of science and per contra.

2. The process of management science and practice cooperation is defined by the analytical companies’ activity. They are also called consulting structures. Consulting has its specific sphere of activity, namely, it implements the searched innovation management technologies of science sphere into the practical managerial activity. Gradually consulting outgrows from the progress initiator into the active equity holder of the different innovative projects. Naturally, such a state of affairs obliges consulting companies to create the high-qualitative goodwill owing to the professional capacity of the experts, consultants, and other specialists and management of the consulting companies by itself.

3. The professional system of management is innovation management’s research object. First of all, it supposes the development of the basic management components, particularly functions and functional technologies, methods and management tools, development of structure and organizational design, and also channels of modern communications. The innovation management’s subject of the investigation is the organizational human capital, literally technologies of the movement to the functional human capital, which is the base of the goodwill’s quality and the main competitive factor in the post-industrial society. Structural and functional capital defines the company as an organizational unity. Positive dynamics, a necessary rotation,

---

<sup>7</sup> Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoï diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)

competences' levels, a specificity of powers division, and an adequate resources provision are the features of the structural and functional capital. And it is the result of the efficient work of the company's management by itself.

4. It is necessary to define the difference between two similar at the first sight categories such as "innovation" and "novelty" with the purpose of the clarification of the researched events' essence. Herewith, it is necessary to draw the lines of the investment component of these categories with signing the effect of the terminal efficiency as the main management index. De facto novelty as the certain modelled result of the fundamental, analytical, and practical investigations is formed in the form of the discoveries, inventions, managerial, financial, and production know-how, results of marketing research. But it is the intermediate result from the management efficiency point of view, after all, it is important to implement the novelty, to transform it into the form of innovation, that means to complete the innovative activity, obtain the positive result, and provide the innovation diffusion mechanism functioning. From these points, the investment into the process of the novelty appearance does not provide the final result. It is necessary to invest in the process of novelty implementation. Therefore, management is called to provide the fullness of the innovative progress from the perspectives of the quality and investments completeness. When we are talking about innovation management, the effectiveness of the intermediate stages is very important but it is not sufficient for the final result. Herein the sufficient and necessary quality of the organization structural and functional capital is the final result. Naturally, this result does not have and is not able to have exact quantitative measurement, but in the conditions of the moment's fixation, i.e. defining the market value of the company, the value of the goodwill (including the human capital) needs to have the absolutely particular qualitative index.

5. The progress of management science and practice cooperation's process consists of the creation of conditions and the transfer to higher stages of "integration" and "organic synthesis". These stages objectively form socio-economic conditions of the movement to innovation economics. The significant progress, both the management science and practice, separately takes place in the social terms, as well as mechanisms of their cooperation. But the thesis of the management science and practice development cannot get to the higher stages of the cooperation at once. But in the conditions of the developed stages of



integration and organic synthesis, the passing of first ones (isolation and co-optation) is enough shorter. Herewith, the efficiency of the current technological cycle of this cooperation does not qualitatively reduce.

We understand exactly and accept the fact that management always represents a certain ratio of approaches, forms, and methods. A sharp sense of proportion in the managerial activity is the consequence of the management high-level professional capacity. Nowadays the managerial resource is the scarcest in the world. The countries that will find the most efficient conditions of the managerial resource reproduction will be among the progressive ones in the formation and development of the innovation economics in the post-industrial development of the modern society.<sup>89</sup>

### **9.3. Modern processes of the managerial professionalization**

Modern economic crises showed the professional imperfection of the managerial mechanisms of society. Investments' efficiency, innovations' quality, socio-economic programs' direction, professional capacity of the staff of all levels, and many other fundamental indexes of the modern economics' effectiveness have not come the priorities of the state policy. In Ukraine, the opportunities of the economic reforms and antirecessionary programs ensuring depend on the qualitative level of the managerial staffs' professional capacity. Problem is also that considered conception and, as a result, practical forms and principles of the managerial staff's modern professional training are absent. Thereupon, there is either a certain "nihilism" or careless "romanticism" in solving these problems. It is widespread among politicians and experts, as well as among the management researchers. The most essential conditions of the formation and development of the managerial activities professionalization process in Ukraine are noted below<sup>10</sup>:

1. The conception of the managerial activities professionalization base needs to be the logical model of the competitiveness achievement of an economics generally, as well as a separate enterprise. The main idea is that the innovation supported by a certain level of investments is

---

<sup>8</sup> Abramov, R. N. (2005). Rossiiskie menedzhery: sotsiologicheskii analiz stanovleniia professii [Russian managers: sociological analysis of profession's development]. Moskva. (in Russian)

<sup>9</sup> Auzan, A. (2014). Ekonomika vsego. Kak instituty opredeliaiut vashu zhyzn [Economics of everything. How institutes shape your lives]. Moskva. (in Russian)

<sup>10</sup> Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoi diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)

the basis of competitiveness. The essential effectiveness factor of this process is the investments' goals achievement direction into the educational and scientific system and also into the system of professional training of the already working specialists and managerial staff. The separate structural and functional programs of the managerial staff's training must be conducted during all the period of the managerial career and in most cases on the company's account.

2. Nowadays, the role of the company's goodwill increases. The modern business structure more often operates with professional skills and capacities with the purpose of the competitiveness achievement in the market. The objective necessity of the new priority company's goal appears. And it is the human capital of the organization. Herein, the profit is only an important tool for this new structural and functional quality of the organizational human capital achievement. And personnel quality and skills are a weighty factor of the organizational investment programs development.

3. The systematic management work of the reproduction expansion of the entire company's resources must be conducted with the purpose of the company's market value increase. First of all, these resources are financial, material, informational, and human ones. However, it is necessary to provide not only the company's market value but also company's use value. These are the specific points of the company's affinity and capacity and also its business and social standing in society. The innovation process and management are supporting frame of these parameters of the company's business development achievement.

4. The system of the managerial researches has to be clearly differentiated with the purpose of the professional skills and knowledge specialization. It is necessary to define the quality and the professional specificity of the management science, the analytical activity of the consulting companies, and management practice. In this case, analytical managerial activity is the active mediator between management science and practice. Nowadays, this important segment of the managerial activity professionalization process development is in its infancy in Ukraine. And the specificity of the experts' and consultants' activities looks like the amateur's work in contrast to the European management.

In Ukraine, the important fundamental condition of the development of the managerial activity professionalization process is the development of the professional scientific and research basis of

management. Today the problem and controversial process of the improvement of the object and structure of the management scientific base takes place. For example, the problem of modern management identification in the system of the economic sciences and business practice is keenly discussed. And the question, if management is the part of economics or economics is the part of management, is the key one. Does the managerial education have the right to be independent, if the structure of its syllabuses and state standards practically do not differ from the economic ones? Is the management applied and complex science or does it have its own scientific and research basis? Answers to these and many other questions essentially define the quality and substantial filling of the management syllabuses and scientific researches.<sup>11,12</sup>

#### **9.4. Managerial processes of leadership development**

The system of leadership functioning entirely depends on the quality of the managerial activity professionalization processes. Company's leaders having the individual talents and vision of the management development necessary need to get the professional facing and develop their opportunities and potency by means of the capability to the innovation training during the entire managerial career. The whole complex of the managerial capacities, which have to be understood, coped, and implemented to the subordinates' and members' of management team perception underlie the manager's leadership skills. The main functional tasks of leader are to sparkplug the subordinates or to follow them creating the operative and professional space for the development and initiatives, the local and strategic formation of the company's intellectual capital. Leadership occurs and gives the opportunity of innovative development in the conditions of the efficient process of the management professionalization. We will consider only some managerial processes contributing to and defining the feature and capacity of the leadership system formation.

*The ratio of management centralization and decentralization.* The quality and capacity of the managerial activities administration are defined by the opportunity of the line managers to find the optimal ratio

---

<sup>11</sup> Drucker, P. (2006). O professionalnom menedzhmente [About professional management]. Moskva. (in Russian)

<sup>12</sup> Drucker, P. (2014). Effektivnyi rukovoditel [Effective manager]. Moskva. (in Russian)

of centralization and decentralization of the enterprise's managerial process. It means that the so-called "ratio optimum" is defined according to the problem solving by management in a certain situation. It is possible to pose such ratio for the long period if the problem of the capacity and managerial decision's quality are not taken into account and the managerial decision is not a result of the alternative choice on the basis of the enterprise analytical service's databank. It is necessary to note that the managerial process could not be centralized or decentralized in whole. The main management task is a professional sense of proportion. Without it, the quality of the managerial process does not exist entirely. Management as the socio-economic phenomenon of modern society perceives the positions' extremity badly. Such management understanding supposes the constant and systemized professional improvement of the managerial staff. The executive's empiric experience and knowledge signify but they are not determinative. But herewith, it is necessary to note that managers' training must be clearly structured and not have the features of general education. It must differ by the professional and practical filling. In other words, working managerial staff that has already the primary professional education further has to complete the professional training only in the specialized training organizations. Thereafter, these training organizations need to have teaching and trainer staff and training and methodical bases for the advanced trainings. Thereafter, it is necessary to clearly distinguish the general education system of the managerial staff training (traditional academies) and the professional training system of the working managerial staff that as a rule proved their abilities by the efficient practical activity. If the first group to a certain extent solves the problem of quantitative filling of the enterprises by the managerial staff, the second one defines the quality and capacity of the management system and also the strategy of the general socio-economic growth of the enterprise and society in whole.

Thus, such features as the manager's general erudition and modern professional knowledge play a key role in the achievement by the company's leaders of the "ratio optimum" of the management centralization and decentralization. Properly, the first and the second ones are not the results of the managerial staff's empiric experience. The modern managerial activity needs the professionally trained managers, so the efficient system of the managerial education and

advanced professional training of the management practitioners are necessary.<sup>13,14,15,16</sup>

*Process of the managerial authorities' delegation.* The managerial process administration supposes the concentration and delegation of the managerial authorities by the enterprise's management. The fact that the authority of the line managerial staff needs to be supported by the certain managerial authorities is natural. Without the managerial authorities, the power at the enterprise does not have any essential form of realization. The authority and the managerial authorities are concentrated at the level of activity of the enterprise's top management. Conditionally speaking, their highest concentration in the system of the enterprise's executive power is the first line manager of the highest level of the management hierarchic pyramid. The primary centralization of the managerial authorities by the first person of the enterprise's executive power is the necessary process in the view of the personification of the managerial responsibility for the decision-making process. But in the view of the necessity of the decision realization, managerial authorities have to be delegated to the lower levels, i.e. to the line and functional managers. The process of certain works performance and the result obtaining are impossible without it. It is necessary to note that the highest line manager along with the managerial authorities could not pass his/her responsibility for the enterprise's result to the lower levels of the management system. He/she personifies only his/her own general responsibility in the interrelation system with his/her subordinates. Thus, such an "interrelation system" needs to have the controlled character and its own mechanism of the responsibilities. The inflexibility of the control depends on the centralization and decentralization level of the managerial process. And the inner mechanism of the responsibility has to be always directed to the result achievement in the context of the enterprise's stated objectives.

---

<sup>13</sup> Abramov, R. N. (2005). Rossiiskie menedzhery: sotsiologicheskii analiz stanovleniia professii [Russian managers: sociological analysis of profession's development]. Moskva. (in Russian)

<sup>14</sup> Isaev, A. P. (2011). Professionalizatsiia upravlencheskoi deiatelnosti v promyshlennosti: teoriia, metodologiia, realizatsiia [Professionalization of managerial activity in industry: theory, methodology, implementation]. Ekaterendurg. (in Russian)

<sup>15</sup> Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoi diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)

<sup>16</sup> Kuznietsov, E. A. (2014). Sovremennaia interpretatsiia upravlencheskikh vzgliadov N. A. Vitke. In: Actual problems of economy and management: theory, innovations and modern practice. Monograph. Vol. 3. Kherson. Pp. 7–28. (in Ukrainian)

We will note here three main aspects defining the essence of the line managerial staff's works administration. The first one is confined in that the delegation of the managerial authorities by the top managerial personnel by the enterprise's management scalar chain is the opportunity of the medium and lower management level to fulfil the certain work and as a result to solve the managerial tasks set by the top management. Thus, the quality of the managerial authorities' delegation defines the capacity of the enterprise's managerial activity in whole. The second one defines the necessity of the efficient work of the feedforward and feedback with the purpose of the control of subordinates' activity. At last the third one is the delegation of the managerial authorities related to the necessity to realize the authority in the context of the centralization and decentralization processes. Per se, the centralization is the delegation of authorities down the management scalar chain for the short period of time with the use of the inflexible tactful control. On the other hand, the decentralization is the pass of the managerial authorities for a long period of time with the definition of conditions of management independence and autonomy. The quality of such activity depends on the enterprise's availability of strategic control system and mechanism of the inner responsibilities with the possible tools of its legal registration. At the same time, the modern managerial activity is always the result of the certain ratio of the centralization and decentralization of the managerial process.

*Levels of professional capacities.* The level of development of management scientific researches is defined by the quality of working-out the general methodological and specialized problems of the modern managerial activity. The problem of the specialization is the pillar stone of understanding and development of the managerial staff's professional capacities levels in management. It is evident that management is the complex and systematic phenomenon of the socio-economic development of modern society. We cannot deny this fact, but it is necessary to note the scientific and practical value of the management specialization. Particularly the specialized managerial researches elaborate on the managerial activities feature, define the efficiency indexes and managerial staff's training context. In other words, we are talking about the professional capacity's levels, if the context of special managerial technologies and its positive dynamics of the development of scientific and practical features are considered. First of all, it is necessary to talk about the necessity of the managerial staff's capacities

by the levels of the hierarchical structure of the enterprise. For example, the competencies of the top, medium, and low level of the company's managers differ. For the most part of executives, the level of their highest capacity is restricted by the positions of the lower and medium levels of the company's management. Even their efficient work at these positions is not the certainty of their efficiency at the positions of the top management. It is necessary to note that the limits of the managerial staff's career growth need more detailed examination, as far as managerial staff's professional incompetence is one of the factors of the management system's low efficiency in whole. Strictly speaking, it is traditionally thought that management professional capacity is confined by the medium and low levels of executive power. Our opinion is that it has not being corresponded with reality for a long time. First of all, in the conditions of economics corporatization, the enterprise's top management is the first level of the executive power, which realizes enterprise owners' corporate will and goals by means of their professional activity. Secondly, modern competitive enterprises are mostly differentiated structures of the holding type. It supposes the managers, especially of the top level, work at the level of macroeconomic development.

Consequently, the structural capacity of managerial staff is defined by the features and the context of the managers' activity per levels of enterprise's hierarchical pyramid and also by their efficiency in such a sphere of enterprise's operation.

### **9.5. The scientific conception of the management professional system**

Nowadays, the reformation process of the management education formed during the Soviet Union existing lasts in Ukraine. Supposing that such an activity logically turns to the building of the new management professional education system, we can admit that these changes will have only external character without a clear definition of the conceptual basis and professional criterions of the new processes of management personnel training. Unfortunately, in Ukraine in most cases particularly such approach is called reformative. It should be noted that the perception of the management maintenance of the economic reforms' necessity is started. These reforms are not the elements of the populist policy, but the socio essential activities of the safety of the economic system and government in whole. The qualitative managerial staff's

training needs government support and the security system as the main priority of the national policy.<sup>17</sup>

In spite of the changes' expediency and positivity, we cannot say that the clear reference points of the managerial staff's professional training are found. In most cases, the selection system of the syllabuses for the bachelor, specialist, and master's degrees programs do not reflect the logic of the management theory and practice. For example, the system of the management professional capacities is not structured per management levels. It decreases the efficiency of the educational process owing to the uncertainty of the intermediate and final goals of the management education. Besides, the factor of the management belonging to the industrial branch continues to be essential. Such an archaic approach gained a foothold in the management training's tradition. The circumstance that modern management is indifferent per se to the economics' branch specialization and it is a fundamental point of the determination of the training program's structure and context is the news, which requires a proof. The technological environment of the management practical activity (economic branch, sphere) is the main management priority. It should be admitted that nowadays management is the scope of activity of the specialist with clear branch-oriented behaviour. Unfortunately, it is the archaic opinion and it does not favour the effectiveness of the modern management system. But the decrease of the effectiveness is not concerned with the technological branch orientation of the managerial personnel that is not per se the disadvantage, it is concerned with the absence of the managerial professional training base that is the fiducial point of the knowledge development during his/her managerial career.

The problem of the fundamental research of the management professional system supposes the development of the history of the management through actualization processes. It is the important factor of the historical management researches' significance understanding for the modern management theory and practice. The understanding of the modern management system development processes is bound up with the fundamental conditions of society's socio-economic development at different historical stages. It is important to understand what prompts the managerial activity's researches, especially in the process of scholar

---

<sup>17</sup> Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoi diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)



schools formation. Why did not the collective and individual ideas of the management scholar schools receive the support in the scientific society or were forgotten? How long has the science been gone crooked and false paths of the managerial thought?

The important processes of the managerial thought development in Ukraine are concerned with the development of the scholar school called scientific labour organization at the 20 years of the XX century. At that time, the idea of the scientific labour organization was at the stage of the primary accumulation. This conception and its context were understood differently by the researches. Nevertheless, we can mark out two main courses of this scholar school.

*The first course* is bound up with the rationalization of the labour process carried out by the separate person in the cooperation with the material productive factor. It actually is the scientific labour organization. This course was determinative for the managerial thought development in the USSR during many decades. In independent Ukraine, inertial processes bounded with identification of the categories “production management” and “management” are going on. As a matter of fact, first of all, it leads to a number of problems and impossibility of the clear definition of the management scientific and research base. In this case, management is considered as one of the parts of the enterprise’s economic system. Although the adjusted category of the production management (operation management) along with marketing and personnel management (properly management) are the components of the enterprise’s management.<sup>18</sup>

*The second course* is bound up with the rationalization of the interpersonal interaction in the general labour process with the purpose of labour optimum achievement. It was called scientific management organization that started an investigation of management. In the modern understanding, “subject-subject” interaction is the main value in management and this interaction is *exceptionally* of the people.<sup>19,20,21,22</sup>

---

<sup>18</sup> Kuznietsov, E. A. & Safonov, Y. N. (2014). Managerial processes of leadership development. *Economical herald of the university. Scientific collection of scientists and post-graduates. Issue 22/3.* Pp. 231–234.

<sup>19</sup> Bogdanov, A. A. (1989). *Tektologiya: (Vseobshchaia organizatsionnaia nauka) [Tektology: (Universal organizational science)]. V 2-kh kn. Kn. 1. Moskva. (in Russian)*

<sup>20</sup> Bogdanov, A. A. (1989). *Tektologiya: (Vseobshchaia organizatsionnaia nauka) [Tektology: (Universal organizational science)]. V 2-kh kn. Kn. 2. Moskva. (in Russian)*

<sup>21</sup> Kuznietsov, E. A. & Safonov, Y. N. (2014). Managerial processes of leadership development. *Economical herald of the university. Scientific collection of scientists and post-graduates. Issue 22/3.* Pp. 231–234.

The opinion that such position simplifies management system and makes it univariate and less efficient, is unproductive. Per contra, particularly the interaction of the enterprise's professionally trained personnel is the main and complex management problem. It needs constant development of the professional knowledge, skills and capacities of the enterprise's management. *The professional management is the system of the scientific (innovation) approach and management art. The art of management in its turn involves the mechanisms of the constant tutorship and certain magic of the enterprise's personnel administration.*

We see the pluralism of the management functions definition when the functional specificity of management is mentioned. Such professional inaccuracy leads to the distortion of the possible management specialization variants. Thus such specializations of the managerial staff's training that do not bound with the real differentiation of the managerial processes in terms of management theory and practice development appear. And it means that licensed specialists in management do not get professional skills for their further practical activity. Such managers' skills depend on their practical experience. Such a situation is impossible from the point of view of the tactics, as well as the management education strategy development.

The efficiency of the management education formation process, which differs from the economic and business ones, needs the analysis of the whole set of scientific, methodological, and practical questions.

The choice of the right reference points of the managerial staff training is bound with the definition of what they need to know as the management experts with the purpose of the certain company's managerial process realization. Considering such a situation when a manager has a great number of technologies and it is unknown what he/she needs to know for a certain problem solution is unproductive. In this case, it is the unreal task stated before the manager to acquire the skills of the organizational and executive work that is not beyond the power of one specialist. Besides, if it is principally impossible, the problem of the considerable decrease of manager's capacity at the whole set of the professionally necessary kinds of the managerial activity appears. The important is that modern managerial activity is the result of the efforts of the management team, but not of one manager. The

---

<sup>22</sup>Kuznietsov, E. A. & Nenno, I. M. (2011). Innovatsionnyi universitet: mekhanizm tekhnologicheskoho transfera. In: Actual problems of economy and management: theory, innovations and modern practice. Monograph. Kharkov. Pp. 340–349. (in Ukrainian)

professional knowledge of each manager cannot be typical and depends on his/her position in the management team.

While analysing modern management technologies development, it is necessary to note that the management professional system conception has to involve the following<sup>23</sup>:

1. The characteristic of management functions and its specificity at different company's structure levels;

2. The detailed structure of the management methods and priorities of the ratio determination of the methods use in certain situations of the managerial activity;

3. The structured building of the managerial activity with the use of search techniques of adaptive organizational management structures;

It should be emphasized that if we do not consider the functions, methods, and structure in management, then we do not consider management in the professional terms in general.

Thus, the management professional system in conceptual terms consists of three basic elements (functions, methods, and structure) and binding processes (first of all, mechanism of the managerial decision-making, communications, and personnel technologies). The management professional activity is built in the context of certain management contour to be effective and resulting. Manager's professional opportunities by the real determination of management contour compose the primary bases of the effective objectives' achievement. That's why management is the synthesis of the creative and professional freedom that depends in direct proportion on the managerial staffs' capacity level, and economic necessity defined as the system of the objective limitations, concerned with indexes of the management contour and management possibilities of their dynamic analysis.

## CONCLUSIONS

1. Management functions, methods, and structure are the basic elements determining the programs of the primary managerial staff's professional training. The binding processes of management, managerial decisions, communications, and personnel technologies characterize the quality of the managerial activity and that's why they need to be explored with the basic management elements.

---

<sup>23</sup>Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoi diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)

2. The functional activity is defined as the main priority of the management. Management reflects its specificity in the spheres of the practical activity, scientific researches, and management education by means of its functions. Therefore, functions are the base of the management specialization. It belongs to the management practice, as well to science.

Management methods, structure, and binding processes are the variant of the increased focus of the managerial staff's training. Such specialists' activity in the system of the complex organizational building defines the high-quality level especially for the top-line managers in the conditions of the sufficiently high responsibility level and riskiness of the management decision-making process. Such management staff's training is necessary at the advanced levels of the managerial career and can be realized during the realization of flexible and innovative techniques of the managerial staff's retraining.

### **SUMMARY**

In the article, issues of implementing the mechanism of managerial activities' professionalization in Ukraine are researched. Professionalization of managerial activity is considered as a basis for improving managerial efficiency. Basic problems of implementing the management professionalization system are defined, and the necessity of exploring managerial activities' special forms is proved. These forms are connected with the scientific, analytic, and practical managerial study. Process of management science and practice cooperation is viewed in the article; its fundamental logical scheme is proposed. Also, creativeness of the scientist's personality and science development are researched in the article as a basis for further improvement of managerial staff. Managerial processes of leadership development are studied; its main principles and basics are proposed. The specific managerial competencies and skills, which can increase the efficiency of managerial labour, are determined. The concepts of developing and improving managerial schools and the system of rapid managerial training are grounded. The structure of managerial activities' professionalization and the forms of its practical use are proposed.

## REFERENCES

1. Abramov, R. N. (2005). Rossiiskie menedzhery: sotsiologicheskii analiz stanovleniia professii [Russian managers: sociological analysis of profession's development]. Moskva. (in Russian)
2. Auzan, A. (2014). Ekonomika vsego. Kak instituty opredeliaiut vashu zhyzn [Economics of everything. How institutes shape your lives]. Moskva. (in Russian)
3. Bogdanov, A. A. (1989). Tektologiya: (Vseobshchaia organizatsionnaia nauka) [Tektology: (Universal organizational science)]. V 2-kh kn. Kn. 1. Moskva. (in Russian)
4. Bogdanov, A. A. (1989). Tektologiya: (Vseobshchaia organizatsionnaia nauka) [Tektology: (Universal organizational science)]. V 2-kh kn. Kn. 2. Moskva. (in Russian)
5. Gvishiani, D. M. (2007). Izbrannye trudy po filosofii, sotsiologii i sistemnomu analizu [Selected papers presented at philosophy, sociology and systemic analysis]. Moskva. (in Russian)
6. Drucker, P. (2006). O professionalnom menedzhmente [About professional management]. Moskva. (in Russian)
7. Drucker, P. (2014). Effektivnyi rukovoditel [Effective manager]. Moskva. (in Russian)
8. Isaev, A. P. (2011). Professionalizatsiia upravlencheskoi deiatelnosti v promyshlennosti: teoriia, metodologiya, realizatsiia [Professionalization of managerial activity in industry: theory, methodology, implementation]. Ekaterendurg. (in Russian)
9. Kammings, S. (2010). Rekonstruktsiia strategii [Reconstruction of a strategy]. Kharkov. (in Russian)
10. Kuznietsov, E. A. (2017). Metodolohiia profesionalizatsii upravlinskoi diialnosti v Ukraini : Monohrafiia [Methodology of professionalization of managerial activity in Ukraine : Monograph]. Kherson. (in Ukrainian)
11. Kuznietsov, E. A. (2018). Kontseptsiiia intehralnoi yakosti professiinoi systemy menedzhmentu [Concept of integral quality of professional management system]. *Herald of Odessa national I. I. Mechnykov University*. Vol. 23. Issue 7 (72). (in Ukrainian)
12. Kuznietsov, E. A. (2018). Kontseptualni osnovy integralnogo menedzhmentu v systemi profesionalizatsii upravlinskoi diialnosti [Conceptual basis of integral management at the professional management system]. *Market economy: modern management theory and practice*. Vol. 17. Issue 3 (40). Pp. 9–19. (in Ukrainian)

13. Kuznietsov, E. A. & Safonov, Y. N. (2015). Improvement of the management professionalization mechanism in Ukraine. *Economical herald of the university. Scientific collection of scientists and post-graduates*. Issue 27/1. Pp. 112–116.
14. Kuznietsov, E. A. & Safonov, Y. N. (2014). Managerial processes of leadership development. *Economical herald of the university. Scientific collection of scientists and post-graduates*. Issue 22/3. Pp. 231–234.
15. Kuznietsov, E. A. & Nenno, I. M. (2011). Innovatsionnyi universitet: mekhanizm tekhnologicheskoho transfera. In: *Actual problems of economy and management: theory, innovations and modern practice. Monograph*. Kharkov. Pp. 340–349. (in Ukrainian)
16. Kuznietsov, E. A. (2014). Sovremennaia interpretatsia upravlencheskikh vzgliadov N. A. Vitke. In: *Actual problems of economy and management: theory, innovations and modern practice. Monograph. Vol. 3*. Kherson. Pp. 7–28. (in Ukrainian)
17. Kuznietsov, E. A. (2015). Tektologia A. A. Bogdanova i sovremennaia aktualizatsiia menedzmenta [Tektology by A. A. Bogdanov and modern actualization of management]. *Economics: time realities*. Issue 3 (19). Pp. 153–158. Retrieved from: <http://economics.opu.ua/files/archive/2014/No3/231-235.pdf>. (in Ukrainian)
18. Moskovskaia, A. A. (2011). Professionalizatsiia menedzmenta: tseli, barery, perspektivy [Professionalization of management: goals, barriers, prospects]. *Sociological research*. Issue 7. Pp. 26–37. (in Russian)
19. Prigozhyn, A. I. (2007). Dezorganizatsiia: prichiny, vidy, preodolenie [Desorganization: reasons, types, overcoming]. Moskva. (in Russian)
20. Salmi, D. (2009). Sozдание universitetov mirovogo klassa [Forming universities of world level]. Moskva. (in Russian)
21. Florida, R. (2007). Kreativnyi klass. Liudi, kotorye meniaiut budushchee [Creative class. People, which change the future]. Moskva. (in Russian)
22. Ederskeim, E. (2008). Luchshie idei Pitera Druckera [The best ideas of Peter Drucker]. Sankt-Peterburg. (in Russian)

**Information about the author:**

**Kuznietsov E. A.**

Doctor of Economics, Professor,  
Head of Department of Management and Innovations,  
Odessa I. I. Mechnikov National University, Ukraine

## **CHAPTER 10**

### **TAX ADMINISTRATION: THEORY AND RETROSPECTIVE ANALYSIS**

**Melnyk V. M.**

#### **INTRODUCTION**

Lorenz von Stein has rightfully noted that taxation is a point where the science of public finance meets the science of public administration. Along with absolute accuracy of the statement, this also invites the need to consider, within the tax issue, organizational and management aspects (besides the traditional fiscal and regulation planes). The latter ones have been under-researched, though in some historical periods in the development of financial science they were given certain attention (in particular, by German representatives of Cameralist school and other devotees of the idea on the leading role of “financial technique”, “tax technique” or “tax levying technique”).

However, the available current developments in the tax administration domain are basically applied and directed at the solution of urgent problems of efficient taxes and duties levying arrangement. Some of these problems though have already had some settlement options in the past, and many of them could be useful today as well (at least, in a part). Besides, the development history is rich material for scientific and abstract construction of tax administration methodology. All of this confirms the need for its study.

#### **10.1. Nature of tax administration**

The researches we have carried show that in most cases the start of active use, by practical experts and politicians, of the term “tax administration” pre-empted justification of its nature by financial theory. This caused the situation when every use of this term was another confirmation of difference in meaning and, at times, the indefiniteness of sense. However, as the issue was of reference points for specific decisions that needed clear perception, the problem of defining tax administration was quite acute. In Ukraine, in particular, this became noticeable at the brink of the late 90s of the previous century and beginning of this one, and made the author to, among others, undertake corresponding studies.

We have offered our own approach towards tax administration definition development. We consider that it should be based on the general term “administration” defined as “administrative activity of managers and management bodies, performed mainly through orders and instructions”<sup>1</sup>. Taking into account the specific nature of tax levying process arrangement, we have offered the following definition: tax administration is an administrative activity of public executive bodies that involves the arrangement of taxation process, is based on public legislative and regulatory documents and applies socially induced and accepted rules.<sup>2,3,4,5</sup>

As we can see from the offered definition, the tax administration is based on adherence to two types of rules: defined by the state in the legislative and regulatory documents, and developed by the society in the form of traditions or habits. The first ones are usually called the same way – “rules”, the second ones are most often denoted by the term “habit”. In the science of the economy, they are usually interpreted as follows: habits (customs) are “rules of behaviour in certain spheres of economic activity, business life, not reflected in laws, regulatory documents and agreements, but adhered to in practice”<sup>6</sup>; a rule is “a collection of obligations, requirements, established by higher management segments for lower segments that ensure consistency, coherence and arrangement of the working process...”<sup>7</sup>

In the course of their implementation, the rules require the intentional performance of activities. The habits are vice versa, a result of people’s adjustment to certain procedures. They are concerned with psychological and physiological peculiarities of individuals, are implemented through the periodical repetition of actions by inertia and

---

<sup>1</sup> Mochernyy, S. V. (Ed.) (2000). *Ekonomichna entsyklopediia [Economic Encyclopaedia]*. (Vol. 1, p. 25). Kyiv: Academy. (in Ukrainian)

<sup>2</sup> Melnik, V. M. (2003). *Problemy teorii ta praktyky administruvannya podatkov v ukraini [Problems of the theory and practice of tax administration in Ukraine]*. *Actual problems of the economy*, 5, 40–43. (in Ukrainian)

<sup>3</sup> Melnik, V. M. (2006). *Opodatkuvannya naukove obgruntuvannya ta orhanizatsiia protsesu [Taxation: scientific substantiation and process organization]*. Kyiv: Computerpress. (in Ukrainian)

<sup>4</sup> Melnik, V. M. (2008). *Do pytannia formuvannya teoretychnykh zasad administruvannya podatkov [The question of the formation of the theoretical principles of tax administration]*. *Finance of Ukraine*, 9, 3–9. (in Ukrainian)

<sup>5</sup> Ivanova, Yu. B., & Mayburova, I. A. (Ed.). (2010). *Podatkova Polityka Teoriia Metodolohiia Instrumentarii [Podatkova policy: theory, methodology, tools]*. Kharkiv: VD "INZHEK". (in Ukrainian)

<sup>6</sup> Mochernyy, S. V. (Ed.) (2000). *Ekonomichna entsyklopediia [Economic Encyclopaedia]*. Vol. 1, p. 594. Kyiv: Academy. (in Ukrainian)

<sup>7</sup> Mochernyy, S. V. (Ed.) (2000). *Ekonomichna entsyklopediia [Economic Encyclopaedia]*. Vol. 3, p. 27. Kyiv: Academy. (in Ukrainian)



define, to some extent, the behaviour of the members of society, being reflected in their decisions. With the course of time, they are transformed into national customs, cultural and historical traditions of the nation. Taking the latter into account in taxation is extremely important as the efficiency of applying fiscal mechanisms is very much dependent on the reaction of society, psychological perception of novelties by the payers.

Along with the mentioned, we cannot omit the fact that separate habits of individuals may be unjustified both in terms of optimal economic behaviour in certain economic conditions and in terms of the interests of society in general and the state as its political organization. Under their influence, the unjustified, inappropriate, and irrational decisions are made. (At this, the provided assessments may be considered from the viewpoint of any of mentioned agents – other individuals, state, etc.). In cases like this, the habits get into an argument with rules. The major task of the rules becomes to correct behaviour of subjects, to overcome habits. In the tax administration, such corrections are especially topical as regards the habits to reserve what belongs to someone as a private property as these habits become decisions and activities on avoiding taxation, etc.

On the total, the habits and the rules are most important, basic sources of decisions in tax administration. They serve a basis for coordinating the activity of all the subjects in taxation relations and regulating all the concerned processes.

The practical fulfilment of decisions in tax administration requires the availability of adequate management tools and technologies of their use. The humankind developed all the relevant tools in the course of solving taxation optimization and rationalizing issues. Having the range of objectives in taxation, they have developed a system of measures for their achievement (on the basis of the available habits and developed rules). In the process of historical development, these measures were somehow rationalized for maximum neutralizing of subjective components. Depending on the technological specifics of applying the mentioned measures, the corresponding tax administration procedures have formed and management activity directions were defined. The main of them are as follows: accounting activities (taxpayer register and tax accounting); mass awareness-raising and consulting activities; prognostic and analytic activities; control and audit activities.

The mentioned management activity directions consequently provide for use of accounting, social, analytical, and control technologies.

Besides, tax administration should include the strategy and tactics of levying process management. The management tactics are aimed at the attainment of basic tax objectives within the specific social and economic, political, and legislative framework. In the course of operating activity of the state executive bodies, responsible for tax levying, the issues of assuring adherence to the acting rules, administrative spending optimization, the rational arrangement of mutual relations with payers, etc. are resolved. Fiscal services, on the one hand, have to maximize budget incomings and, on the other, to exclude, to the maximum extent, direct intrusions into the sphere of economic activity and not to lead, with their work, to deterioration of business conditions.

In the recent changeable economic and political situation, the role of developing the tax administration strategy is increased. The changes of political authority after every election process must not have a serious influence on efficiency and continuousness of the state fiscal services' activities. All the political forces, replacing each other in the authorities of any country were a priori not interested in irregular tax incomings and subsequent shortages in the funding of state spending. The reason for this is the fact that this has a significant impact on their reputation and terms in office... Therefore, the first task is forming the unchangeable (depending on the election cycle) administrative apparatus that would promptly and skilfully fulfil the decisions of any group of political leaders, elected by the nation. Besides, an important strategic task is a substantiation of the directions for modernizing fiscal and administrative technologies pursuant to possible changes of market conditions, the behaviour of economic subjects – taxpayers, change of orientation of business operations, etc.

The strategy of tax administration should consider the present situation in the country's economy and state political system, as well as perspectives regarding the development of the national market, globalization processes, and the emergence of various risks.

Modern tax administration technologies are hard to apply. Therefore, implementation of specific managerial decisions of strategic and tactical character requires the availability of specifically skilled workers, each with sufficient level of financial and economic knowledge, understanding specifics of establishing relations with people, forming and directing them in accordance with major taxation objectives and acting rules. Among the basic qualities of an officer, needed in the sphere of tax administration, we should single out internal self-sufficiency,

strive for self-development, the ability for self-control, and ability to influence the surrounding people and convince them.

A tax officer who, pursuant to his or her official duties, has to contact (directly or indirectly) with a vast amount of people, has to continually analyse his or her actions and give them objective account, recognize characters and moods of the payers and, correspondingly, select style of communication with them, striving to create the atmosphere of cooperation, partnership, and interaction.

The interaction itself does not exclude an opportunity for conflicts. If, at this, we take into account that it is about managing the processes, after which a part of the property, belonging to a person according to the private property right, is withdrawn for the sake of redistribution, the probability of conflicts is increased. The basis of conflicts in tax administration may arise from the collision of interests, disagreement of thoughts, different vision of values and ways of their achievement. The first case in taxation is inevitable. Representing the interests of the state and performing his or her own duties, the fiscal officer is interested in withdrawing a part of income. A payer, with an account of natural aspirations regarding preservation and collection of private property, is apt to the minimization of such withdrawals. Overcoming of such a conflict is possible only through the clear application of the established rules of tax administration.

The second and the third cases are more complex and require a result-oriented approach of both parties. It is important to reach a mutual understanding of the situation subject matter as soon as possible. The official should apply maximum efforts for smoothing the conflict and reaching the compromise. Although the compromise does not always allow making an optimal decision, a conflict might be made away with and the atmosphere, acceptable for interaction, might be established. However, in case of clear non-conformity of the payer's actions to the defined rules (mainly peculiar to the third case of conflicts), the public representative has to occupy the position of counteraction, oriented exclusively on the acceptance of one point of view.

Therefore, the role of the human factor in tax administration is one of the leading ones. In the perfect situation, its realization allows reaching fairness in taxation, robustly ensuring the levying management process. However, close personal contacts with payers may also generate negative consequences, noted yet in the late 19<sup>th</sup> century by the classics of financial science, who recommended minimizing personal meetings with tax inspectors and, thus, decreasing the risks of corruption. But in

this case, we should stress that obviously direct contacts were meant. In modern times, there exist obvious opportunities for their replacement with indirect ones (with the mediation of technical means). Therefore, it is important to find the optimal correlation of these two contact types for the arrangement of efficient interaction with payers, as well as spheres and volumes of their implementation.

All sorts of strategic and tactical managerial decisions and actions are directed to specific conscious need of a person or society. In the tax administration, they are oriented at solving issues, important for society, achieving desired taxation results, overcoming irrelevance between the desired and actual situation in taxation. Implementation of the above-mentioned provides for the need in an organizational system what is an inevitable attribute of managerial activity. Its major task is the coordination of actions of separate people regarding the solution of the said problems.

The structure of tax administration organization system in every country was actually formed pursuant to social and political, economic, as well as organizational and technical conditions. It is represented by the public services with fiscal functions. There might be several of them (in Ukraine, these are: state taxation service and state custom service). Each of these services might be viewed as an independent organizational system of lower level as they have all the features, necessary for this: are clearly problem-oriented, have management centres, as well as a certain hierarchical structure.

However, it is already clear that in the countries with several services, instead of one, engaged in tax administration, there must be a unified centre for their coordination. Of course, the Cabinet of Ministers may be considered this sort of centre. Though, it is not clearly problem-oriented with a specific focus solely on taxation. Therefore, this sort of centre is, as a rule, the Ministry of Finance. An equally important in the conditions of multiple tax administration services is an issue of the optimal distribution of functions between them and their subdivisions in order not to allow, on the one hand, responsibility of different sectors for fulfilment of one function and, on the other hand – loss of function in the list of obligations. However, the mentioned, in its turn, brings an issue of arranging interaction of services for the sake of informational exchange and assuring the performance of functions, laid upon them.

Therefore, the tax administration organization system, being formed individually in every country under the influence of specific conditions

and subjective decisions, continually requires rationalization of its structures on the basis of scientific substantiation and further account of regularities and general principles of tax levying process management.

### **10.2. Retrospective Analysis of Tax Administration**

The results of the retrospective analysis show that the arrangement of the taxation process and its management depend on the degree of the state's development. Actually, the latter has also defined methods of public functions (demesnial, regalia, tax) funding. In the Middle Ages, they mainly used the pre-bate form of tax levying. At those times, taxes were considered extraordinary proceeds. In the need of money, a monarch addressed classes and communities that (in case of consent) divided the needed amount between themselves. The methods of dividing were arbitrary. "The great vassals collected the needed amount from their people according to their possessions, or, bluntly counted by the head"<sup>8</sup>. This sort of taxation did not require any special methods of control, but for brute force. Thus, one could not speak of any tax administration methods.

However, at the same time, the different sorts of charges started to be levied (court charges, for various state services, for toll roads, for use of bridges, etc.). Some feudal lords started building bridges in the open plains, making the merchants pay charges. At this, by no means all of the paid amounts reached the royal treasury, staying in the ownership of feudal lords. Due to these artificial obstacles to the development of trade and pocketing of the king's money, the state had to interfere. Though at those times, it was weak and underdeveloped and this did not allow for strictly regulated management of tax levying processes and efficient control of local policymakers. The only thing the state managed to do was to find methods for attracting to treasury more of the collected money. This was the objective, with which they introduced the sale of political offices, concerned with levying of charges. The first experience of this sort was demonstrated by France in the 14<sup>th</sup> century. The authorities sold an office, receiving the necessary amount for their budget and a purchaser was given a right to levy charges for his own benefit. There were quite a lot of such offices, especially in the court system. The relevant practice had a range of negative consequences. For instance,

---

<sup>8</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. Moskva: Printing house Association of I.D. Sytina. (in Russian)

“judges, in an attempt to return monies they have spent for purchase of office, dragged the trial out”<sup>9</sup>, etc. Somehow modified French experience was introduced by the Polish-Lithuanian Commonwealth, including Poland, Ukraine, and Lithuania. They provided the title for a collection of taxes for lease<sup>10</sup>. Lease takers were increasing due amounts (if compared to those, demanded by the king) for their own benefit.

While levying the taxes from city residents, the principle of collective responsibility was applied. It consisted of the following: the city community was imposed with an obligation to pay the established per annum amount of taxes. The state did not bother with control over every payer – the responsibility for payment of the total amount was borne by the community. The issue of dividing the amount by individual payers was also considered its own business. Professor I. Ozerov called this practice “the most absolute type of state’s withdrawal from levying”<sup>11</sup>. In the case of big debts, the authorities could apply force and even destroy the entire settlement as a punishment for the community. Who was responsible for debts was often the issue of no importance. The state simply had no resources to find this out. “The collective responsibility with the low financial technique was thriving”<sup>12</sup>.

Over time, the taxes became regular proceeds of the state. A significant differentiation of income sources, caused by rapid economic development, led to the emergence of new taxation methods. Their multitude and complexity already require a special tax levying method. To use it, there arises a need to establish the entire apparatus of fiscal bodies. The first to develop was a special methodology of land taxation that provided for measuring, self-assessment of the parcel, declaration of property, and keeping of cadastre. With the course of time, the problem of dishonest declaration generated a need to develop unified regulations for assessment of immovable property with a division of lands by the classes. In the taxation evolution, the land cadastre was developed from a simple representation of geometric data on the parcels to carrying the assessment of their earning power for the classification

---

<sup>9</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. Moskva: Printing house Association of I.D. Sytina. (in Russian)

<sup>10</sup> Nechai, N. V. (2002). *Narysy z istorii opodatkovannia* [Essays on the history of taxation]. Kyiv: Bulletin of the Tax Service of Ukraine. (in Ukrainian)

<sup>11</sup> Ozerov, I. Kh. (1920). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 2. Moskva: Printing house Association of I.D. Sytina. (in Russian)

<sup>12</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. Moskva: Printing house Association of I.D. Sytina. (in Russian)

purposes. The latter provided for defining the gross income according to different methodologies. Thus, in Prussia, they carried calculation with an account of proceeds for 24 years (before the compilation of cadastre in 19<sup>th</sup> c.), in Württemberg and France – for 15 years, in Austria – for the least expensive year out of last fifty<sup>13</sup>. The industrial taxation, taxation of houses, monetary capitals and movables were first performed with the similar methodology: levying according to external features of the objects (fields, trade, merchants' belonging to guilds, etc.). The reason for this was rather an absence of other methodology as in the period under analysis, the financial science fixed the taxation practice rather than created novel re-distribution mechanisms. However, some authors state that the reason for this situation was adherence to the “financial technique saving principle”<sup>14</sup>.

Since the 19<sup>th</sup> century, the tax levying according to external features has transformed into taxation according to income level. Capitation, industrial taxes are replaced with income ones. The earning power is considered while imposing taxes on capitals, buildings, etc. The states had to change the tax levying strategy due to considerable stratification of society according to income. In the early 20<sup>th</sup> c. professor I. Ozierov used the example of capitation tax for the following conclusion: “With the low level of economic life, the capitation tax was most appropriate source of receiving funds as the difference between economic situations of separate members was not as stark as the present one when some people are starving and some, like Rockefeller, get 100 million roubles of net income per annum...”<sup>15</sup>

In its turn, the income taxation required a change in levying technology. The new conditions did not allow applying the principle of collective responsibility and the pre-bate form of levying anymore. The simple census and count of the population for capitation tax also turned to be insufficient. The issue of a payer's individualization is brought to the agenda. In fact, every citizen and legal entity had to declare their income. This provided for a need in the development of the unified methodology of their defining, accounting, and control. The latter required increasing and enhancing fiscal services.

---

<sup>13</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

<sup>14</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. Moskva: Printing house Association of I.D. Sytina. (in Russian)

<sup>15</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. Moskva: Printing house Association of I.D. Sytina. (in Russian)

The very declaration as a note of property state has been known in the tax history for quite a long time. However, there was no methodology for processing and check of declarations. Only external data on the occupation and field could be checked. “There was no control, but for person’s own conscience and a holy terror”<sup>16</sup>. We have to emphasize that for theopathetic people of those times, this was enough. The nobility though was paying taxes, governed by the ideas of nobiliary honour. “Prince-electors, counts and barons, cardinals and prelates were paying... according to their conscience, pursuant to the handshake (that replaced oaths) and even the very amount, contributed by them, was infrequently beyond re-counting – their position had to be factored in and their vanity had to be spared”<sup>17</sup>. In the Russian Empire, yet since 1775 (since Catherine II has introduced the guild tax) even for merchants (who could not have noble status), there was a provision, according to which the merchant’s announcement of his capital for attribution to 1<sup>st</sup>, 2<sup>nd</sup> or 3<sup>rd</sup> guild was performed “according to the conscience”, there were no checks and denunciations were not considered<sup>18</sup>. However, until the 19<sup>th</sup> century, the tax imposed for each of the three guilds was the same – 1% from the announced capital. Along with that, attribution to higher guild guaranteed winning of state orders. This fact, to some extent, induced merchants to declare bigger amounts. However, upon merchant’s attribution to the 1<sup>st</sup> guild (if the capital amounted to more than 10 thousand roubles), the state’s hopes for truthful declarations were becoming vane.

The legislation of European countries though even in the 19<sup>th</sup> century adhered to the principle of careful and delicate attitude to the payer. In Bayern, Hessen, and Austria, the demand to indicate the amounts of proceeds from certain sources was prohibited. It was considered that the payer has to announce only the general amount according to the conscience. In Prussia and Sachsen, they decided not to use declarations at all as the latter diminish social and personal freedom. The tax commission had to, without payer’s assistance, establish his financial situation and, besides, not to hold studies of the circumstances, burdensome and difficult for the payer. In the legislation of Switzerland, they did not even mention

---

<sup>16</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

<sup>17</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

<sup>18</sup> Nechai, N. V. (2002). *Narysy z istorii opodatkovannia* [Essays on the history of taxation]. Kyiv: Bulletin of the Tax Service of Ukraine. (in Ukrainian)



possible violations but only a need to additionally pay tax in a case of discovered fact of “tax amount decrease”<sup>19</sup>.

However, the new capitalist reality did not correspond to the patriarchal taxation manners. The ideas of nobiliary honour were either gradually forgotten or simply unknown to the new property class. The poor people started imitating their employee leaders forgetting their former theopathy. Therefore, a change in the psychology of payers, influenced by vivid development of the new social and political formation, led to the death of governments’ expectations for manifestations of patriotism. The incomings to the budget were disappointing. The tax commissions, in their attempt to increase incomings, started violating laws by themselves – they were levying the excessive amounts from the suspected of embezzlement and concealment of income, though their fault has not been proven. And with this generalized declaration without indication of different sources of income, there was no opportunity to check faithfulness of the data. The situation could be remedied only through the declaration of all types of property and amounts of income (all together and with a breakdown by separate sources), along with the strict state control. The first measure for income representation completeness control was a comparison of the data in payers’ declarations with average rates of earnings. However, the labour payment of employees considerably varied and application of average rates led to exceedance (or, vice versa, shortage) of tax amounts for a significant part of the population. Thus, the subsequent step was comparing, in the early 20<sup>th</sup> c., the declared incomes with the so-called “indirect declarations”, provided by employers (regarding remunerations, paid to salaried employees). The declarations of legal entities (regarding industrial or income tax) were compared with the data in trading books. Though there was no unified methodology for keeping these books, as well as very obligation to fill them in. Therefore, they simultaneously applied the methods of check by comparing with average rates of earnings and with expenses held. However, assessment of incomings according to expenses caused a lot of complaints as it deformed the very nature of income taxation. Considerable difficulties, likewise in our times, were concerned with the check of proceeds from monetary capitals due to the confidentiality of the banking information. This was the reason why in the early 20<sup>th</sup> c. credit and insurance institutions of the

---

<sup>19</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

Russian Empire had to inform tax bodies on contributions of payers, on their current accounts, on storage of securities and commercial operations, carried with the mediation of banks<sup>20</sup>. This sort of practice was quite unconventional for Europe and was not admitted there. Though this fact caused hot discussions and opposition, the scientists of those years even recommended making all the declarations of income public, referring to the experience of the provinces of Canada. This action, to their mind, had to ensure public control both over the activity of payers and over the activity of fiscal services<sup>21</sup>. And the bankers' discontent with the requirement to inform on the clients' operations was seen like this: "The movable capital uses one principle two-fold, depending on the more convenient side: on the one hand, it develops public character of property relations and declares it useful (bureaux of creditworthiness...); and on the other hand – it rises against it, declaring it almost revolutionary principle, ready to blow down the entire trade and industry, lose the credit, etc."<sup>22</sup>

The tax bodies of separate countries yet in the 19<sup>th</sup> c. started imposing fines not only for underpayment but also for failure to submit (untimely submission) of declarations. This was a reflection of governments' endeavour to ensure universality of declaring and payers' participation in the entire taxation process. This is because while defining taxes from income, self-taxation is not restricted to declaring the income. "...This is just a starting point followed by and resulting in further payer's participation in taxation process, two-directional participation: on the one hand, in the establishment of tax institutions, and on the other hand, in all the stages his own declaration comes through"<sup>23</sup>.

Taking the above-mentioned into account, the states are faced with an assignment of the principal renovation of tax bodies. "On the one hand, there was a need to establish self-governed bodies that are trustworthy for the payers afraid of their "omniscience" and aware of the fact that sincerity in this context is never to harm, while deception – always is. On the other hand, it also required mandatory serious supervision, on the part of the government, over the entire taxation

---

<sup>20</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

<sup>21</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. M. : Printing house Association of I.D. Sytina. (in Russian)

<sup>22</sup> Ozerov, I. Kh. (1917). *Osnovy finansovoy nauki* [Fundamentals of Financial Science]. Issue 1. M. : Printing house Association of I.D. Sytina. (in Russian)

<sup>23</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

process, control over the appropriateness of the actions of representative offices, over the safeguarding of the interests of the treasury”<sup>24</sup>. We might state that this task is being continuously solved up until today.

In the course of taxation evolution, along with tax administration methodology, the tax services were developed. In the times when the liability to pay taxes was temporary and the taxes did not have a leading role in the state’s proceeds, they were collected by the military. Actually, at those times, that was the only power structure that could assist in the withdrawal of a part of private property for the benefit of the treasury. The examples of this were the ancient Roman “riders” (commanders that headed the military groups collecting the taxes from provinces)<sup>25</sup>, princely watch groups of Kievan Rus (who personally accompanied the princes during their ride around the subject tribes for collection of taxes), Ukrainian Cossack groups (in the Middle Ages, they protected bridges and passages, as well as levied charge from the merchants), groups of land rulers in other countries of Europe (the sovereigns headed them in their ride around the subject areas for collection of taxes). It was only in medium-level state management that provided for special positions of people, responsible for the treasury. In the medieval cities of Europe with the domination of rebate taxation form, the duties of levying taxes at the local level were laid upon community collectors (for instance, in Ukraine, Poland, and Lithuania in the times of Polish-Lithuanian Commonwealth, this was a duty of the village heads). The latter positions were most often elective and subjected not so much to government, as to community that was responsible to the government on the terms of collective responsibility. Most directly subjected to the authorities were only tax farmers. However, we cannot call them some sort of professional tax apparatus. They performed their obligations to the state only while paying for the post. Later on they levied charges and taxes for their own benefit. But when the taxes obtained regular character, the state first encountered a need to keep the regular specialized staff of officers on every authority level. Western Europe was probably the most advanced in the issues of establishing and reforming tax services. Yet then, the Europeans were concerned with establishing the relations of trust with the payer.

---

<sup>24</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

<sup>25</sup> Nevertheless, the system of fiscal power of Roman Empire was quite diverse and bifurcated. The taxes collected by the military were protected by state slaves. They also kept accounting. Some of the taxes on the fiscal territories were collected by civil officers – procurators fiscal.

I. Kulisher wrote: “Austria and Italy, on the one hand, England – on the other, all the time stress that fiscalism and fiscal incomes are far from being identical and that we may provide tax officer with the cruellest whips and scorpions and this will cause only cease in further increase of incomes...”<sup>26</sup>. Due to this, some states started a practice of attracting, for tax levying, the representatives of population. They established tax divisions of a mixed type where, beside the officers, the elected representatives of community were working. They were engaged even to the check of declarations. Besides, there existed appeal commissions (of the mixed type as well) for consideration of payers’ complaints, as well as administrative courts (appeal bodies) that settled the disputes and interpreted disputable questions of tax legislation. This already meant the existence of legal supervision over the activity of state bodies, as well as a system for the protection of payer’s rights. The corresponding structures were peculiar to German states (Prussia and Sachsen, in particular), Austria, Hungary, Italy, Netherlands, Scandinavian countries, Switzerland.

A complication of the modern technology of tax administration in the early 21<sup>st</sup> century requires a high level of professional education for the fiscal service officers. Therefore, engagement of broad public to the fulfilment of at least some functions is problematic. This segment in today’s structure is replaced with opportunities of influencing fiscal decisions on the part of non-governmental auditing and public human rights organizations. What concerns court protection option, it has acquired development up to creation, in certain western countries, of the specialized tax courts.

## CONCLUSIONS

The above-mentioned material regarding the nature of tax administration may serve to form the priority directions of scientific and theoretical search, as well as starting the theoretical base of its development. The substantiation of fundamental notions, principles, axioms are major assignments, completion of which will allow bringing tax administration to a level of separate management theory. Its peculiarity will consist in close interaction with public finance as a field of knowledge. The need in such a theory is stipulated by the demands of taxation practice that continuously provides requests regarding the

---

<sup>26</sup> Kulisher, I. M. (1919). *Ocherki finansovoy nauki* [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

synthesis of rational approaches, modelling of situations, creation of efficient tool kit for levying process management, as well as methods of solving the existing problems.

And the research of historical experience of tax administration allows making conclusions regarding the similar character of many problems at different times. The knowledge of them may become an important factor for avoiding of the recurrent mistakes. This is particularly an issue with establishing the privileged character of certain payers in the relations with fiscal bodies (at times the so-called “big payers”, and at times – the representatives of small business). The history shows that both excessive trust and excessive suspicion (regarding the payer) prejudice the interests of the treasury.

### **SUMMARY**

The author views today’s taxation as a complex phenomenon that requires a wide array of studies with a special sector – issues of tax administration. He pays attention to the fact that there are currently no unified and established views of an issue and theoretical framework of levying process management has been not developed enough. He considers a definition of tax administration, the issues of correlation and coexistence of habits and rules in tax administration, management activity directions in tax administration, strategy and tactics of tax administration, psychological background and role of the human factor in tax administration, organization system of tax administration. He provides results of a retrospective analysis of tax administration subsystem development. The author notes that development history is rich material for scientific and abstract construction of tax administration methodology. On the basis of the latter’s research, he provides conclusions on the similarity of many problems at different times. The understanding of their solution options, in the author’s opinion, may become an important factor in avoiding the recurrent mistakes.

### **REFERENCES**

1. Mochernyy, S. V. (Ed.) (2000). *Ekonomichna entsyklopediia* [Economic Encyclopaedia]. Vol. 1, p. 594. Kyiv: Academy. (in Ukrainian)
2. Mochernyy, S. V. (Ed.) (2000). *Ekonomichna entsyklopediia*. [Economic Encyclopaedia]. Vol. 3, p. 27. Kyiv: Academy. (in Ukrainian)
3. Kovanko, P. (1901). *Glavneishie reformy, provedennyye N. Kh. Bunge v finansovoi sisteme Rossii* [The principal reforms

conducted N. H. Bunge in the financial system of Russia]. Kiev: Tipografiia Imperatorskogo universiteta sv. Vladimira. (in Russian)

4. Kulisher, I. M. (1919). Ocherki finansovoy nauki [Sketches of financial science]. Petrograd: Nauka i Shkola. (in Russian)

5. Melnik, V. M. (2008). Do pytannia formuvannia teoretychnykh zasad administruvannia podatkov [The question of the formation of the theoretical principles of tax administration]. *Finance of Ukraine*, 9, 3–9. (in Ukrainian)

6. Melnik, V. M. (2006). Opodatkuvannia naukove obgruntuvannia ta orhanizatsiia protsesu [Taxation: scientific substantiation and process organization]. Kyiv: Computerpress. (in Ukrainian)

7. Melnik, V. M. (2003). Problemy Teorii Ta Praktyky Administruvannia Podatkiv V Ukraini [Problems of the theory and practice of tax administration in Ukraine]. *Actual problems of the economy*, 5, 40–43. (in Ukrainian)

8. Nechai, N. V. (2002). Narysy z istorii opodatkuvannia [Essays on the history of taxation]. Kyiv: Bulletin of the Tax Service of Ukraine. (in Ukrainian)

9. Ozerov, I. Kh. (1917). Osnovy finansovoy nauki [Fundamentals of Financial Science]. Issue 1. M. : Printing house Association of I.D. Sytina. (in Russian)

10. Ozerov, I. Kh. (1920). Osnovy finansovoy nauki [Fundamentals of Financial Science]. Issue 2. M. : Printing house Association of I.D. Sytina. (in Russian)

11. Ivanova, Yu. B., Mayburova I. A. (Ed.). (2010). Podatkova Polityka Teoriiia Metodolohiia Instrumentarii [Podatkova policy: theory, methodology, tools]. Kharkiv: VD "INZHEK". 364–365. (in Ukrainian)

12. Hodskij, L.V. (1901). *Osnovy gosudarstvennogo hozhajstva. Kurs finansovoj nauki* [Fundamentals of the state economy. Fiscal Science Course]. Sankt-Peterburg: Printing house by M. Stasyulevich. (in Russian)

**Information about the author:**

**Melnyk V. M.**

Doctor of Economics, Professor,  
Professor at Department of Finance,  
Kyiv National Economic University  
named after Vadym Hetman, Ukraine

## **CHAPTER 11**

### **THE ECONOMIC ASSESSMENT FOR THE RELIABILITY OF INVESTMENT IN THE CONSTRUCTION COMPANY**

**Popova V. V.**

#### **INTRODUCTION**

One of the urgent problems in the activities of construction companies is the problem of accounting when investing of possible negative effects from the adverse effects of the external environment and the associated uncertainty and risk that affect the reliability of the entire investment process. And since the realization of investments by construction companies takes a lot of time and a large number of executors and various resources are involved in it, the likelihood of the impact of negative factors increases significantly compared with other sectors of the economy, causing significant deviations of the real indicators from the planned ones, that is, reduces the reliability of investment.

The problems of the influence of uncertainty on the process of planning, managing, and evaluating the effectiveness of investments, as well as the issues of ensuring and economic assessment for the reliability of investment, were considered by the following scientists: I.V. Bahrova, T.A. Vladymyrova, H.V. Dvas, P. Derevianko, M.A. Zakharevych, V.B. Sirotkin, V.H. Sokolov, Yu.V. Tryfonov, V.H. Fedorenko, T.S. Yarovenko, and others. The problems associated with the peculiarities of the development of construction enterprises were considered by: V.I. Anin, N.I. Verkhoglyadova, V.T. Veчерov, V.V. Herasimov, V.F. Zalunin, Yu.B. Kalugin, V.L. Konashchuk, H.N. Lapin, V.R. Mlodetsky, Yu.V. Orlovska, A.V. Radkevich, V.D. Raizer, Yu.I. Sedykh, V.I. Torkatiuk, R.B. Tian, L.M. Shutenko, and others. A significant contribution to solving the problems of investment activity of enterprises, the strategy of investment development of economic systems, and the risks associated with it were made by: M.V. Hracheva, P.H. Hrabovoy, V.V. Vitlinskyi, S.A. Koshechkin, A.O. Nedosiekin, L.N. Tepman, N.V. Khokhlov, R.A. Fatkhudynov, and others.

However, there are a number of unresolved issues related to the quantitative characteristic of the reliability of the final indicators of

investment efficiency and taking them into account during the economic justification of the reliability of investment. In most cases, alternative investment options today are incomparable in terms of reliability. In some cases, there is no economic justification for investing at all; in others, the probabilistic nature of environmental parameters is not taken into account. Therefore, the solution to the problem of the economic assessment for the reliability of investment at the construction company based on the system interrelation of reliability of individual indicators is relevant and allows the enterprise to reduce absolute and relative deviations between planned and real indicators of investment efficiency due to timely rejection of investment options that do not correspond to the specified level of reliability.

### **11.1. The essence and content of the concept of reliability, features of its accounting in the assessment of investment**

Historically, the emergence of the concept of reliability (as a property of any system) is associated with the widespread use of a systems approach in the 20th century. The theory of systems was first used in exact sciences and in engineering. Accordingly, reliability was considered first exclusively in technical systems. Reliability in technology was defined as the property of the system itself or its elements to perform specified functions while maintaining their performance in specified limits for the required period of time relative to certain conditions and modes<sup>1</sup>.

The application of system theory to the management of organizations in the late 50s was the beginning of numerous studies in the field of reliability not only of production but also of economic systems, based on the calculation of the probability of obtaining the desired value of the efficiency indicator. However, the practice of applying this approach to determining the local reliability of an individual indicator showed that in this case, the real value of the efficiency indicator achieved as a result of the realization of investments often turns out to be much worse than expected.

Given the probabilistic nature of the majority of destabilizing factors, it is quite difficult to establish analytical dependencies that determine the nature and magnitude of their influence on the final

---

<sup>1</sup> Эдельман В. И. Надежность технических систем: экономическая оценка. Москва : Экономика, 1988. 312 с.



performance indicators, which determines the need for their cumulative accounting using the probabilistic estimates of these indicators.

It is necessary to single out not only “aggregate accounting” but also systemic. Systematicity in this case is manifested in the fact that the conclusion about the reliability of obtaining a final positive economic result should be made not on the basis of individual performance indicators but taking into accounts their systemic (cause-effect) relationship with each other. The legitimacy of such a question is justified by a pattern known by probability theory, the reliability of a single element and a system of such elements are determined differently and may differ significantly depending on the connection pattern of the elements. This is in engineering, and in economic calculations the same tendency is revealed in a somewhat different form. In fact, any indicator of economic efficiency consists of several influencing parameters, each of which is also influenced by the random effects of the external environment, and is considered as a structural element of the system of performance indicator, which is calculated. The systematic nature of these structural elements is determined by a formula that interconnects them in a certain way<sup>2</sup>.

In this way, in economic calculations, it is advisable to investigate and determine the reliability of both a single indicator for each of the quantities included in the calculation, and a complex indicator of reliability determined based on the dependence of individual indicators.

Most of the existing research in this area is focused on assessing the reliability of an enterprise as an economic system, which is determined by diagnosing all levels of an organization’s financial and operating activities<sup>3</sup>. Such an approach is acceptable for those enterprises that are at the stage of sustainable development of the life cycle trajectory. In the case when an enterprise develops a strategic development program and plans appropriate investments, the problem arises of determining the integrated reliability of obtaining the expected indicators by which the economic efficiency of the future end result is assessed. Very often, and this is noted in the literature, in analysing the effectiveness of investments, problems arise with the choice of alternative investment

---

<sup>2</sup> Захаревич М.А. Техничко-экономическое обоснование надежности инвестирования в интегрированные структуры наукоемких отраслей промышленности: автореф. дис. ... канд. экон. наук: 08.00.05. Санкт-Петербург, 2004. 20 с.

<sup>3</sup> Попова В. В. Экономическая надежность параметрических процессов. *Економічний простір*. 2012. № 58. С. 126–134.

options when comparing their performance indicators, which are known to have different dimensions and therefore cannot be considered as additive. Most often, a compromise subjective decision is made on the basis of providing one of the indicators of high priority (in most cases, this is the net present value NPV)<sup>4</sup>. When reliability is added to the analysis, the process of choosing an option is simplified since the reliability of each indicator can determine its priority in justifying the investment<sup>5</sup>.

An analysis of the definitions of the “reliability of an organization” showed that most of them basically contain the definitions by M. Porter<sup>6</sup> “the reliability of an organization is defined as the sum of rational distribution and interaction among themselves of technical, technological, personnel, spatial, organizational, informational, financial resources of industrial organizations.”

From the point of view of determining a favourable event, the probability of occurrence of which defines the concept of reliability, the above definition makes sense. At the same time, the term “reliability” is a concept of probability theory, as the probability of a favourable event occurring. Based on the above, the considered definition of reliability in terms of probability theory can be written as: enterprise reliability is the probability of an enterprise finding at the reproductive stages of the lifecycle trajectory due to “rational distribution and interaction of technical, technological, personnel, spatial, organizational, informational, financial resources.”

Based on the above, it can be noted that there is a certain hierarchy of indicators of reliability, on top of which is an indicator of the reliability of the organization. Each indicator of the upper level is complex in relation to the indicators of the lower level, which are regarded as elementary with respect to it. This shows the dual role of indicators at intermediate levels. In this case, it is logical to assume that the reliability of the lower level indicators should be higher than the final reliability of the upper-level result.

---

<sup>4</sup> Крылов Э. И., Власова В. М., Журавкова И. В. Анализ эффективности инвестиционной и инновационной деятельности предприятия : учеб. пособие. Москва : Финансы и статистика, 2003. 608 с.

<sup>5</sup> Здрилик В. С. Сутність фінансових інвестицій як об'єкта обліку: проблеми та шляхи їх розв'язання. *Українська наука: минуле, сучасне, майбутнє*. 2014. Ч. 1, вип. 19. С. 51–59.

<sup>6</sup> Портер, М. Международная конкуренция. Конкурентные преимущества стран. Москва : Альпина Паблицер, 2016. 947 с.

Based on this approach, it is possible to define certain types of reliability in the hierarchical system of their relations.

1. Reliability of the company – the definition mentioned above in the text.

2. Reliability of the structural unit – the probability that the results of economic activities of the structural unit will not lead to a decrease in the reliability of the result of the company.

3. Reliability of the system of integrated indicators of financial and operating activities – the probability that the final value of the system of indicators will be at such a level that will provide the necessary reliability of the work of the structural unit.

4. Reliability of the integrated indicator of economic performance – the probability that the value of the integrated indicator will be at such a level that will provide the necessary reliability of the system of indicators of financial and operating activities.

5. The reliability of the elementary indicator involved in the calculation of the complex – the probability that the value of the elementary indicator will be at a level that will provide the necessary reliability of the integrated indicator of the economic result of the activity.

For the economic rationale for the reliability of investment, the reliability of the system of complex indicators of economic efficiency is considered: net present value (NPV); internal rate of return (IRR); return on investment (RI); payoff period (PP)<sup>7</sup>.

Complex, in this case, is because it is determined using the elementary indicators included in the calculation formula of each of them. For example, for NPV:

$$NPV = \sum_{k=1}^n \frac{I_k}{(1+r)^k} + \sum_{j=1}^m \frac{CF_j^{(+)}}{(1+i)^j} \quad (1)$$

Elementary indicators are:

$I_k$  – investment costs in the k-period of time;

$r$  – the discount rate for the investment stage;

$CF_j^{(+)}$  – positive cash flow in the j-period of time;

$i$  – the discount rate for the commercial phase.

---

<sup>7</sup> Орловська Ю. В., Квактун О. О. Стратегічне управління екологічними інвестиціями: регіональний аспект. Дніпропетровськ, 2011. 280 с.

This example shows the legitimacy of building a hierarchy of a system of economic reliability from an elementary indicator into a complex system and an enterprise as a whole.

These data indicate the need for further research in the field of economic feasibility of investment reliability.

Economic calculations can be divided into two groups: in the first, they are performed based on deterministic data, and in the second, they are made up of probability values. Calculations for the first and second groups are acceptable and reasonable for certain areas of analysis of economic processes. For example, when analysing the indicators of production and economic activity for the previous period, when the process that forms the indicators has already been completed, the results are deterministic. This also applies to balance settlement. At the same time, when comparable data from a number of past periods are analysed (for example, extrapolation methods are used) in order to determine the patterns of their change, a probabilistic component appears due to random deviations of the considered indicator in each time period.

In general, it can be noted that when an analysis of past periods of an enterprise's economic activity is carried out, the share of calculations performed on a deterministic basis is quite large. Parameters characterizing probabilistic processes (mathematical expectation, variance, etc.) appear in this group of calculations when they analyse the sample of data and try to establish their own pattern of change.

At the same time, a group of economic calculations is carried out to ensure the management process. Management is always focused on the future – operational, current, strategic. In accordance with this, the time period for performing the economic analysis is also determined, the purpose of which is to determine quantitative indicators characterizing the state of the control object for a specific time perspective<sup>8</sup>. These types of calculations are based on an analysis of past realizations of the parameters that influence and forecast the development of the economic process for the future. As noted earlier, the parameters calculated on the basis of statistical processing of past implementations of the process are probabilistic.

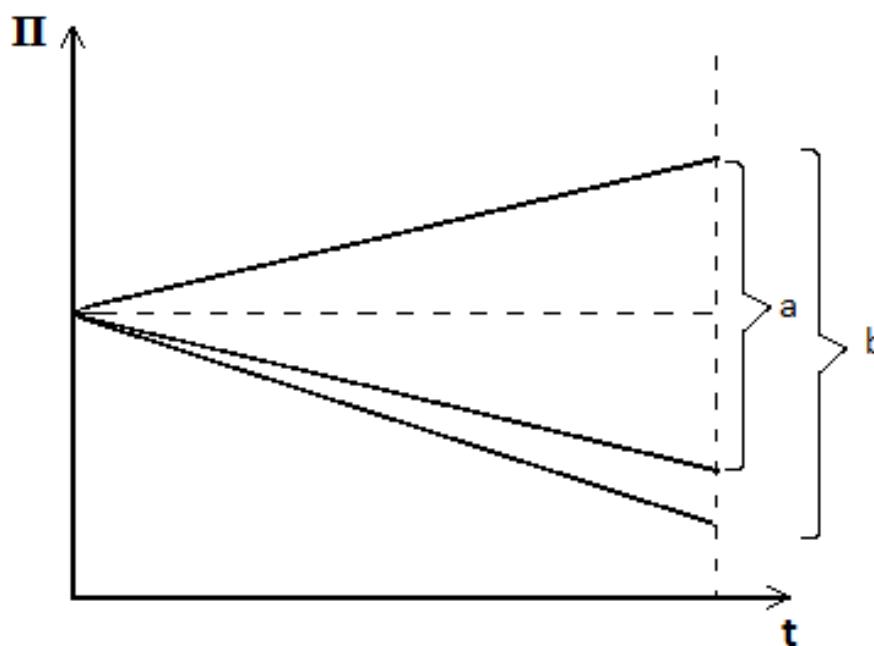
A forecast of future processes, like any forecast, is subject to the influence of uncertainty, and the longer the forecast process, the greater

---

<sup>8</sup> Бахмут О. Управління організацією через прогнозування. *Економіка. Фінанси. Право*. 2000. № 1. С. 10–15.

the impact of uncertainty and the lower the reliability of such forecast and, accordingly, the calculation based on it, describes the promising trends in the development of this process.

On such regularity development forecast process, the number of researchers paid attention: F. Baikheld, V. Druzhylin, V.F. Zalunin, V.R. Mlotsetskyi<sup>9</sup>. It is noted that the resulting state of the system can be represented as a “fan” of increasing uncertainty. Moreover, in a stable economic situation, deviations from the mathematical expectation are equally probable in any direction (typical of the symmetric distribution of the probability density of a random variable). In the conditions of unstable economic processes, the range of distribution increases towards negative (undesirable) parameter values, are calculated (the law becomes asymmetric, the mode is shifted to the zone of negative values) (Fig. 1).



a – stable conditions for the development of the process;  
b – in conditions of transient processes.

**Fig. 1. Dynamics of increasing uncertainty with increasing time of the forecast period**

Based on this view of the future development of the economic process, it is concluded that the use of standard, deterministic indicators is acceptable at the stage of developing common goals, but at the stages

<sup>9</sup> Млодецкий В. Р. Управленческая реализуемость строительных проектов. Дніпропетровськ : Наука і освіта, 2005. 261 с.

of goal realization, the forecast analysis should be based on the uncertainty factor and take into account possible deviations from the forecast development scenario controlled process.

The mismatch of the parametric process in time is of an increasing nature, with the assumption of a normal law of distribution of deviations from the predicted level, to have the following values of the forecast interval.

For a confidence level of 99%, the well-known “three sigma” formula takes the form<sup>10</sup>:

$$Q_{np}^{99\%} f(t) = Q(t) \pm 3\delta \cdot \mu(t) \quad (2)$$

where  $\mu(t)$  – is a function depending on the forecast period:

$$\mu(t) = \sqrt{1 + \frac{(2t + t_0 - 1)^2}{t_0^2 - 1}} \quad (3)$$

where  $t$  – is a forecast time;

$t_0$  – the so-termed dynamic range in the “retrospective”.

This feature in the development of plans was noted long ago and it was taken into account when developing organizational and technological models such as a linear graph, cyclograms, and network graphs. All these and further studies were designed to develop: planning methods, performance evaluation, and management, which together ensured not only the effect of uncertainty on the process itself but also higher reliability of achieving the final result.

Analysis of the current state of the theory and practice of planning investment processes showed a lack of reliability and authenticity of these plans and programs. So the actual cost and duration of construction significantly 1.5-2 times higher than the corresponding figures at the planning stage<sup>11</sup>.

In the early 90s of the last century, Professor A.A. Husakov formulated the concept of organizational and technological reliability (OTR) in the construction industry<sup>12</sup>. “The organizational and technological reliability of the construction industry is the ability of the

---

<sup>10</sup> Семенов В. А. Теория вероятностей и математическая статистика : Учебное пособие. Стандарт третьего поколения. Санкт-Петербург : Питер, 2013. 192 с.

<sup>11</sup> Конащук В. Л. Аналіз економічних можливостей підприємства з реалізації інвестиційного проекту. *Научно-технический сборник ХНАГХ*. 2010. № 94. С. 44–50.

<sup>12</sup> Гусаков А. А., Гинзбург А. В. Веремеико С. А. Организационно-технологическая надежность строительства. Москва : Стройиздат. 1994. 470 с.

construction organization to maintain the operating parameters within the specified limits and obtain the planned result under the given production conditions”.

Also in this work, attention is drawn to the fact that the term “reliability” should be applied only to the result of the system’s activity, and not to individual factors affecting the result. Therefore, it is necessary to clearly formulate what is the result and give a quantitative assessment of the indicators characterizing the effectiveness of achieving this result.

According to the reliability criterion, evaluations of the results of the implementation of large programs over the past few decades have been carried out. So, the work of Professor A.A. Gusakov presents a table for determining the reliability of the main parameters by stages of the investment process (Table 1).

Table 1

**Acceptability (reliability) of the values of the main parameters  
in the economic and organizational-technological documents  
on the stages of the investment process of building  
industrial complexes (fragment)**

The main parameters of construction	Index of deviation of values (average values) of parameters in documents				
	TEA	CMP	OMP	AMP	AR
Resource consumption	1	1,25	1,3	1,35	1,42
The interaction of factors of production (models, graphics)	1	0,75	0,6	0,3	0,2
Development of factors of production (duration of cycles, etc.)	1	0,82	0,7	0,5	0,3
.....					
Total construction system	1	0,8	0,55	0,5	0,42-0,11

where TEA – technical and economic assessment;  
 CMP – construction management plan;  
 OMP – operations management plan;  
 AMP – activities management plan;  
 AR – actual result.

It can be seen from the above table that the reliability of the decisions made during the feasibility studies for the construction of industrial complexes is very low and reaches only 11-42%.

Thus, even today, the problem of the reliability of plans and programs, designated several decades ago, remains relevant, the solution of which is seen in the “distant future”.

If we consider in more detail the term of organizational and technological reliability, then in the considered sources it is determined and evaluated as the probability of achieving the planned targets.

Obviously, since plans are being developed in the current period of time, and are being implemented in the future, this situation objectively already introduces a disagreement that increases with the time between forecasts and realities arising from the implementation of these plans. However, if you pay attention not to the plans but to the quantitative indicators characterizing the development of production processes, organizationally and technologically interrelated in time and space, you can see that their calculation, and therefore, the result are not accurate and contain certain errors.

These errors (inaccuracies) are formed by the adopted model of the display of the plan (line graph, cyclogram, network graph) and the structure of the formulas for calculating the parameters of this plan.

In the work, A.L. Yaremenko summarizes the characteristics of models that are classified according to the method of describing an object (Table 2), which contains recommended areas of their application and a preliminary assessment of the accuracy of the results obtained on their basis<sup>13</sup>.

In construction, when developing plans, organizational and technological models are often used on the basis of a linear schedule (Gantt chart), a cyclogram or a network schedule. As can be seen from the table, they provide relative accuracy in the range of 75-80%. However, the accuracy of the forecast is determined not so much by a graph as by parameters characterizing quantitative values describing the purpose of planning. When calculating these parameters, a series of calculations are performed on the original data. This calculation algorithm includes several elementary functions. For each elementary function, using the analysis of variance, the error is calculated based on the errors of the argument parameters<sup>14</sup>.

---

<sup>13</sup> Яременко О. Л., Сумец А. М. *Операционный менеджмент*. Харьков : Фолио, 2002. 231 с.

<sup>14</sup> Болотин С. А. Основы постановки частной задачи комбинаторной оптимизации строительства комплексных объектов. *Известия вузов. Строительство*. 2010. №4. С. 32–35.



Table 2

**Characteristic features of mathematical models**

Models	Primary applications	Relative calculation accuracy
Algebraic	Common operational problems: analysis of process costs → profit, etc.	90-95%
Line charts, cyclograms	Production planning, distribution of labour	75-80%
Network	Research and design work, development of production projects	up to 75%
Probably statistical		
– queuing theory models;	Evaluation of service systems	up to 80%
– inventory models;	Asset management firms, enterprises	70-75%
– statistical;	In various areas with a fair amount of uncertainty	up to 70%
Regression-correlation	In the areas of production management	85-95%

Thus, the calculation of economic indicators itself contains uncertainty, which is also caused by the choice of the type of model and the scheme for calculating this indicator.

In accordance with this, the remark made by Professor A.A. Husakov in the 70s-90s of the last century: “For a proper assessment of the reliability of the designed solutions, reliable assessment methods are needed. However, the problem of “reliability of the economy” has until recently been overlooked not only by institutions but also by individual authors, whereas the solution to the general problem of efficiency and reliability must begin with increasing the reliability of economic assessment methods when choosing design solutions.”

## **11.2. Methodical prerequisites for the economic rationale for the reliability of investment**

Reliability is one of the main characteristics of the quality of functioning of technical, organizational, technological, production, and economic systems.

Reliability is usually understood as the probability that at any time the system under investigation will be in working condition. In these works, it is noted that, unlike technical systems, which are characterized by instantaneous failures, there is a parametric failure in organizational and economic systems when the system remains operational but the parameters characterizing its efficiency are below the permissible level and due to the mobilization of additional resources seeks to return controlled parameters to the specified efficiency limits.

It is obvious that the reliability of the system depends, on the one hand, on its internal properties, and on the other hand, on various external influences that are random in nature.

If the system has a sufficient level of resources to compensate for negative random external influences, then it also has a high level of reliability. However, the availability of additional resources is associated with additional costs. On the other hand, the lack of reliability of the system leads to frequent parametric failures, an increase in the total time of the recovery period, resulting in a decrease in the average for the period of the system performance indicator<sup>15</sup>.

Thus, the problem of reliability is closely related to the problem of the economic efficiency of the functioning of the organizational-economic system. In this formulation, the solution is reduced to the classical optimization problem.

Such an approach will allow approaching the solution to the problem of a rational level of reliability. In the existing literary sources, this level is determined in the range of 0,4–0,75, but without deep justification for why it is in this range.

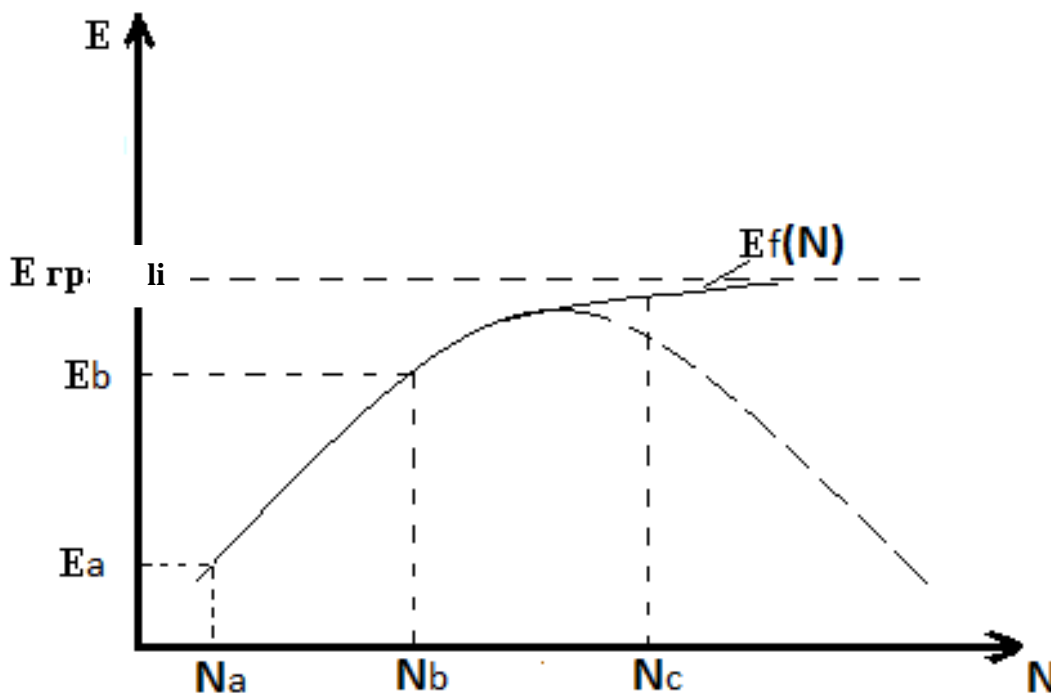
The expansion of the economic parameters included in the solution of the problem, together with the probabilistic ones, will make it possible to solve this problem when choosing an economically sound level for these conditions. Therefore, obviously, it is impossible to talk

---

<sup>15</sup> Млодецький В. Р., Тяг Р. Б., Ткаченко В. А. Аспекти управління інноваціями проектно-орієнтованих організацій: монографія. Дніпро : ДУ ім. А. Нобеля; вид-во «Моноліт», 2012. 242 с

about a rational value of reliability for all possible options since in each case there is an economically reasonable level of reliability.

In a number of works, the interrelation of the concepts of reliability and efficiency is noted – the higher the reliability of the system, the higher its performance indicators, but this trend can be traced to a certain level. In the work by O.L. Yaremenko, a qualitative dependence of efficiency on reliability is given (Fig. 2)<sup>16</sup>.



$E_{lim}$  – limiting efficiency;

$E_f(N)$  – the trajectory of the dependence of efficiency on reliability.

**Fig. 2. The dependence of efficiency (E) on reliability (N)**

Dependency analysis allows identifying the following characteristic areas:

1. (a – b) – the trajectory is approximated by a straight line with a high value of the angular coefficient and in this area, the change in reliability significantly affects the efficiency;

2. (b – c) – transition section, within which the influence of reliability on efficiency decreases in progression – a small increase in efficiency corresponds to a significant increase in reliability;

<sup>16</sup> Яременко О. Л. Операционный менеджмент. Харьков : Фолио, 2002. 231 с.

3. Zone  $> c$ , where the function asymptotically approaches some marginal efficiency characteristic of this system.

An increase in reliability must be accompanied by an increase in efficiency, and these parameters correlate directly in proportion to each other only up to a certain point (Fig. 1.5, trajectory a – b). Thus, for practical purposes, this particular trajectory segment may be of interest.

Uncertainty is an unavoidable quality of the market environment, due to the fact that a large number of factors of different nature and direction have their simultaneous effect on market processes. For construction companies, the problem of uncertainty is of particular relevance – this is due to the long period of the building of the construction facility and, thus, the indicators of economic efficiency, which participants of the investment process expected can be outside of the tolerance level. In the conditions of the economic crisis, management decisions began to be taken with a greater share of risk. The reason for this risk is the lack of information and continuously increasing prices of factors of production.

In calculations that take into account the probabilistic nature of real processes, as a rule, use the following concepts:

- risk ( $R$ );
- reliability ( $N$ );
- uncertainty;
- authenticity.

Risk and reliability are events that complement each other to complete, so from a mathematical point of view, it does not matter which of these categories to choose as the object of study ( $N+R=I$ ). In their works, I.V. Bagrova and T.S. Yarovenko conducted a detailed analysis of the definition of the concept of “risk” from the standpoint of different points of view. Attention is paid to risk accounting as the main factor ensuring the reliability of investment<sup>17</sup>.

By definition of V.V. Kovalev, the risk describes the likelihood of financial loss, expressed<sup>18</sup>:

- a) in the possibility of not achieving the goal;
- b) in the uncertainty of the predicted result;
- c) in the subjectivity of the assessment of the predicted result.

---

<sup>17</sup> Багорова І. В., Яровенко Т. С. Основні аспекти визначення ризику в забезпеченні надійності інвестиційних проектів. *Науковий вісник НГУ*. 2010. № 4. С. 129–133.

<sup>18</sup> Ковалев В. В. Курс финансового менеджмента: учебник. Москва : Проспект, 2011. 480 с.

The main property of risk – it takes place only in relation to the future and is inextricably linked with forecasting and planning.

Risk and reliability are measures of the probability of a certain event, the state of which is uniquely uncertain and is characterized by a certain level of uncertainty. The dictionary meaning of “uncertainty” is “an indefinite mathematical expression that allows for many solutions”<sup>19</sup>.

From the position of probability theory, uncertainty is determined by the possible complete list of states of the monitored parameter. The condition “full list” means that with a probability equal to one we can assert that the parameter is within the possible state and the probability of going beyond these limits tends to zero.

In a number of papers<sup>20</sup>, uncertainty is characterized as an objective state of nature, and risk as a kind of “derivative of a state of uncertainty, which describes the possibility of an undesirable event”<sup>21</sup>. The risk appears when any possible value of the parameter is chosen in the indicated range. The selection process is subjective, therefore, it is noted that the risk category is subjective as opposed to uncertainty.

Thus, uncertainty is a risk measurement environment and can be defined:

- in the form of probability distributions: the distribution of a random variable is precisely known, but it is not known what specific value the random variable will acquire;

- in the form of subjective probabilities: the distribution of tasks in the form of the probability of occurrence of individual values determined by the expert;

- in the form of an uncertainty interval: the distribution of a random variable is unknown, but it is known that it can take any value in a certain interval.

The impact of the level of uncertainty directly determines the level of risk.

The level of uncertainty is influenced by factors of both the internal and external environment. Factors of the internal environment must be considered at the stage of investment realization, and at the stage of

---

<sup>19</sup> Толковый словарь русского языка. Том I. Под редакцией Д.Н. Ушакова. Москва : ООО «Издательство Астрель», ООО «Издательство АСТ», 2000. 848 с.

<sup>20</sup> Кошечкин С.А. Концепция риска инвестиционного проекта. Корпоративный менеджмент. URL: <http://www.cfin.ru/finanalysis/koshechkin.shtml>

<sup>21</sup> Савчук В. П. Управление финансами: Интернет портал для управленцев. URL: <http://www.management.com.ua/finance/finlll.html>.

planning and economic justification of investments, environmental factors are mainly taken into account. These features must be taken into account when developing forecasts regarding the formation of cash flow parameters, which are the basis for calculating investment performance indicators, the values of which make the final decision on the advisability of investing. It is obvious that the reliability of forecasts decreases with an increase in the forecast period and, with an increase in the complexity of unstable external conditions this period shortens more intensively and may in some cases reach 1–2 years.

Obviously, no matter how the state of uncertainty is formalized, we have a discrete spectrum of possible states of the monitored parameter in the possible range of its values and the probability that this parameter falls into the boundaries of each range.

In the work<sup>22</sup>, attention was paid to the factors implemented in construction investment. The following of them are distinguished: technical, organizational, resource (material, financial), economic. Each of the selected factors is characterized by its “input” list of parameters that are “input” for evaluating other factors. So, the parameters of technical feasibility are input for organizational and so on. As a result, the researcher is interested in the level of final feasibility, and its conditional decomposition into separate factors is the methodology of researching the whole through its components, taking into account their interdependence and mutual influence.

Each of these factors is the subject of independent research. In further work, economic feasibility is chosen as research. By definition, “feasibility” is the ability to achieve a goal with a limited amount of resources available for a certain period of time. The concept of “opportunity” has a strict mathematical analogy – probability, that is, “reliability.”

As noted in<sup>23</sup>, the term “reliability” should be applied only to the result, and not to individual factors affecting the result. If reliability is investigated as an economic category, then in the future as the object of this reliability we will consider investments.

It is necessary to determine what should be considered as a result of the investment. Here we can distinguish two components if we talk

---

<sup>22</sup> Тяг Р. Б., Павлов І. Д., Головкова Л. С. Управління проектами у виробничих системах. Запоріжжя : ГУ «ЗІДМУ», 2006. 208 с.

<sup>23</sup> Гусаков А. А., Гинзбург А. В., Веремченко С. А. Организационно-технологическая надежность строительства. Москва : Стройиздат. 1994. 470 с.

about investing in construction. The first component of the material is the object itself. A theory of organizational and technological reliability has been developed that is precisely concerned with the investigation of the reliability of related processes: technical, technological, and organizational. The second component is the economic processes that throughout the implementation of investments (duration of the life cycle) form its effectiveness.

In the literature on the economic analysis of investments, the following ratios between standard indicators for evaluating the effectiveness of investment are provided (Table 3).

Table 3

**Conditions for decision for practicability to invest**

Performance indicators			Alternate solution
NPV	IRR	RI	
>0	>CC*	>1	Positive decision
<0	<CC	<1	Negative decision
=0	=CC	=1	State of limit equilibrium

\* CC – the cost of capital, which is advanced in investment activities.

Unlike technical, technological, and organizational processes, where most often reliability is the object of study, risk parameter is more often studied in economic literature. As noted earlier, there is no fundamental difference in choosing risk or reliability, since they complement each other before the full event.

Here is the definition of economic risk<sup>24</sup>:

1. Economic risk – the possibility of incurring losses due to the random nature of the results of economic decisions that are taken or in the implementation of certain actions.

2. In the investment sphere, economic risk represents the probability of incurring losses as a result of unsuccessful capital investment.

3. Economic risk in business is the risk that the products produced as a result of business activities cannot be sold at a price that covers operating and maintenance costs.

The above definitions consider economic risk as a fact of a negative event (system failure). The existing definitions of technical and organizational reliability focus on the property (ability) of the system to

<sup>24</sup> Борисов А. Б. Большой экономический словарь. Москва : Книжный мир, 2003. 895 с.

maintain an operational condition for a certain length of time. Based on this, we give a definition of investment reliability.

The reliability of investment is the result of a systemic influence on the processes that occur in the control object and are aimed at ensuring that the values of economic efficiency indicators are obtained from the results of the investment process not lower than the established probability level.

Here, under the “systemic action” understood all possible factors influencing the controlled process, these are technical, organizational, technological, financial, and others, and economic indicators act as a criterion for evaluating the effectiveness of such an action.

Thus, based on the analysis of literary sources, the dependence of the level of reliability on the degree of uncertainty of the external environment, which is the cause of the risk, is substantiated. Therefore, the level of reliability is a subjective category, which is determined by the investor’s desire to obtain a certain level of income at an acceptable level of risk for implementing an investment decision.

Based on this, the possible future risks of non-receipt or shortfall in the expected income level, which can reflect a more objective picture of the investment process, should be included in the calculation of investment performance.

## **CONCLUSION**

As a result of the analysis of literary sources in the field of justifying the reliability of investment in the construction industry, it was established that the existing methods are fragmented, non-systemic in nature, and do not take into account probabilistic processes affecting the operation of the economic system.

Joint consideration of the definitions of organizational and technological reliability, focuses on the properties of the system to maintain an operating condition for a certain period of time, and economic risk, as a fact of a negative event, allow formulating the concept of reliability of investment.

Analysis of the probabilistic nature of real economic processes showed that the uncertainty of the state of the system is an objective value, and reliability is subjective, associated with the choice of the desired level of confidence in obtaining a positive result.

It is established that the reliability decreases more intensively with time than the higher the intensity of the increase in system uncertainty,



which is important when determining the duration of forecasting the development of the investment process and calculating economic efficiency indicators.

It is established that the duration of investment affects the accuracy of the forecast, and therefore, the reliability of the final result, which emphasizes the importance of determining the payback period of investments.

### **SUMMARY**

The transformation processes in the national economy have significantly changed the economic, legal, and social environment of the construction industry. Now the further development of the construction industry requires the attraction of significant investment resources, and this especially applies to business entities that are direct participants in investment processes. Since the realization of investments by construction companies takes a lot of time and a large number of executors and various resources are involved in them, the investment process at the enterprises of the construction industry requires a systematic approach to its management.

The article reveals the problem of the influence of uncertainty in conditions of incomplete information and solves the problem of increasing the reliability of the final result and the efficiency of the investment process.

### **REFERENCES**

1. Эдельман В. И. Надежность технических систем: экономическая оценка. Москва : Экономика, 1988. 312 с.
2. Захаревич М. А. Техничко-экономическое обоснование надежности инвестирования в интегрированные структуры наукоемких отраслей промышленности: автореф. дис. ... канд. экон. наук: 08.00.05. Санкт-Петербург, 2004. 20 с.
3. Попова В. В. Экономическая надежность параметрических процессов. *Економічний простір*. 2012. № 58. С. 126–134.
4. Крылов Э. И., Власова В. М., Журавкова И. В. Анализ эффективности инвестиционной и инновационной деятельности предприятия : учеб. пособие. Москва : Финансы и статистика, 2003. 608 с.

5. Здреник В. С. Сутність фінансових інвестицій як об'єкта обліку: проблеми та шляхи їх розв'язання. *Українська наука: минуле, сучасне, майбутнє*. 2014. Ч. 1, вип. 19. С. 51–59.
6. Портер М. Международная конкуренция. Конкурентные преимущества стран. Москва : Альпина Паблишер, 2016. 947 с.
7. Орловська Ю. В., Квактун О. О. Стратегічне управління екологічними інвестиціями: регіональний аспект. Дніпропетровськ, 2011. 280 с.
8. Бахмут О. Управління організацією через прогнозування. *Економіка. Фінанси. Право*. 2000. № 1. С. 10–15.
9. Млодецкий В. Р. Управленческая реализуемость строительных проектов. Днепропетровск : Наука і освіта, 2005. 261 с.
10. Семенов В. А. Теория вероятностей и математическая статистика: Учебное пособие. Стандарт третьего поколения. Санкт-Петербург : Питер, 2013. 192 с.
11. Конащук В. Л. Аналіз економічних можливостей підприємства з реалізації інвестиційного проекту. *Научно-технічний збірник ХНАГХ*. 2010. № 94. С. 44–50.
12. Гусаков А. А., Гинзбург А. В. Верременко С. А. Организационно-технологическая надежность строительства. Москва : Стройиздат, 1994. 470 с.
13. Яременко О. Л., Сумец А. М. Операционный менеджмент. Харьков : Фолио, 2002. 231 с.
14. Болотин С. А. Основы постановки частной задачи комбинаторной оптимизации строительства комплексных объектов. *Известия вузов. Строительство*. 2010. № 4. С. 32–35.
15. Млодецкий В. Р., Тян Р. Б., Ткаченко В. А. Аспекти управління інноваціями проектно-орієнтованих організацій : монографія. Дніпро : ДУ ім. А. Нобеля; Вид-во «Монолит», 2012. 242 с.
16. Яременко О. Л. Операционный менеджмент. Харьков : Фолио, 2002. 231 с.
17. Багрова І. В., Яровенко Т. С. Основні аспекти визначення ризику в забезпеченні надійності інвестиційних проектів. *Науковий вісник НГУ*. 2010. № 4. С. 129–133.
18. Ковалев В. В. Курс финансового менеджмента : учебник. Москва : Проспект, 2011. 480 с.

19. Толковый словарь русского языка. Том I. Под редакцией Д. Н. Ушакова. Москва : ООО «Издательство Астрель», ООО «Издательство АСТ», 2000. 848 с.

20. Кошечкин С. А. Концепция риска инвестиционного проекта. Корпоративный менеджмент. URL: <http://www.cfin.ru/finanalysis/koshechkin.shtml>

21. Савчук В. П. Управление финансами: Интернет портал для управленцев. URL: <http://www.management.com.ua/finance/finlll.html>

22. Тяг Р. Б., Павлов І. Д., Головкова Л. С. Управління проектами у виробничих системах. Запоріжжя : ГУ «ЗІДМУ», 2006. 208 с.

23. Гусаков А. А., Гинзбург А. В., Верременко С. А. Организационно-технологическая надежность строительства. Москва : Стройиздат. 1994. 470 с.

24. Борисов А. Б. Большой экономический словарь. Москва : Книжный мир, 2003. 895 с.

**Information about the author:**

**Popova V. V.**

Candidate of Economic Sciences,  
Associate Professor at Department of Accounting,  
Economics and Human Resources Management,  
Prydniprovskaya State Academy of Civil Engineering  
and Architecture, Ukraine

## **CHAPTER 12**

### **BACKGROUND OF FORMING THE RELEVANT LEVEL OF ECONOMIC SECURITY OF THE ENTERPRISE: EFFICIENCY, INNOVATION, AND COMPETITIVENESS**

**Fisunenکو P. A.**

#### **INTRODUCTION**

Study of economic security at different levels of the economy began in the last thirty years of the past century when it became necessary to identify and respond to the threats and continues up today. The economic security of enterprises in foreign literature is called “ecosecent” (economic security of enterprise). In the Ukrainian literature concerning the definition of the essence of “economic security of the enterprise” concept at the present stage, there is a lot of opinions. The research of the conceptual-categorical apparatus in this area and the definition of the preconditions for the appropriate level of economic security of the enterprise formation are relevant.

Considering the basic prerequisites for the formation of the appropriate level of economic security of the enterprise, it is necessary to apply a systematic approach that allows investigating the causal relationships between economic security (purpose), the competitiveness of the enterprise (means) and efficiency (the ratio of income and expenditure, organizational and managerial efficiency), and the innovation of its activities (tools).

According to the World Economic Forum, Ukraine refers to efficiency-oriented economies at the level of competitiveness<sup>1</sup>. That is, the level of economic growth depends on efficiency. At this stage, it is necessary to introduce more efficient production processes, to improve the quality of products, to ensure the quality of higher education and training, an efficient market for goods and services, the sound functioning of the labour market, the development of the financial market, internal and external markets, and the ability to implement the

---

<sup>1</sup> Позиція України в рейтингу країн світу за індексом глобальної конкурентоспроможності 2017-2018. *Економічний дискусійний клуб*. URL: <http://edclub.com.ua/analytika/pozyciya-ukrayiny-v-reytingu-krayin-svitu-za-indeksom-globalnoyi-konkurentospromozhnosti-2> (дата звернення: 15.05.2019).

latest technology. Also, the report published by the World Economic Forum points to the need for a systematic approach to improving competitiveness, which is especially relevant when it comes to innovation, because strong innovation orientation can provide a “jump” in the economies of low- and middle-income countries. As the research has shown, in the process of ensuring an adequate level of economic security of an enterprise, one can distinguish the main preconditions – competitiveness, efficiency, and innovation, and consider them as a goal, means, and tools for its achievement.

### **12.1. An overview of theoretical and methodological approaches to the definition of the essence of economic security of the enterprise**

Many Ukrainian scientists are involved in the study of the economic security of the enterprise, in particular, B. Andrushkov, A. Baranovsky, V. Vasiltshev, S. Varnalius, A. Vlasyuk, V. Gayets, B. Gunnsky, S. Dovbnia, F. Evdokimov, I. Ivanyuta, A. Zaichychsky, O. Zhikhor, A. Kirienko, G. Kozachenko, T. Kuzenko, V. Muntian, V. Ponomarev, O. Lyashenko, T. Sokolenko, and many others.

Given a large number of investigations in this field in order to study the essence of the concept of “economic security of the enterprise”, it is necessary to carry out its semantic analysis as a phrase from three concepts: “economic”, “security”, “enterprise”.

In the dictionary<sup>2</sup>, the term “economic” is understood as, firstly, “which concerns the totality of socio-industrial relations, economic life, etc. (economic struggle, economic crisis, economic life, economic journal, economic geography), and secondly, as “profitable” in economic terms (economic project, economic regime, economic refrigerator, economic technology). Semantically, the word “economic” is an adjective of the word “economy”<sup>3</sup>. Economy (from Greek. Oikonomikē – the art of conducting a household) – a set of economic relations in human society; economy of the enterprise, region, country, group of countries or the world; a complex of social sciences that explores the above-mentioned economy and a set of economic relations<sup>4</sup>.

With regard to the concept of “security”, then in the new interpretive dictionary of the Ukrainian language, it is defined as a state

---

<sup>2</sup> Slovopediy. URL: <http://slovopedia.org.ua/32/53397/30739.html>

<sup>3</sup> Словник української мови. URL: <http://sum.in.ua/s/ekonomichnyj>

<sup>4</sup> Словарь финансовых терминов. Программа поиска толкований слов «Interpretatio». URL: <http://inetio.org/>.

when someone or something nothing threatens<sup>5</sup>. In this paper<sup>6</sup>, security refers to the conditions in which a complex system is present when the action of external factors and internal factors does not lead to processes that are considered negative in relation to this complex system in accordance with existing, at this stage, needs, knowledge, and representations.

A number of normative documents also defines the term: “Safety – the absence of unacceptable risk associated with the possibility of causing any damage to life, health, and property of citizens, as well as for the environment”<sup>7</sup>; safety means the absence of unacceptable risk associated with the possibility of causing damage and/or damage<sup>8</sup> and a number of other specific definitions relating to aviation, mining and smelting complex, railway transport, regulations of explosive materials of industrial purpose. In Greek, “security” means “to have a situation”, that is, security is a state of the subject in which the probability of a change in the properties and parameters of its environment inherent to this subject is insignificant, less than a certain interval<sup>9</sup>.

The third component of the phrase is the term “enterprise”. The Law of Ukraine “On Enterprises in Ukraine” states that an enterprise is an independent economic entity that has the rights of a legal entity and carries out production, research, and commercial activity in order to receive the corresponding profit (income). In the current normative document, the Commercial Code of Ukraine states that an enterprise is an independent economic entity created by a competent authority of state power or a local self-government authority or other entities to meet social and personal needs through the systematic implementation of industrial, research, trade, other business activities in the manner prescribed by this Code and other laws. In educational literature, it is noted that the enterprise is an organizationally separate and economically independent branch of the manufacturing sphere of the national economy specializing in the production of products, the

---

<sup>5</sup> Новий тлумачний словник української мови: В 4-х т. / Укл.: В. В. Яременко, О. М. Сліпущко. Київ : Аконті, 2001. 911 с.

<sup>6</sup> Заплатинський В. М. Логіко-детермінантні підходи до розуміння поняття «Безпека». *Вісник Кам'янець-Подільського національного університету імені Івана Огієнка. Фізичне виховання, спорт і здоров'я людини*. 2012. Випуск 5. С. 90–98.

<sup>7</sup> Правила обстежень, оцінки технічного стану та паспортизації виробничих будівель і споруд. URL: <https://zakon.rada.gov.ua/laws/show/z0423-98>

<sup>8</sup> Кодекс систем розподілу. URL: <https://zakon.rada.gov.ua/laws/show/v0310874-18/ed20180314#n28>

<sup>9</sup> Словарь финансовых терминов. Программа поиска толкований слов «Interpretatio». URL: <http://inetio.org/>.

execution of works, and the provision of services<sup>10</sup>. In the book under the editorship of S. Pucropivny, it is stated that the enterprise is an organizationally isolated and economically independent main (primary) link of the manufacturing sphere of the national economy, which produces products (performs work or provides paid services)<sup>11</sup>.

Let's consider the modern and most actual thoughts of national specialists regarding the definition of "economic security of the enterprise" as a result of combining the semantic meanings of the three concepts under consideration and establish the main characteristics used in determining the essence of the complex concept "economic security of the enterprise".

So, G. Kozachenko considers the economic security of the enterprise "as harmonization in time and space of economic interests of the enterprise with the interests of the external entities involved with it, operating outside the enterprise"<sup>12</sup>. But in this case, the tools and means to achieve this harmonization are not considered.

F. Evdokimov and O. Misina characterize economic security in terms of the impact of the external and internal environment of the enterprise. So, in terms of the environment (various market agents), the company's economic security is a complex expression of the degree of reliability of the company as a partner in the production, financial, commercial, and other economic relations. From the standpoint of the internal environment, the company's economic security is the protection of its potential (production, organizational, technical, financial, economic, social) from the negative impact of external and internal factors, direct or indirect economic threats, as well as the ability of the subject to reproduce<sup>13</sup>. In this case, in our opinion, there are no tools and facilities for ensuring the security of the potential.

In another work, F. Evdokimov notes that the assessment of the economic situation of the enterprise, the absence of a threat of bankruptcy is a necessary but not sufficient condition for an assessment of economic security. The author notes that we should talk about the

---

<sup>10</sup> Бойчик І. М. Економіка підприємства: підручник. Київ : Кондор-Видавництво, 2016. 378 с.

<sup>11</sup> Економіка підприємства : підручник / За заг. ред. С. Ф. Покропивного. Вид. 2-ге, перероб. та доп. Київ : КНЕУ, 2001. 528 с.

<sup>12</sup> Козаченко Г. В., Пономарьов В. П. Економічна безпека підприємств: сутність і передумови формування. *Теорія та практика управління у трансформаційний період*. Т. 3. Донецьк : ІЕП НАН України, 2001. С. 3–7.

<sup>13</sup> Евдокимов Ф. И., Мизина Е. В. Экономическая устойчивость предприятия как фактор его безопасности. *Наукові праці Донецького державного технічного університету. Серія: економічна*. Випуск 37. Донецьк, ДонНТУ, 2001. С. 16–25.

sustained economic development of the enterprise for a long-term perspective, the identification of risk factors in advance in all directions of its activity. In this case, economic security is understood by the author as harmonization of production, marketing and reproductive processes of the enterprise, in which the probability of unwanted economic condition, estimated by changes in regulated parameters, does not exceed a predetermined level<sup>14</sup>. This definition, in our opinion, does not indicate at the expense of what and thanks to whom (i.e. means and performers) harmonization is achieved.

N. Yatsenko and S. Mikhailuk consider the economic security of the enterprise as a subsystem of national economic security and define it as the economic state of the enterprise, consistent with the internal and external changes in financial and economic activity, not related to force-majeure circumstances<sup>15</sup>.

The Big Economic Dictionary has the following definition: economic security is the state of legal, economic relations, organizational links, material and intellectual resources of the enterprise, which guarantees the stability of its operation, financial and commercial success, progressive scientific and technical and social development<sup>16</sup>. It should be noted that this definition does not specify the preconditions for this state.

T. Sokolenko considers economic security as a condition in which the strategic potential of the company is near the limits of adaptability, and the threat of loss of economic security increases as the degree of adaptability of the strategic potential reaches the marginal zone<sup>17</sup>. As factors influencing the economic safety of the enterprise, the author identifies the degree of the possible risk of making managerial decisions and claims the need to fall into the zone of permissible risk (when the magnitude of possible losses does not exceed the magnitude of possible profits). In this case, due attention was paid not only to risk but also to other factors of influence, in particular, efficiency and innovation of the enterprise.

---

<sup>14</sup> Евдокимов Ф. И. Экономическая безопасность – необходимое звено в планировании развития предприятия/ Матеріали науково-практичної конференції «Донбас 2002: наука і техніка – виробництву», 5–6 лютого 2002, Донецьк. С. 966–969.

<sup>15</sup> Яценко Н. М., Михайлюк С. О. Регіональна економічна безпека у контексті національної економічної безпеки. *Наукові праці Донецького державного технічного університету. Серія: економічна*. Випуск 37. Донецьк, ДонНТУ, 2001. С. 78–82.

<sup>16</sup> Большой экономический словарь. Под ред. А. Н. Азриляна. 5-е изд., доп. и перераб. Москва, 2002.

<sup>17</sup> Соколенко Т. М. Економічна безпека підприємства в умовах транзитивної економіки. URL: <http://intkonf.org/kand-ped-n-sokolenko-tm-ekonomichna-bezpeka-pidpriemstva>



In the normative document<sup>18</sup>, under the economic security of the enterprise, the state understands the state of its defence against the negative impact of external and internal threats, destabilizing factors, which ensures a stable implementation of basic economic interests and objectives of the statutory activities. Again, it is not clear what exactly determined the ensured security status.

T. Ivanyuta and A. Zaichychsky in their work under the economic security of an enterprise mean the state of the economic entity, in which, at the most efficient use of available resources, it achieves prevention, weakening or protection against existing threats and threats or other unforeseen circumstances, and basically achieves business objectives in conditions of competition and economic risk<sup>19</sup>. In this definition, there is a mention of efficiency but it only refers to the efficiency of the use of resources and does not mention the innovation of the enterprise.

In the monograph, T. Vasylytsiv<sup>20</sup> under the economic security of an enterprise means the level of viability of the business entity during the life cycle of its operation, which simultaneously guarantees the fulfilment of the mission and objectives of the enterprise. In addition, the inevitable characteristics of economic security of the business entity, according to scientists, are the access to resources and markets, the state of protection from external and internal risks, the level of economic efficiency of functioning, as well as the ability of the enterprise to develop. Indeed, this approach describes important functional areas and functional elements of the enterprise but does not reflect fully the preconditions for ensuring economic security.

Authors L. Korchevskaya and G. Josan define economic security terminologically as the ability of subjects of socio-economic relations to protect economic potential from internal and external destabilizing factors<sup>21</sup>. It does not understand the tools and means of such protection.

A rather common approach to determining the essence of economic security of an enterprise is to consider it as a certain state of corporate resources (resources of capital, personnel, information, technology, and

---

<sup>18</sup> Постанова Ради Центральної спілки споживчих товариств України «Про концепцію економічної безпеки споживчої кооперації України» від 12.11.2008. URL: <http://zakon.nau.ua>

<sup>19</sup> Іванюта Т. М., Заїчковський А. О. Економічна безпека підприємства : навч. посіб. [для студ. вищ. навч. закл.]. Київ : Центр учбової літера тури, 2009. 256 с.

<sup>20</sup> Васильців Т. Г., Волошин В. І., Бойкевич О. Р., Каркавчук В. В. Фінансово-економічна безпека підприємств України: стратегія та механізми забезпечення : монографія. Львів : Ліга-Прес, 2012. 386 с.

<sup>21</sup> Корчевська Л. О., Жосан Г. В. Методологічні питання економічної безпеки підприємства // *Вісник економіки транспорту і промисловості*. 2010. № 29. С. 108–110.

equipment) and business opportunities, which guarantees their most efficient use for the stable functioning of dynamic scientific and technical and social development, prevention of internal and external negative influences (threats)<sup>22</sup>.

## **12.2. Definition of the essential characteristics of the concept “economic security of the enterprise”**

On the basis of further research and systematization of the views of scientists, a list of essential characteristics used by scientists in considering the economic security of the enterprise (Table 1) was established.

Apparently, some scientists focus on one particular essential characteristic of the company’s economic security, others – on several, more revealing the essence of the concept.

Thus, investigating the views of 44 scientists, found that 14 of them when considering the essence of economic security enterprises underline the state of corporate resources use (or the state of corporate resources). Such scientists are V. Heiets, S. Pokopropivny, Z. Varnalij, O. Kosarev, T. Kuzenko, N. Podluzhnaya, S. Ilyashenko, O. Grunin, V. Mak-Mak, A. Kiriyenko, L. Shvab, V. Muntian, I. Mantsurov, O. Nosinova. The share of these scientists in the total amount is 31.8%. It is important to note that the approaches of these scientists point to the need to ensure the effective use of enterprise resources, that is, one can conclude that one of the prerequisites for ensuring an adequate level of economic security of the enterprise is the effectiveness of its activities.

In their works, 13 scientists emphasize the state of the protection of resources, capacity, business processes of the enterprise. Such scholars include F. Evdokimov, O. Mizina, S. Dovbnaya, A. Beijing, L. Malyuta, V. Shlikov, D. Kovalev, Y. Krakos, I. Pletnikova, M. Bendikov, V. Zabrodsky, N. Podluzhna, A. Sosnin. The share of these scientists in the total amount is 29.5%.

Among the investigated sources, three scientists (N. Yatsenko, S. Mikhailuk, B. Andrushkov) emphasize the economic state of the enterprise, which is consistent with internal and external changes in financial and economic activity, which ensures the protection of the interests of the enterprise from various threats. The share of these scientists in the total amount is 6.8%.

---

<sup>22</sup> Економіка підприємства : підручник / За заг. ред. С. Ф. Покропивного. Вид. 2-ге, перероб. та доп. Київ : КНЕУ, 2001. 528 с.

Table 1

**Essential characteristics of the concept  
“economic security of the enterprise”**

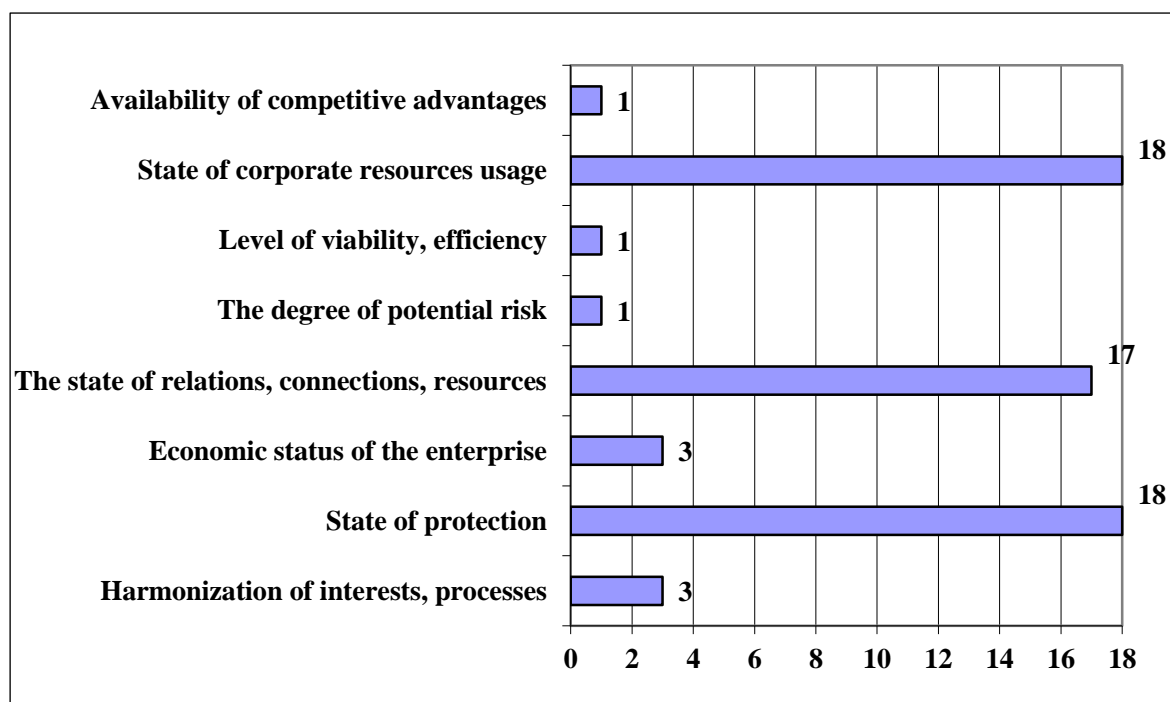
Author	Harmonization of interests, processes	State of protection	The economic status of the enterprise	The state of relations, connections, resources	The degree of potential risk	Level of viability, efficiency	State of corporate resources usage	Availability of competitive advantages
G. Kozachenko, V. Ponomarev	+						+	
F. Evdokimov, O. Mizina, S. Dovbnya, A. Beijing, L. Malyuta, V. Shlikov, D. Kovalev, Yu. Krakos, I. Plitnikova, M. Bendikov, V. Zabrodsky, A. Sosnin, N. Podluzhna		+						
F. Evdokimov	+							
N. Yatsenko, S. Mikhailuk, B. Andrushkov			+					
Great Economic Dictionary V. Zubik, A. Sudoplatov				+				
T. Sokolenko					+			
“On the Concept of Economic Security of Consumer Cooperation of Ukraine”		+						
T. Ivanuta, A. Zaichychsky		+		+			+	
T. Vasiltsiv						+		
L. Korchevskaya, G. Josan		+						
V. Heiets, O. Kosariev, T. Kuzenko, N. Podluzhna, S. Ilyashenko, O. Grunin, V. Mak-Mak, A. Kiriienko, L. Shvab, V. Muntiyan, Z. Varnaliy, I. Mantsurov, O. Nusinova, S. Pokropivny				+			+	
N. Lohanova								+
Number of references	3	18	3	17	1	1	18	1

Also, in three sources, namely, the Great Economic Dictionary and works of the authors V. Zubik and A. Sudoplatov, points to the state of relations, ties, resources, characterizing the economic security of the enterprise. The share of these scientists in total is also 6.8%.

Two scientists from 44 emphasized the following characteristic of the economic security of the enterprise as the harmonization of interests, processes (G. Kozachenko, V. Ponomarev), the state of security, the state of relations, connections, resources, their use (T. Ivanyuta, A. Zaichchkovsky), the state of protection (L. Korchevskaya, G. Josan). Their share is 4.5%.

All other characteristics are found in the work of one scientist from 44: the harmonization of interests, processes (F. Evdokimov), the state of security (“On the Concept of Economic Security of Consumer Cooperation in Ukraine”), the degree of potential risk (T. Sokolenko), the level of viability, efficiency (T. Vasiltsov), the presence of competitive advantages (N. Lokhanova). The share of these scientists in the total amount also makes up to 2.3%.

It will also be appropriate to analyse the number of references to some or other essential characteristics of the enterprise’s economic security in all investigated scientists (as some scientists point to several characteristics) (Fig. 1).



**Fig. 1. The frequency of mentioning the essential characteristics of economic security of the enterprise in the investigated works**

Selecting the most significant characteristics of the concept, it is expedient to apply the method of expert assessments while the subjective opinions of experts will be their emphasis on the essential characteristics

of the enterprise's economic security. As the researchers note, the examination procedure is based on the use of the method of pairwise comparison of objects, according to which they are all compared in pairs. The method of pairwise comparisons has become widely used in the investigated economic phenomena since it allows us to determine the most important priorities of choice, which provides an opportunity for further deeper analysis.

Applying the pairwise comparison method, each essential characteristic, relative to another, is assigned a coefficient of relative importance, which can be established by experts or determined on the basis of their comparison according to a certain criterion, which in our case may be the frequency of mentioning the essential characteristics of economic security of the enterprise in the investigated works.

Let's place all the essential characteristics we are investigating in order of decreasing the frequency of their mention in the work of scientists and assign them an identification code (Table 2).

Table 2

**Ranking of the essential characteristics of economic security of the enterprise in the investigated works**

Characteristic	Identification code	Frequency of mentioning
The state of protection	X1	18
The state of corporate resources use	X2	18
The state of relations, connections, resources	X3	17
Harmonization of interests, processes	X4	3
The economic status of the enterprise	X5	3
The degree of potential risk	X6	1
Level of viability, efficiency	X7	1
Availability of competitive advantages	X8	1

Based on the data of Tab. 2, the matrix of pairwise comparisons of the essential characteristics of the economic security of the enterprise is filled, the sum of coefficients of relative importance is calculated and determined by the weight of the essential characteristic (Table 3).

Based on the results of calculating the importance of the essential characteristics of economic security, the enterprise is offered a choice of

characteristics that are essential for our study. According to the expert survey, the minimum allowable value of the weight, in which this characteristic can be considered significant, is 0.1. All specifications with lower weight are not significant and can be ignored during further research.

Table 3

**Matrix of pairwise comparisons of essential characteristics of economic security of an enterprise**

Code	X1	X2	X3	X4	X5	X6	X7	X8	The sum of coefficients of relative importance	The weight of the essential characteristic
X1	1,00	1,00	1,06	6	6	18	18	18	69,06	0,290
X2	1,00	1,00	1,06	6	6	18	18	18	69,06	0,290
X3	0,94	0,94	1,00	5,67	5,67	17	17	17	65,22	0,274
X4	0,17	0,17	0,18	1,00	1	3	3	3	11,51	0,048
X5	0,17	0,17	0,18	1,00	1,00	3	3	3	11,51	0,048
X6	0,06	0,06	0,06	0,33	0,33	1,00	1,00	1,00	3,84	0,016
X7	0,06	0,06	0,06	0,33	0,33	1,00	1,00	1,00	3,84	0,016
X8	0,06	0,06	0,06	0,33	0,33	1,00	1,00	1,00	3,84	0,016
Total									237,87	1,000

Consequently, the essential characteristics of the economic security of an enterprise whose weight exceeds 0.1 include:

1. State of protection (0,29).
2. Condition of corporate resources' use (0,29).
3. Status of relations, connections, resources (0,274).

These characteristics can be divided into two groups:

1. Functional (use of corporate resources).
2. Effective (state of protection, state of relations, connections, resources).

**12.3. Preconditions for the formation of a proper level of economic security of the enterprise**

As has been established, the security level is determined by the efficiency of the use of resources. In turn, this efficiency is determined primarily by the ability of the enterprise's management system to attract, form, redistribute, and use the necessary resources. Thus, the economic

security of an enterprise depends on how efficiently its management and managers will be able to avoid possible threats and eliminate the harmful effects of the influence of individual factors of the external and internal environment.

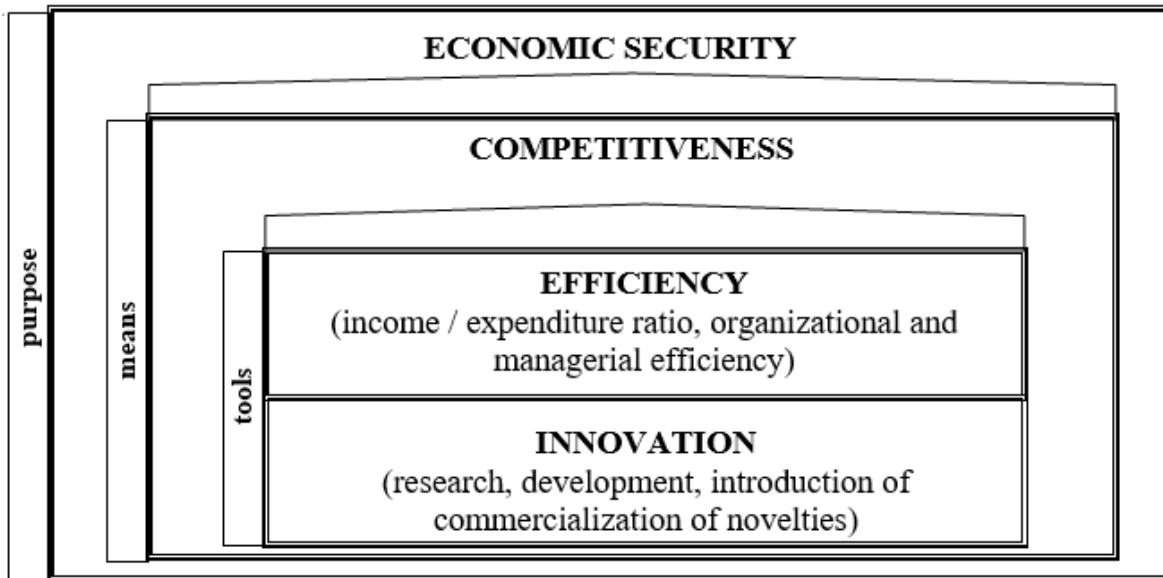
Thus, the economic security of an enterprise is a state of the enterprise's management system, which achieves efficient resource management and is able to respond adequately to changes in the external and internal environment and to project potential threats and reactions to them in order to ensure the company's non-crisis development. After all, it is the management system that recognizes threats and develops measures to overcome them. At the same time, the level of economic security is determined by the extent to which the management of the company and its managers are able to prevent possible threats and avoid losses from the negative effects of factors.

The research on the interconnection of the preconditions for the formation of the appropriate level of economic security of the enterprise was made: efficiency, innovation and competitiveness. It is established that the basis of enterprise competitiveness is the innovation and efficiency of its activity. And not only (but above all) profit and indicators of the ratio of income and expenditure but also organizational and managerial efficiency. And this makes it possible to link together in a single whole such key characteristics of the enterprise's activities as efficiency and competitiveness.

Such a complex combination of the above characteristics of the enterprise will allow developing a set of strategic, tactical, and operational measures aimed at ensuring sustainable development of the enterprise, with the aim of increasing the competitiveness of the national economy and raising the standard of living.

The results of the research showed that there are interconnections between the three main characteristics of the company's activity – efficiency, competitiveness, and economic security. In the process of reviewing the main characteristics, a systematic approach was used to investigate the causal relationships between the enterprise's economic security (purpose), the competitiveness of the enterprise (means) and efficiency (the ratio of income and expenditure, organizational and managerial efficiency), and the innovation of its activities (tools) (Fig. 2).

Such a comprehensive presentation will enable systematically to approach the definition of the directions of ensuring an adequate level of economic security of the enterprise.



**Fig. 2. The preconditions for the formation of a proper level of economic security of the enterprise and their interconnection**

## CONCLUSIONS

A semantic analysis of the essence of the concept “economic security of the enterprise” was conducted, which made it possible to form an exhaustive list of essential characteristics used by scientists during its definition. According to the results of the examination, which is based on the use of the method of pairwise comparisons, those essential characteristics that are significant are identified and singled out. The established characteristics are divided into functional (corporate resources usage) and productive (state of security, state of relations, connections, resources).

It is established that the level of security is determined primarily by the efficiency of the use of resources, which greatly depends on the ability of the enterprise’s management system to attract, form, redistribute, and use the necessary resources. Thus, the economic security of an enterprise depends on how effective its management and managers will be able to avoid possible threats and eliminate the harmful effects of the influence of individual factors of the external and internal environment.

The interconnection of the preconditions of the formation of the proper level of economic security of the enterprise – efficiency, innovation, and competitiveness – was studied. The hierarchy of these preconditions is established, namely, that the basis of the company’s



competitiveness lies in the innovation and efficiency of its activities. The highest level that characterizes the result to be achieved is economic security, which ensures the crisis-free development of the enterprise.

### SUMMARY

The article gives an overview of theoretical and methodical approaches to the definition of the essence of economic security of the enterprise. On the basis of semantic analysis, essential characteristics of the concept “economic security of the enterprise”, which include the state of security; state of use of corporate resources; the state of relations, connections, resources were defined. The established characteristics are divided into functional and productive. The obtained results provided an opportunity to consider the preconditions for the formation of an appropriate level of economic security of the enterprise (as a goal), which includes competitiveness (as a means) and efficiency and innovation (as tools). The proposed complex view will allow systematically approaching the definition of the directions of ensuring an adequate level of economic security of the enterprise.

### REFERENCES

1. Бендиков М. А. Экономическая безопасность промышленного предприятия в условиях кризисного развития. *Менеджмент в России и за рубежом*. 2000. № 2. С. 17–30.
2. Большой экономический словарь / под ред. А. Н. Азриляна. Москва : 5-е изд., доп. и перераб., 2002. 1280 с.
3. Грунин О. А. Экономическая безопасность организации : учеб. пособ. СПб.; М.; Х.; Минск, 2002. 160 с.
4. Довбня С. Б., Гічова Н. Ю. Діагностика рівня економічної безпеки підприємства. *Фінанси України*. 2008. № 4. С. 88–97.
5. Евдокимов Ф. И. Экономическая безопасность – необходимое звено в планировании развития предприятия. *Донбас-2002: наука і техніка – виробництву : матеріали наук.-практ. конф., 5-6 лютого 2002 р., Донецьк*. С. 966–969.
6. Евдокимов Ф. И., Мизина Е. В. Экономическая устойчивость предприятия как фактор его безопасности. *Наукові праці Донецького державного технічного університету. Серія: економічна*. 2001. Вип. 37. С. 16–25.
7. Економіка підприємства : підручник / за ред. С. Ф. Покровного. Київ : КНЕУ, 2001. 526 с.

8. Економічна безпека : навч. посіб. / за ред. З. С. Варналія. Київ : Знання, 2009. 647 с.
9. Економічна безпека : підручник / за ред. О. І. Барановського, О. Б. Жихор. Київ : УБС НБУ, 2015. 467 с.
10. Економічна та майнова безпека підприємства і підприємництва. Антирейдерство / за ред. Б. М. Андрушківа. Тернопіль : Терно-граф, 2008. 424 с.
11. Забродский В. Теоретические основы оценки экономической безопасности отрасли и фирмы. *Бизнес-информ.* 1999. № 15–16. С. 35–37.
12. Зубик В. Б., Зубик Д. В. Экономическая безопасность предприятия (фирмы). Минск : Высшая школа, 1998. 391 с.
13. Ильяшенко С. И. Составляющие экономической безопасности предприятия и подходы к их оценке. *Актуальні проблеми економіки.* 2003. Вип. 3 (21). С. 12–19.
14. Іванюта Т. М., Заїчковський А. О. Економічна безпека підприємства : навч. посіб. Київ, 2009. 256 с.
15. Камлик М. І. Економічна безпека підприємницької діяльності. Економіко-правовий аспект : навч. посіб. Київ, 2005. 432 с.
16. Кірієнко А. В. Механізм досягнення і підтримки економічної безпеки підприємства : автореф. дис. на здобуття наук. ступня канд. екон. наук : 08.06.01. Київ, 2000. 19 с.
17. Ковальов Д., Плетнікова І. Кількісна оцінка рівня економічної безпеки підприємства. *Економіка України.* 2000. № 4. С. 35–40.
18. Козаченко А. В. Экономическая безопасность предприятия: сущность и механизм обеспечения. Київ, 2003. 280 с.
19. Козаченко Г. В., Пономарьов В. П. Економічна безпека підприємств: сутність і передумови формування. *Теорія та практика управління у трансформаційний період.* 2001. Т. 3. 2001. С. 3–7.
20. Корчевська Л. О., Жосан Г. В. Методологічні питання економічної безпеки підприємства. Вісник економіки транспорту і промисловості. 2010. Вип. 29. С. 108–110.
21. Косарев О. Й., Захаров О. І., Рибак О. М. Людський капітал як ключовий чинник забезпечення економічної безпеки підприємства. *Актуальні проблеми економіки.* 2008. Вип. 9. С. 104–113.

22. Кракос Ю. Б. Подход к оценке уровня финансовой составляющей экономической безопасности предприятия. *Економіка. Фінанси. Право*. 2006. № 12. С. 7–12.
23. Кузенко Т. Б. Планування економічної безпеки підприємств в умовах ринкової економіки : дис. канд. екон. наук : 08.06.01 / Європейський ун-т фінансів, інформаційних систем, менеджменту і бізнесу. Київ, 2003. 194 с.
24. Кузенко Т. Б. Тактичне і стратегічне планування економічної безпеки підприємства. *Актуальні проблеми економіки*. 2004. Вип. 3. С. 142–151.
25. Лоханова Н. О. Система управління станом економічної безпеки підприємства: проблемні питання, концепція розвитку. *Економіст*. 2005. № 2. С. 52–56.
26. Мак-Мак В. П. Служба безпеки підприємства. Организационно-управленческие и правовые аспекты деятельности. Москва : Мир безопасности, 1999. 160 с.
27. Малюта Л. Я. Економічна безпека підприємств в умовах становлення ринкових відносин. *Економіка. Фінанси. Право*. 2008. № 10. С. 14–17.
28. Манцуров І. Г., Нусінова О. В. Побудова ієрархічної структури складових економічної безпеки підприємств. *Ефективна економіка*. 2011. № 9. URL: <http://www.economy.nauka.com.ua/index.php?op=1&z=680> (дата звернення 14.05.2019).
29. Моделювання економічної безпеки: держава, регіон, підприємство : монографія / за ред. В. М. Геєць. Харків : ІНЖЕК, 2006. 240 с.
30. Мунтіян В. І. Економічна безпека України : монографія. Київ : КВІЦ, 1999. 463 с.
31. Пекін А. Економічна безпека підприємств як економіко-правова категорія. *Економіст*. 2007. № 8. С. 23–26.
32. Плетнікова І. Л. Визначення рівня і забезпечення економічної безпеки залізниці : автореф. дис. на здобуття наук. ступня канд. екон. наук : 08.07.04. Харків, 2001. 15 с.
33. Подлужна Н. О. Вибір критерія економічної безпеки підприємства. *Наукові праці Донецького державного технічного університету*. 2002. № 46. С. 10–16.
34. Подлужна Н. О. Організація управління економічною безпекою підприємства : автореф. дис. на здобуття наук. ступеня канд. екон. наук : 08.06.01. Донецьк, 2003. 16 с.

35. Пономарьов В. П. Формування механізму забезпечення економічної безпеки підприємства: автореф. дис. на здобуття наук. ступня канд. екон. наук : 08.06.01. Луганськ, 2000. 20 с.
36. Постанова Ради Центральної спілки споживчих товариств України «Про концепцію економічної безпеки споживчої кооперації України» від 12.11.2008. URL: <https://zakon.rada.gov.ua/rada/show/ru/n0007626-08> (дата звернення 14.05.2019).
37. Соколенко Т. М. Економічна безпека підприємства в умовах транзитивної економіки. *Наука і життя: сучасні тенденції, інтеграція у світову наукову думку*: матеріали VII Міжнар. наук.-практ. інтернет-конф. 19-21 травня 2011 р. Київ, 2011. URL: <http://intkonf.org/kand-ped-n-sokolenko-tm-ekonomichna-bezpeka-pidpriemstva-v-umovahtranzitivnoyi-ekonomiki>
38. Соснин А. С., Прыгунов П. Я. Менеджмент безопасности предпринимательства. Киев : Изд-во Европ. ун-та, 2004. 357 с.
39. Судоплатов А. П., Лекарев С. В. Безопасность предпринимательской деятельности : практ. пособие. Москва : ОЛМА-ПРЕСС, 2001. 381 с.
40. Фінансово-економічна безпека підприємств України: стратегія та механізми забезпечення: монографія / за ред. Т. Г. Васильціва. Львів : Ліга-Прес, 2012. 386 с.
41. Шваб Л. І. Економіка підприємства: підручник. Київ : Каравела, 2011. 416 с.
42. Шлыков В. В. Комплексное обеспечение экономической безопасности предприятия. Санкт-Петербург : Алетейя, 1999. 138 с.
43. Яценко Н. М., Михайлюк С. О. Регіональна економічна безпека у контексті національної економічної безпеки. *Наукові праці Донецького державного технічного університету. Серія: економічна*. 2001. Вип. 37. С. 78–82.

**Fisunenکو P. A.**

Ph.D. in Economics, Associate Professor,  
Department of Accounting, Economics  
and Personnel Management of Enterprise,  
Prydniprovskа State Academy of Civil Engineering  
and Architecture, Ukraine

## **CHAPTER 13**

### **ESSENTIAL AND FUNCTIONAL ANALYSIS OF REGIONAL ECONOMIC SYSTEMS IN TERMS OF FOOD SECURITY**

**Shaposhnykov K. S.**

**Holovko O. P.**

#### **INTRODUCTION**

The global problem of humanity in the twentieth century was the food crisis. World population is growing every year and by 2050, according to scientists, it will reach 9 billion. This creates a need for Food Safety Management. The priority of the global economy is to ensure food for all segments of the population. Solving this problem is a priority for every state. Only public authorities are able to create food funds effectively used for support of basic foodstuffs.

Integration of Ukraine's economy and the world necessitates the study of food security of the population by region and analysing effective management of regional economic systems. First, you must define basic concepts in the study area.

The concept of "region" has many meanings and is used in many sciences, history, geography, political science. Therefore, the definition of the region is not unambiguous reference and encyclopaedic publications that are universal, defining the region have different meanings. For example, in the Little Dictionary of Economics, region is treated as a "region, district, part of a country that is different from other areas of the set of natural and (or) historical, relatively stable economic and geographic and other features that often are combined with features of the national structure of the population"<sup>1</sup>.

Domestic and foreign scholars interpret the concept of "region" in different ways, but you can find definitions of common features, an area specialization, availability of economic ties. Definition of the term can be grouped into the following areas of research<sup>2</sup>.

---

<sup>1</sup> Knysh, Y. (2011). Genesis nature and content of the concept of "region" as an economic category. *Efficient Economy*, 11. URL: [http://nbuv.gov.ua/UJRN/efek\\_2011\\_11\\_43](http://nbuv.gov.ua/UJRN/efek_2011_11_43)

<sup>2</sup> Voronkova, V. G. (2010). Regional-administrative management: a manual. Publishing house "Professional".

So, in terms of economics, the region – a territory that is different from other events or on attributes, characterized by unity, integrity, relationship elements that are the natural result of its development.

The economy of the region is heterogeneous, and therefore, for the regional economic system will always be a characteristic level of differentiation of regional economic spaces, which is a natural phenomenon that makes a number of positive aspects in the development of regional economic systems, ensuring their original dynamism and competition. The disintegration of the economic space of the country, which finds expression in chaotic, uncontrolled self-development regions, neglecting the national interests and breaking the inter-relationships is a typical consequence of regionalization in terms of the weakness of the central government and regional policy uncertainty. Disintegration is the opposite phenomenon to regional integration, in which both positive and negative consequences can be noted. So, in the region, there are constant economic processes. These include the planning and forecasting of the economy, finance, banking and investment flows, legislative regulation, monitoring of natural and human resources, emerging food market. These are important food security issues in the concepts of national security. In connection with the desire to integrate Ukraine into the European community, the problem of regional food security becomes important.

### **13.1. Food security in the structure of economic security**

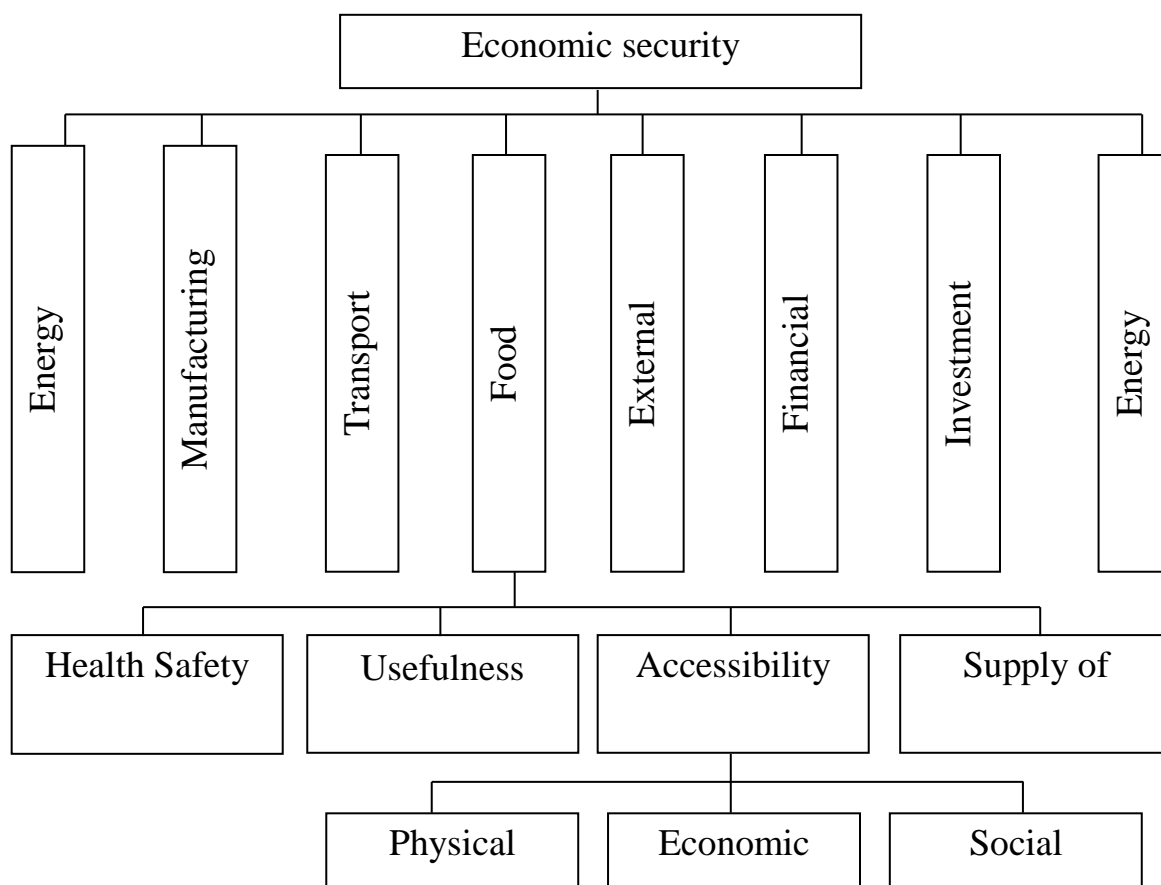
Food security is an important part of economic security, which in turn is a part of social security. The central element of food security is the security of food and its structure should be divided into four components. Availability of food is found in three forms. Physical accessibility implies simple presence in the consumer market of essential products, economic accessibility includes the possibility of financial gain, and social – minimal differentiation in consumption of major food groups among the different populations<sup>3</sup>.

Many domestic and foreign scientists investigated and studied the features of food security; under the food security they understand the ecological and economic situation of the state in which all its citizens are provided with food in the required quantity, range, and the corresponding quality maintains the highest level of physical and mental health<sup>4</sup>.

---

<sup>3</sup> Manylich, M. I. (2004). The transformation of regional economic mechanism [monograph]. Chernivtsi Books.

<sup>4</sup> Matvienko, R. O. (2013). Economic system and its role in the regional space: specific elements. *Actual problems of economy*, 5, 152–155.



**Fig. 1. Food security in the structure of economic security<sup>5</sup>**

It is necessary to consider food security from the socio-economic and environmental side. Socio-economic content includes increased production or import food shortage, and its availability to the public. The environmental side includes adherence to the standardization of production, which ensures the safety of the environment. Food security is a multi-level structure.

The highest link – national food security – depends on its efficiency. This region forms the socio-economic system of the country, sets targets for improving the system of food security. At the same time, any region is relatively independent and geographically separate subsystem across the country, has an internal structure, especially the economy, resources and reserves, own goals and interests in economic development. Strengthening the role of the regions in implementing economic policy and food security is justified because it begins with the meso-level integration processes, formed the basis for socio-economic development, and lays the competitive advantages of the regions.

<sup>5</sup> Chechel, A. (2000). State regulation of food security. *Economy of AIC*, 8, 73–76.

Ensuring effective functioning of the food security of the region depends on<sup>6</sup>: ensuring stability subsystems; structural changes in agriculture; investment policy; forming subsystems logistics; improvement of tax legislation; banking service; creating inventories of material and technical means; the current system of insurance and property fields of agricultural enterprises; research and information support.

Food security in the region can be achieved if the following conditions are met:

- population provided with quality and safe health food produced by special norms and standards, according to the diet, age, gender, working conditions, climatic conditions, and national traditions;

- food prices accessible to all segments of the population, regardless of profession, age, family composition;

- funds set up food in case of famine, natural disasters, wars, and other emergencies;

- water and land craft developing steadily and have reserves of resources that allow increasing food production to refresh and replenish insurance reserves in case of assistance to other countries where the disaster happened or war;

- education and science are at the highest world technological advances. Innovative production technologies. High automation of production. The increased gene pool of livestock breeding and plant cultivation. Science predicts and gives advice on all areas of life and society in the future for intelligent control circuit;

- a policy of conservation and environmental remediation operates in practice and ensures the preservation and improvement of the environment.

The degree of food security in the region may assess describing the following parameters: public health; life expectancy, fertility and mortality; the presence of national and local development programs; the level of the population with food; state production; quality of food; availability of products; volume and increase of production capabilities in the event of natural disasters, wars, and other emergencies; the level of implementation of scientific and technological progress; ability to preserve the environment and improve the environment of the region.

Food security is a category of regional economy and management, as characterized by the level of resources, industrial and investment potential

---

<sup>6</sup> Ulianchenko, A. V. (2014) Food security – the basis of national security. *Congress World*. URL: [http://humanright.org.ua/blogs/prodovolcha\\_bezpeka](http://humanright.org.ua/blogs/prodovolcha_bezpeka)



of the region and its efficient use and, at the same time, the degree of influence of destabilizing the region as a socio-economic system, the nature of the ties between the constituent elements of the regional economy, regional balance and foreign relations, efficacy mechanism of formation of commodity supply in the territorial food market.

To ensure food security, there is the need to develop regional development strategy, which would be based on the ratio of interest national and regional policies and the achievement of national, regional, and corporate goals.

### **13.2. Strategic management of economic development, its characteristics, and role in shaping the competitive advantages of the region**

Globalization of the world economic processes enhances the role of competition between states and their territories. Modern management is a strategic impetus in the formulation, implementation, and realization of regional development strategy based on continuous monitoring and analysis of environmental change, which is used to support the region and ensure its support at the state level. Everything is the urgent search for new ways of regional development and competitiveness of regions.

Ensuring food security is a leader in economic growth strategies of developed countries. At present, all states with advanced market economies implement a program of national economic development strategy chosen by food security. The essence of strategic management is to implement long-term plans that reflect the end result and how to achieve it, involves the creation and development of a certain economic model that depends on external and internal factors.

Thus, strategic management of economic development of the region is a type of control, in which the operation target area focuses on the requirements, quickly adapting to the environment, selects the means to improve the competitiveness of the territory, as a result, and provides a stable development in the long run.

The strategic planning of regional development in Ukraine provided strategic and program documents of four levels: national, regional, subregional, and basic. At the national level, strategic development priorities for all regions of Ukraine are set by the State Regional Development Strategy for the period until 2020.

Formation of the economic development strategy of the region is important and causes interest to scientists. An important form of

implementation of these aspects of regional development is strategic planning, which makes it possible to implement effective management of the region as a single organism and to ensure adequate living standards of its population. Therefore, it is necessary to pay attention to strategic planning, which is a natural step for the formation of local government, caused a crisis of centralized management, the rejection of direct regulation of the economy, reform of hierarchical relationships, resulting in increasing the level of autonomy and responsibility of local governments<sup>7</sup>.

Thus, strategic planning at the regional level is the process of setting goals and values of economic indicators for the most important areas of socio-economic development in the long term based on forecast of future state of the system, the formation of mechanism of implementation, and is a part of the State Administration of goals' achievement. The strategic planning process at the regional level includes the following steps.

Step 1. Strategic analysis. The essence of the first phase is to organize work on the analysis of socio-economic development and the development of planning documents. Strategic analysis is used to evaluate the impact of external and internal factors that have an impact on the development of the region that determines the choice of strategies and prospects of its implementation. Long-term development of the region largely depends on the achievements in the previous period and the state of efficiency of the social and economic potential of the region.

Step 2. Mission statement, goals and objectives of social and economic development. The mission must be socially significant. At this stage, it is important to identify the true desires, interests, and needs of the local community. Only socially-oriented plan or program would get public approval and support. At this point, a system of socio-economic development in the future. Based on the identified social and economic problems, to formulate long-term and short-term goals at every level of government in the region for all projects and programs. Goals should be formulated to keep the possibility of adjustment in case of change of external or internal conditions, under which achieving them is envisaged. Simultaneously goals should be acceptable for the main actors involved in their implementation. The level of property management to achieve sought by local governments must be realistic. Following the second phase of the formulated strategy of socio-

---

<sup>7</sup> Chechel, A. (2000). State regulation of food security. *Economy of AIC*, 8, 73–76.

economic development, interested parties are discussing the received document, make corrections and comments. The agreed document is submitted for approval by the legislative branch.

Step 3. Justification and selection of the strategy. The third phase of strategic planning is directly linked with the development of a socio-economic development strategy. It involves the creation and evaluation of alternative areas of regional development and the selection of the most preferred option. Formation and evaluation of alternatives in the region represent a value itself for management and implementation of a strategic planning process. It highlighted time frames, activities, resources, volumes, and sources of funding and those responsible for the implementation of planned activities.

Step 4. Development of predictive analytical documentation. On the fourth stage, justified the choice of forecasting and analytical document of strategic development of the region developed. The predictive analytical instrument developed is an instrument of policy implementation regulator; reveals the goals and directions of its development; defines the stages of socio-economic development of society as a whole and its individual subsystems; serves as a measure, the criterion of economic and social progress of society. It justified the specific digital content and relevant forecasting calculations based on internal activities of the region. This calculation is performed for multivariate forecasts, and the most effective strategic alternatives are selected.

Each region has its own characteristics in the development of strategy and management. Regional strategic management had focused on achieving goals in an unstable, competitive, market environment, which includes a diagnostic analysis of the region, strategic planning, and implementation of the chosen strategy.

The first phase of the lifecycle of the region (recovery) involves a fracture of the negative trends prevailing in the socio-economic development of the region and achieving a quantitative pre-crisis level of the most important products in different sectors. The main objective of this phase – ensuring the quality of life of the region in accordance with the accepted norms and standards. In this phase, the industry producing consumer goods and medical services should get priority development. A group of industries, some industries and companies that produce products for industrial purposes and provide quantitative growth, the region in individual sectors, and science and education and utilities get support selectively. High-tech production due to limited resources gets

support for individual industries and companies that provide national security and lay the foundation for further qualitative structural changes in the economy. And individual enterprise sphere of culture and leisure will precisely receive support.

The second phase of the lifecycle of the region (growth) – further quantitative growth of the regional economy and its individual sectors over the level that was achieved before the crisis. The main objective of phase – full and effective use of available natural resources of the region. In this phase, the priority development cycles get energy-field region, providing output for industrial purposes, science and education, and utilities. Selective support is given to certain sectors of the agriculture, energy, and health sectors, and some support – individual companies of the same sectors in the region. High-tech production, culture and leisure sector will receive some support.

The third phase of the lifecycle of the region (namely development) – large-scale development of new technologies, qualitative change in the economic structure of the region, enhancing its competitiveness and efficiency to the world average level parameters. The main objective of phase – providing quality structural changes in the economy of the region. In this phase, high-tech industries will receive priority development, as well as culture and leisure. Some energy-industry cycles, producing products for industrial purposes, science and education, and utilities are receiving selective support.

Competitive advantages of the region are characterized by certain conditions that distinguish it from other regions. The successful development and implementation of effective strategies of regions more and more depend on the unequal distribution of resources described above.

At present, the main task is to develop a regional strategy for regional competitiveness – its formation, maintenance, and continuous strengthening. The competitiveness of the region includes the concept of risk as the most important characteristics of business processes in the region because competitive position and characteristics of competitiveness as a set of potential include the study of risk inherent in this region.

### **13.3. Priorities of regional development in terms of food security**

Analysis of regional strategies found that all regions and subregions of Ukrainian Black Sea Region singled out agriculture, transport and

logistics, tourism and recreation as priority areas. The development of innovation as a strategic priority is provided by strategies of Kherson and Odesa sub-region. Priority development of social policies present at the regional level and at the subregional level – a priority for human development, which aims to enhance the professional skills of people and their cultural development. At the regional level, priority development of industries is identified, and at the subregional level – small and medium businesses.

Among the priorities of development and strategic planning, the European integration processes should be highlighted:

- Euroregion. The border regions of Ukraine, involved in the operation of eight Euroregion – Bug, Carpathian, Lower Danube, Upper Prut, Dniro, Sloboda, Yaroslavna, and Donbas. It is composed of Volyn, Donetsk, Zakarpattia, Ivano-Frankivsk, Luhansk, Lviv, Odesa, Sumy, Chernivtsi, Chernihiv, and Kharkiv regions of Ukraine;

- Border Cooperation Program implemented using the ENPI (European Neighbourhood Instrument (ENI)) for 2014–2020 (budget of € 15.433 billion). European Neighbourhood provides for the following areas of cooperation between the countries as economic development, security, and migration.

One of the programs funded by the European Neighbourhood is a program of Black Sea Border Cooperation for 2014–2020 (Black Sea Basin, 2014–2020). The purpose of this program is to improve the welfare of the Black Sea region by means of sustainable economic growth and joint protection of the environment<sup>8</sup>.

The main outcomes of partnerships of the Black Sea region of Ukraine with the EU member states should include:

- developing interregional cooperation potential of Ukrainian coastal regions and introducing an intensive model of economic growth based on the diversification of resource sources;

- viewing the status and role of the coastal regions of Ukraine in the international division of labour; revival and further development of the Ukrainian Black Sea Region as an international recreation area (spa treatment, rehabilitation, recreation) and tourism;

- ensuring integrated and sustainable spatial development of Ukrainian coastal regions;

---

<sup>8</sup> Coastal, V. K. (2011). Issues of Ukrainian food security. *Economy of AIC*, 5, 71–78.

– commitment to environmental security and the ability to heal the natural resource potential.

Food safety management strategy is linked to the regional economic strategy and relevant agricultural policy. National Strategy provides the distribution of resources between regions to achieve its goals and objectives, and regional policy defines these necessary resources to facilitate the achievement of objectives. Forming the strategy of food security in the region, in our opinion, should be associated with the agricultural sector development programs, socio-economic development, and environmental security of Ukraine. But not only resources are the subject of competitiveness. In terms of regional unevenness, it is extremely important to ensure the competitiveness of certain industries. Their socio-economic objective is to create economic food availability, increase purchasing power.

According to the above, one can generate the following areas of food safety assessment of regions<sup>9</sup>:

1. The market balance of production and supply of foodstuffs, which is based on the study of consumption and domestic trade between regions producing regions and consuming in terms of: the types of food; the adequacy of nutrition in accordance with the physiological needs of the population; the supply channels (detailing the biggest suppliers).

2. Ranking of regions, the contribution of each to the overall state or “ensure” food supplies within the relevant industry clusters. This food security dimension deeper reveals its essence as a component of economic security. The proper level of food security depends on the social and economic stability of industrial centres and efficiency of large enterprises, so the evaluation of reserves to ensure their food security needs characterizes the state in connection with its economic interests and national security;

3. The economic accessibility of food to be characterized by: comparing the overall level of income and the level of prices for basic foodstuffs; the adequacy of funds to ensure household nutrition in terms of gender and age structure, belonging to a group of physical activity. This dimension of food security assessment characterizes the region’s food security as a part of proportion to the whole population of the region in the total population of Ukraine.

---

<sup>9</sup> Germanenko, L. M. (2015). Food security in the region as a prerequisite for national food security. *Bulletin of the Eastern University of Economics and Management. Series: Economics and Management*, 1, 20–27.

Characteristics of competitive advantages and limitations of perspective development of the region, the development of a strategic plan based on the diagnosis are starting conditions for regional development analysis by SWOT<sup>10</sup>.

The competitiveness of the region reflects a set of comparative advantages in different areas (economic, investment, innovation, technology, personnel, market, etc.), the combination of which forms a strong regional position in comparison with others. Regional competitiveness is formed through the effective and efficient use of production, marketing, financial, scientific, technical, and human resources.

For the successful implementation of the management strategy of regional economic development, it is needed to create actual models that function effectively. In the current context of globalization, such a model should take into account the historical features of the region, resource potential, the principles and methods of management of economic, financial, social, and organizational aspects of economic activity and more. Formation of regional development paths requires the development of appropriate models and modelling processes.

Scenario development strategy is a description of the sequence of events from the present to the future status of the region based on assumptions. The main types of scenarios are<sup>11</sup>:

- likely scenario based on maximum use of the strengths and opportunities;
- threat scenario based on the maximum weaknesses and threats, without exerting crucial strengths;
- other versions based on different relationships.

The strategy of economic development based on the model of regional development – the totality of views on ways to address socio-economic problems, goals and implement challenges of the region in the future.

The model of economic development is the main vision of the economic development of regions and the country as a whole, proposed for implementation by the authorities and local governments. Features of models of economic development specific conditions defined relationship and interaction of economic factors. Models of

---

<sup>10</sup> Guidelines for the formation of regional development strategies (2002). *Ministry of Economy and European Integration*.

<sup>11</sup> Osipov, V. M. (2014) Priorities for socio-economic development of Ukrainian context of modern regional policy. *Prometheus. Transformation and prospects of development of local systems*, 2(44), 76–82.

economic development are based on theoretical laws of functioning of economic entities in the market system. Specific conditions in different countries and regions determine the specific relationship and interaction of economic and other factors as the degree of achievement of economic goals, and hence especially the development of national and regional models.

Each regional model of strategic management has certain generalizations that reflect the trends of the economic system. It is, therefore, necessary to consider the principles, which formed the model and strategic management.

Characteristic patterns of regional economic development define: economic resources, regional characteristics, the nature of the economy, the level of economic development in the country and the world, institutional and sectoral structure of the economy, the role of economic agents, the system of state regulation of the economy, openness of the economy and the degree of involvement of economic relations, the use of foreign capital. According to the temporal stages of development, the dynamics of these characteristics are considered. In models of integration groupings, focuses are on the purpose and tasks of groups, organizational structure and resources, role and place in the global economy, prospects and problems, development programs<sup>12</sup>.

Each region of the state has economic potential, creates and manages its own budget funds, and organizes financial, resource, commodity exchanges within the region or exchanges with other regions, decides on production, investment, employment, and social problems within the territory.

Clusters are one of the most common worldwide models of successful economic development at the regional level. The development of regional industrial clusters is now a widely accepted tool that enhances the competitiveness of the economy. A growing number of cluster associations in countries confirmed their effectiveness. Today, in Ukraine, there are about 50 clusters in different regions and sectors. Among them is the southern region, which includes Odesa, Mykolaiv, Kherson regions.

The southern region has many competitive advantages among others, namely transport system (extensive river system, the Black Sea,

---

<sup>12</sup> Zhavoronkova, G. V. (2010) Strategic Regional Development. *Problems of environmental biotechnology*, 1, 26–31.



important logistics centres) territorial and sectoral proximity, investment attractiveness, the presence of a strong scientific and technical base.

In carrying out simulation and selection of management strategy of regional economic development, Ukrainian Black Sea Region should be guided by the provisions of the State Regional Development Strategy by 2020, taking into account the priorities of regional policy, namely<sup>13,14,15</sup>:

1. Interterritorial cooperation.
2. Participatory democracy.
3. Interregional cooperation of Ukrainian Black Sea regions.
4. Balanced spatial development at the “city and suburban area – rural area”.

Results of the study are as follows<sup>16</sup>:

1) social component, present in all policies at the regional level, at the subregional level the priority is human development;

2) interterritorial cooperation, not mentioned in any strategy at the regional level, is the main component of sub-strategies, the main principle of their design and implementation;

3) development tools of the business environment and innovation sphere, provided in all policies, but the policies’ subregional data tools are applied in nature and more adapted to implementation in practice;

4) consideration of regional (sea) specificity;

5) development tools in small towns and villages, little attention is paid to municipalities in strategies of Mykolaiv and Kherson regions;

6) cross-sector partnership.

The southern region, which formed a cluster model, has certain advantages, namely<sup>17</sup>:

– efficient use and development of the economic potential of the region to attract resources from inefficient industries;

– establishing contractual cooperative relations between business, government, education and science, providing a synergistic effect;

---

<sup>13</sup> Fetisov, G. G. (2006). The regional Economy and Management: Textbook. INFRA-M.

<sup>14</sup> Kozlovsky, S. V. (2012) Tools of food security and social protection crisis in terms of economies. *Crimean Economic Bulletin*, 1(01), 266–269.

<sup>15</sup> Romanko, A. P. (2015). The concept of regional competitiveness and its features. *Efficient Economy*, 3. URL: <http://www.economy.nayka.com.ua/?op=1&z=3869>

<sup>16</sup> Panuhnyk, O. V. (2011). Methodical maintenance of strategic planning in the regions of Ukraine. *Actual problems of Economy*, 1(91), 152–157.

<sup>17</sup> Stepanova, K. V. (2016) Ukrainian Black Sea Euro-regional cooperation system. *Socio-economic problems of the modern period in Ukraine*. Institute of Regional Studies NAS of Ukraine, 3(119), 135–139.

– improving the competitiveness of cluster members, increasing their market share through mutually beneficial cooperation, particularly in marketing, exchange of scientific and technical research and innovation;

– strengthening of specialization and division of labour between members of the cluster, which allows reducing the cost of production and increasing its competitiveness;

– creating terms of economic growth, promoting scientific and technological progress, increased innovation production;

– increase in domestic and foreign investment, export growth;

– creation of new high-paying jobs, promotion of healthy social capital, and management of regional business elite;

– reducing unemployment and expanding the tax base;

– improvement of people's lives.

Even though cluster technology has several advantages and prospects, there are problems that prevented them from large-scale and efficient use. The main problems according to scientists include<sup>18</sup>:

– lack of awareness of government and business representatives in the application of the cluster approach;

– lack of public policies that ensure a systematic approach and coordination of various levels of government in the implementation of cluster projects and as a result – the lack of organizational and financial support of cluster initiatives;

– lack of trained specialists on issues related to cluster organizational technologies;

– lack of an effective methodological framework that provides the application of cluster technology.

Thus, the cluster model solves most problems of socio-economic areas, regional development aimed at improving infrastructure and investment, thus increasing the number of jobs and increased employment.

Of course, it takes time and thorough scientific study to realize that clustering – a streamlined method of interaction between government and business, it is more dynamic, faster, more efficient but, at the same time, more complex. Cluster development is geographically dispersed; it is quite a complex process of interaction where the private business

---

<sup>18</sup> Gornyak, A. V. (2016) Estimation food security at regional level. *Bulletin of the Odessa National University. Economy*, 10(52), 17–21.

has a significant voice. For clustering in Ukraine, a development strategy should be elaborated; we actively promote the concept of clusters to improve the conceptual basis to improve the economic stability of the state.

## **CONCLUSIONS**

1. Scientists show the world that even in the twenty-first century, there is hunger and malnutrition. Overcoming these negative phenomena in society is possible by the intensification of food security. Every country in the world should form a reserve of food, to ensure the availability and quality of products. The primary task of the state and regional authorities is to ensure equal conditions for the functioning of the food market, avoiding its monopolization, to promote the development of small producers.

2. Strategic planning of regional food security advocates integrating force of the region and creates, organizes, and directs the process of equitable distribution of resources at the territorial level. In addition, strategic planning creates the conditions necessary to overcome the regional problems of economic development and provides interaction of state and local authorities, in particular, in the context of the implementation of regional development programs. The strategic vision of the region is to determine its place in the state at different rates, the ups and downs in development, evaluate opportunities and create new conditions for development, encourage innovation processes in time to determine changes in the internal and external environment and respond quickly to them.

The impact of the implementation of regional development strategy and the timely execution of tasks of the regional development program in the context of competitive advantages depends not only on the availability of resources, population, and investment but also on the management efficiency. Therefore, to ensure food security in the region strategic development programs are developed and implemented to expand and strengthen competitive positions of the region and state.

3. Building, implementing, and effectively managing a unique model of regional development is a strategic task of the government. Management model should meet the main bases and principles of the 2020 National Strategy of Regional Development, which is a national model of achieving the goals, trends, and patterns of development, the definition of strategic priorities of the state and social policies,

industries, agriculture, investment and innovation, the identification of steps and mechanisms of their implementation.

Modelling of regional development includes the development and implementation of institutional and economic mechanism based on subsidiarity, public-private partnerships, etc., providing for the introduction of public-public and public-business initiatives for the effective use of financial and economic instruments of state regional policy.

### **SUMMARY**

The article deals with food security that is an important part of economic security, which in turn is a part of social security. It is necessary to consider food security from the socio-economic and environmental side. Socio-economic content includes increase production or import food shortage, and its availability to the public. The environmental side includes adherence to the standardization of production, which ensures the safety of the environment. Food security is a multi-level structure. Every country in the world should form a reserve of food to ensure the availability and quality of products. The primary task of the state and regional authorities is to ensure equal conditions for the functioning of the food market, avoiding its monopolization, to promote the development of small producers. Strategic planning of regional food security advocates integrating force of the region and creates, organizes, and directs the process of equitable distribution of resources at the territorial level. Building, implementing, and effective managing a unique model of regional development is a strategic task of the government. Management model should meet the main bases and principles of the National Strategy of Regional Development for 2020.

### **REFERENCES:**

1. Knysh, Y. (2011). Genesis nature and content of the concept of “region” as an economic category. *Efficient Economy*, 11. URL: [http://nbuv.gov.ua/UJRN/efek\\_2011\\_11\\_43](http://nbuv.gov.ua/UJRN/efek_2011_11_43)
2. Voronkova, V. G. (2010). Regional-administrative management: a manual. Publishing house “Professional”.
3. Manylich, M. I. (2004). The transformation of regional economic mechanism [monograph]. Chernivtsi Books.

4. Matvienko, R. O. (2013). Economic system and its role in the regional space: specific elements. *Actual problems of economy*, 5, 152–155.
5. Ulianchenko, A. V. (2014). Food security – the basis of national security. *Congress World*. URL: [http://humanright.org.ua/blogs/prodovolcha\\_bezpeka](http://humanright.org.ua/blogs/prodovolcha_bezpeka).
6. Chechel, A. (2000). State regulation of food security. *Economy of AIC*, 8, 73–76.
7. Coastal, V. K. (2011). Issues of Ukrainian food security. *Economy of AIC*, 5, 71–78.
8. Germanenko, L. M. (2015). Food security in the region as a prerequisite for national food security. *Bulletin of the Eastern University of Economics and Management. Series: Economics and Management*, 1, 20–27.
9. Guidelines for the formation of regional development strategies (2002). *Ministry of Economy and European Integration*.
10. Osipov, V. M. (2014). Priorities for socio-economic development of Ukrainian context of modern regional policy. *Prometheus. Transformation and prospects of development of local systems*, 2 (44), 76–82.
11. Zhavoronkova, G. V. (2010). Strategic Regional Development. *Problems of environmental biotechnology*, 1, 26–31.
12. Fetisov, G. G. (2006). *The regional Economy and Management: Textbook*. INFRA-M.
13. Kozlovsky, S. V. (2012). Tools of food security and social protection crisis in terms of economies. *Crimean Economic Bulletin*, 1(01), 266–269.
14. Romanko, A. P. (2015). The concept of regional competitiveness and its features. *Efficient Economy*, 3. URL: <http://www.economy.nayka.com.ua/?op=1&z=3869>
15. Panuhnyk, O. V. (2011). Methodical maintenance of strategic planning in the regions of Ukraine. *Actual problems of Economy*, 1(91), 152–157.
16. Stepanova, K. V. (2016). Ukrainian Black Sea Euro-regional cooperation system. *Socio-economic problems of the modern period in Ukraine*. Institute of Regional Studies NAS of Ukraine, 3(119), 135–139.

17. Gornyak, A. V. (2016). Estimation food security at regional level. *Bulletin of the Odessa National University. Economy*, 10(52), 17–21.

**Information about the author:**

**Shaposhnykov K. S.**

Doctor of Economy, Professor,  
Head of the Black Sea Research Institute  
of Economy and Innovation, Ukraine

**Holovko O. P.**

Senior Research Scholar,  
Department of Macroeconomics and Public Administration,  
Black Sea Research Institute  
of Economy and Innovation, Ukraine

## **CHAPTER 14**

### **THE METHODOLOGY OF FORMING UNITED TERRITORIAL COMMUNITIES’ BUDGET EXPENDITURES IN UKRAINE**

**Shchur R. I.**

#### **INTRODUCTION**

In the current context of the reforming local self-government in Ukraine, special attention is paid to the budget decentralization, as it is one of the background preconditions of the independence, as well as an effective activity of the local self-governmental authorities. The expected outcome of the process of decentralization founded in Ukraine results in the formation of capable and self-sufficient united territorial communities (UTC) that would possess corresponding financial, material, land resources, social objects of the infrastructure necessary for the improvement of citizens’ social needs, creating the conditions for territorial development, rational usage of the budget money. It is UTC, in particular, that is to become the “engine” for the regional development, as well as the distribution centre of the finances locally.

However, the formation of the financially independent and self-sufficient communities is not possible without streamlining the system of finance managed by the local authorities in terms of effective planning of financial resources. That is why the issue concerns methodology research on the planning of expenditures of territorial communities with the aim of the satisfaction of citizens’ full needs providing social services and stable socio-economic growth.

One of the major areas in the system of managing the finances locally that is concerned is budget planning, while it is pending local authorities could analyse the contents and structure of available financial resources, evaluate their prospects and ways of increasing them, as well as choose the most efficient option for their implementation.

#### **14.1. The theoretical background of budget expenditures of united territorial communities**

Budget expenditures play a key role in stimulating socio-economic development for both the territorial communities and the country overall,

taking part in distributional processes of financial resources among the branches of the budget system and the state as well among local authorities on the one hand and individuals and entities on the other hand. Due to the expenditures of the corresponding budget, both the state and local authorities perform the functions that have been entrusted to them in order to satisfy and account for citizens' needs based on the subsidiary principle.

Many native and foreign scientists devote their scientific merits to the problem of "expenditures' nature" through the development evolution and economic essence of the functional implication. So, based on the analyses, we offer our own authorial interpretation of the definition "expenditures of the united territorial community". They are economic relationships that appear between the entities of budget legal relations in order to distribute monetary funds to finance personal and delegating power, programs and events, community's socio-economic development, social needs' satisfaction. This phenomenon also serves as a means of alignment of income capability of a certain category of people living on this territory.

The necessity of the research classification according to their features has arisen recently. There exist many approaches to the classification of local budget expenditures.

According to Article 10 of The Budget Law of Ukraine, budget expenses are classified as:

1) budget programs (program expenditure classification and budget crediting);

2) property of the main manager of budget money (departmental classification of expenses and budget crediting);

3) functions, which are closely connected with expenditures and budget crediting (functional classification of expenditures and budget crediting);

4) economic characteristics of the operations, performed while being conducted (economic classification of budget expenditures).

Program (allows analysing the degree of certain results' achievement based on every program and evaluates the effectiveness of money expenditure), governmental (systematize budget expenditures in terms of head managers), and economic (shows economic characteristics of the operations). The distribution of the budget money according to their classification is the same both at the state and local budgets. The classification of expenditures allows determining the similarity of the operations by local authorities and grouping separate operations into



homogeneous categories. It helps to find out the character, structure, and economic impact on the level of socio-economic development of the corresponding territorial community, region, as well as the state on the whole<sup>1</sup>.

Some authors consider<sup>2</sup> local budget expenditures to be grouped on the grounds of the following objectives: financing cultural, educational, healthcare, and social service institutions; funding local authorities; financing councils.

V. Fedosov, V. Oparin, and L. Safonova suggest that budget expenditures should be classified according to the following characteristics: production reproduction; social implementation; fields of economics and social sphere; target designation; the level of the budget system<sup>3</sup>.

N.V. Prosyanyk supports a similar idea, which offers to classify local budget expenditures according to the following criteria<sup>4</sup>:

- economic characteristics (current and major expenditures);
- participation in social production (financing major and circulating means);
- the role in social production (the development of the material production and non-material sphere);
- scope feature (production, education, culture financing, and social security, etc.).

V. Demyanyshyn and A. Tulyulyuk applied a very interesting approach to classifying expenditures of the local authorities according to the role in replicating process; socio-economic contents; functional classification; subject (economic) classification; program target classification<sup>5</sup>.

S.L. Koval suggests dividing local budget expenditures (UTC inclusive) into three groups<sup>6</sup>:

---

<sup>1</sup> Zhadan, O. V. (2018). Ekonomichna klasyfikatsiia vydatkiv: natsionalnyi i mizhnarodnyi dosvid [The economic classification of expenditures: national and international experience]. *Scientific review*, 8 (51), 22–34. (in Ukrainian)

<sup>2</sup> Chechetov, M. V., Chechetova, N. F., Berezhna, A. Yu. (2004). Biudzhetni menedzhment [Budget Management]. Kharkiv : INZhEK. (in Ukrainian)

<sup>3</sup> Fedosov, V. M. (Ed.). (2004). Biudzhetni menedzhment [Budget management]. Kyiv : KNEU. (in Ukrainian)

<sup>4</sup> Prosyanyk, N. V. (2013). Rol derzhavnogo upravlinnia vydatkamy mistsevykh biudzhativ u rozvytku miskoho kompleksu: zarubizhnyi dosvid [The role of public administration of local budgets expenditures in the development of the urban complex: foreign experience]. *Business Inform*, 6, 15. (in Ukrainian)

<sup>5</sup> Demianyshyn, V., Tuliuliuk, A. (2008). Problemy sutnosti ta skladu vydatkiv mistsevykh biudzhativ [The problems of essence and composition of local budgets expenditures]. *The world of finance*, 3(16), 135–144. (in Ukrainian)

<sup>6</sup> Koval, S. L. (2014). Vydatky mistsevykh biudzhativ: problemy ta shliakhy [Local budget expenditures: problems and ways]. Formation of the model of power distribution “Center-Territory”: theory and practice: collection of scientific-pract. conf. Ternopil: TNEU. (in Ukrainian)

1) economic activity expenditures (council development, building construction, farming, forestry, and fish farming, transport, and other services connected with economic activity);

2) social care sector expenditures (social benefits and social security for certain categories of citizens, other social measures);

3) social care sector financing and expenditures (providing for cultural and art establishments, education, healthcare, physical education and sports).

According to G.O. Sykrusheva<sup>7</sup> and Ye.S. Stryuchenko<sup>8</sup>, it is necessary to aggregate expenditure items of local authorities in order to increase the effectiveness of their implementation. Such aggregation of expenditure classification of local authorities can be adjusted to the UTC budgets, which is depicted in Table 1.

Table 1

**Aggregated UTC classification of budget expenditures<sup>9,10</sup>**

Aggregated expenditures	Expenditures according to the budget
Administrational expenditures	Local authorities, firefighters, metropolitan organizations to provide civil order
Social expenditures	Education, healthcare, social care and social security, state cultural-educational, theatrical, entertainment programs, media, physical education and sports
Economy and infrastructure	Council, transport, traffic department, emergency crews, local debt service, building construction, environment protection, target funds, budget loans, undivided money
Transfers	Inter-budget transfers

<sup>7</sup> Sukrusheva, H. O. (2011). Neobkhdnist prohozuvannia vydatkiv mistsevykh biudzheta v suchasnykh umovakh rozvytku ekonomiky Ukrainy [The necessity of forecasting of local budgets expenditures in the current conditions of the development of the Ukrainian economy]. *Bulletin of Economy of Transport and Industry*, 36, 86–89. (in Ukrainian)

<sup>8</sup> Stryuchenko, E. S. (2006). Otsenka effektivnosti rashodov byudzheta (na primere Sverdlovskoy oblasti) [The evaluation of the effectiveness of budget expenditures (for example, Sverdlovsk region)]. Abstract. dis.... cand. econ. sciences: 08.00.10. Yekaterinburg. (in Russian)

<sup>9</sup> Sukrusheva, H. O. (2011). Neobkhdnist prohozuvannia vydatkiv mistsevykh biudzheta v suchasnykh umovakh rozvytku ekonomiky Ukrainy [The necessity of forecasting of local budgets expenditures in the current conditions of the development of the Ukrainian economy]. *Bulletin of Economy of Transport and Industry*, 36, 86–89. (in Ukrainian)

<sup>10</sup> Stryuchenko, E. S. (2006). Otsenka effektivnosti rashodov byudzheta (na primere Sverdlovskoy oblasti) [The evaluation of the effectiveness of budget expenditures (for example, Sverdlovsk region)]. Abstract. dis.... cand. econ. sciences: 08.00.10. Yekaterinburg. (in Russian)

The implication of the aggregated structure of expenditures with analytical aims proves that the structure and absolute budget expenditures of UTC is closely connected with the following social economic and qualitative indexes such as quantity, age/sex aspect of the population, the level of socio-economic development, proper resources' implementation, production capacity and its growth, prices, territory, etc. The above-offered classification of the aggregated budget structure allows evaluating the priorities of budget policy in the sphere of finances and performing a comparative analysis of the development of UTC peculiarities.

The UTC conducts delegated responsibilities and functions, which perform state assignments and reach targets. That is why the UTCs are entitled to conduct the following functions:

The responsibilities, in their turn, are conducted according to the three main streams:

- legal – local authorities' activity results as to the fulfilment of their duties are conducted on the grounds of legislative regulation;

- functional – appointed rights and duties performed by local authorities to solve certain tasks and the achievement of set goals is dynamic and depends on structural changes in socio-economic development and financial policy overall;

- resourceful – realized in terms of state and local authorities duties of the UTC regardless of target budget expenditures according to their spheres of conducting, volumes, and the terms of their financing.

There often appear misunderstandings between functional and resourceful (expending) power connected with a variety and diversion of the objectives of state authorities and the UTC.

It is necessary to strictly divide duties between the levels of local budgets, local authorities, and the state, especially when it refers to UTC functions. As clear management and competences will allow increasing the effective expenditures of the UTC. According to the Constitution of Ukraine, it is the state that guarantees that people will be provided with social services (healthcare, social security, education, culture), however, they will have to be allotted from the local budget of the UTC aiming at maximum proximity to provide guaranteed services and standards, they are to be allotted from local authorities budgets solely, especially from the UTC budgets. Correspondingly, UTC expenditures will not only be affected by intergovernmental relations that are built between the levels of the budget system but also a complex of relations in the process of a

distinct division of a functional mandate. The distinctive features of a decentralized state system are the issue of functions' attachment according to different levels of state and local authorities. There are no strict rules both in practice and theory for the division of authorities' responsibilities as to solving general social problems, however, we define a string of points how to effectively share expending mandates that have already been observed in the theoretical approaches to local finance functioning.

To effectively realize governmental policy, we can define the following principles that optimize the division of expenditure authorization among the state, local authorities, and the UTC<sup>11,12,13</sup>:

- the subsidiary principle (maximum proximity to the authorities that perform expenditures for the consumers of particular social services);

- the principle of territorial authorization (entire responsibility of the UTC on a defined territory that performs expenditures and a particular territory of consuming these services);

- the principle of social authorization (the only approach to the formation of the social services package for citizens despite their place of living);

- the principle of the most relevant approximation of the level of budget service for its consumer (the more difference is in state authorities and the UTC in the possibility to provide budget services, the more services ought to be provided at the highest level of the budget system);

- the principle of scale effect (budget services are as available as possible to consumers means that their decentralization affects the increase in their quantity, effectiveness, as well as the economy of their budget money).

The major principle of expenditure responsibilities segregation among the levels of budget systems is considered the above-mentioned principle of subsidiary. According to it, the budget system is built from

---

<sup>11</sup> Vyznachennia ta klasyfikatsiia vydatkiv mistsevykh biudzhetyv [The definition and the classification of local budgets expenditures]. Retrieved Apr. 12, 2019, from: <http://www.govfor.com/index.php?id=237>. (in Ukrainian)

<sup>12</sup> Ashmarina, E. M., Shohin, S. O. (Ed.). (2009). *Finansovoe pravo* [Financial Law]. Moscow : OOO "Izdatelstvo "Elit". (in Russian)

<sup>13</sup> Kachanova, E. A. (2014). *Strategicheskie priorityi formirovaniya finansov munitsipalnykh obrazovaniy v usloviyah reformirovaniya byudzhethnogo ustroystva* [Strategic priorities of the formation of municipal formations finance in the context of the budget reform]. Dis ... dr. econ. sciences: 08.00.10. Moskow. (in Russian)

the bottom to the top. Local authorities are made to perform many functions; they are able to deal with them independently. Due to the fact that this type of authorities is located at close proximity to the consumer, it means that services are provided more effectively. The next principle of authorization segregation is called the principle of social justice that presupposes that citizens are given a full package of services according to the unified standard despite their place of living. As local authorities are closer to their citizens (service consumers), they will get an opportunity to independently make decisions about the formation of the services' range to satisfy their needs, as well as improve the welfare of this community.

Regarding the principle of the territorial correspondence, any functions performed by local authorities must be conducted independently despite their aims. To avoid the doubling of the functions performed, they should be strictly divided among all the levels of the government to provide the necessary amount of income for their implementation.

The main task of the state and budget policy is to provide equalization of socio-economic conditions of the development of the UTC, increasing the level of social standards, the quality of social and welfare services, and the increase of citizens' living standards. As the major part of the expenditures of local budgets, UTC budgets, in particular, are directed to social and cultural spheres: education, healthcare, social care, etc.

#### **14.2. UTC Budget Expenditure Planning**

The formation and planning of the expenditures by the local authorities as a part of UTC's budgets are based on regulations of the Budget Code of Ukraine, as well as normative legislative acts that regulate the process of planning and serve the background for performing financial responsibilities. The main directions while forming and realizing the budget policy of local authorities regardless of expenditures of the UTC must be providing citizens with social and economic necessities fulfilling their expenditure mandate foreseen by the legislation.

According to Article 1 the Budget Code of Ukraine, there was governed the regulation of the relations that appears in the process of composing, examining, improving, fulfilling of budgets, reporting about their fulfilment and control sticking to budget legislation, and the issues

of responsibility for breaking fiscal legislation, legal regulations of the state and local debt formation and paying off are defined<sup>14</sup>.

Correspondingly the establishment of effective and efficient methodology of expenditure planning of local budgets, the UTC in particular, backgrounding budget assignments, necessary for performing their own and delegated functions, budget programs' realization, having been formed according to the priorities of socio-economic development of both the state and the region with the effective approaches to budget planning must become the main directions for mastering the planning of budget expenditures at all levels, and the reformation of the whole budget process in particular.

The planning makes up the system of goal and index setting, as well as objectives and tasks; moreover, it requires backgrounding necessary resources to solve them.

Methodological principles of budget planning at the local level must be based on the following components: budget income formation, planning and forming budget expenditures, local debt management that will affect positively the socio-economic development of the corresponding territorial community. Budget planning is an amalgamation of mechanisms that coordinate financial links and provide the formation of multi-level budgets.

Ye. A. Chernysh emphasizes that methodology is a science about the structure, logical organization, methods and means of activity; it characterizes the internal organization and cognition regulative process or factual transformation of any object. We agree with the given idea that "methodology of planning means the system of approaches, principles, indexes, methods, and techniques of working out and backgrounding planned decisions and planning logics"<sup>15</sup>. That is, the major attention is drawn to the formation of methodology logics of planning with a fixed succession of actions to achieve the most effective results.

Planning methodology of budget expenditures must provide the entity of expenditure responsibility planning and budget assignment planning on the grounds of the unified methodological base.

---

<sup>14</sup> Biudzhetniy kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17>. (in Ukrainian)

<sup>15</sup> Chernysh, E. A., Molchanova, N. P., Novikova, A. A., Saltanova, T. A. (2000). *Prognozirovaniye i planirovaniye v usloviyah ryinka* [Forecasting and planning in the market conditions]. Moscow: PRIOR. (in Russian)

In our opinion, local budgets' planning methodology can be observed as a unity of principles, methods, instruments, with the help of which planning and forecasts of budgets take place.

The major elements of planning methodology of UTC's budget expenditures belong to<sup>16</sup>:

- planning budget expenditure principles;
- methods for planning budget expenditures;
- instruments for planning budget expenditures;
- responsibilities, mandates, and order of participants' cooperation for planning budget expenditures;
- index system with the help of which they can conduct the evaluation of efficiency at the stage of formation and implementation and estimate achieved factual results.

That is why the necessity of mastering methodological aspects of budget planning arises to define socio-economic effect from expenditures within an average period on the grounds of program target method implementation. To develop the system of expenditures' planning of the part of local budgets, it is necessary to work out methodology approaches concerning activity strategies on a medium term based on the objectives, tasks, and expectations of their functioning in prospective according to the set priorities and assignments in the programs and strategies of socio-economic development.

The program of budget expenditure classification, namely program division of expenditures is the basis for implementation and use of program-based budgeting method. It gives an opportunity to define the priorities of state development and corresponding territories and connect them between each other under the conditions of resource lack. The program of budget expenditure classification has been worked out on the grounds of functional classification. Each program corresponds to a function and, correspondingly, there is only one doer who is in charge of finances. It allowed structuring expenditures by their performers and increasing transparency of the budget system in general<sup>17</sup>.

---

<sup>16</sup> Shinkaruk, E. V. (2007). *Planirovanie rashodov byudzheta v usloviyah reformirovaniya byudzhethnogo protsessa v Rossiyskoy Federatsii* [Budget expenditures planning in the context of reforming the budget process in the Russian Federation]. Dis. ... cand. econ sciences: 08.00.10. Moscow. (in Russian)

<sup>17</sup> Shapoval, S. (2016). *Planuvannia vydatkiv biudzhetu v systemi finansovo-ekonomichnoho rehuliuвання* [Planning of budget expenditures in the system of financial and economic regulation]. *Foreign Trade: Economics, Finance, Law*, 4, 110. (in Ukrainian)

Program-based budgeting is based on program expenditure classification that corresponds to the demands of budget resource distribution, aiming at their most effective and productive use.

S.N. Kozlov considers that program classification of budget expenditures is due to the organizational structure of budget expenditure pursers and imposes responsibility for the realization of budget programs, which in their turn are formed on the grounds of functional expenditure classification<sup>18</sup>. Economic classification of expenditures defines the resources that are used for the implementation of the given programs<sup>19</sup>.

Thus, currently in budget planning, both the program of budget expenditure classification and the traditional budget classifications are used simultaneously – they are functional, departmental, and economic. As the latter are necessary for doing the analysis sufficiently and for the budget structure. Program classification contains the division depending on a type of scheduled services and goals but not on expenditures type. The goal of expenditures formation according to program classification lies in the implementation of the program target method at the local level, the UTC in particular. It is necessary to create the conditions for the effectiveness of public legal entities on their own and delegated functions, the increase of availability and quality of social services, the realization of long-term priorities and targets of socio-economic development of territorial communities.

In terms of the methodology of budget planning according to program-based budgeting method, the major elements that form expenditures at the UTC level are: budget policy directions as to the program classification of expenditures, the elaboration of the list of departmental and interdepartmental target programs financed from the UTC budget, target indexes and program indicators, budget program identification.

We agree with the idea offered by I.O. Chugonov that the system improvement of local budget expenditures, namely, the UTC by means of program-based budgeting implementation will affect the increase in budget process transparency, state and local authorities' responsibility to

---

<sup>18</sup> Kozlov, S. N. (2012). Tehnologiya podgotovki programmnoy byudzheta [The technology of Program Budget Preparation]. *Bulletin of NSREI*, 7 (14), 40. (in Russian)

<sup>19</sup> Mulendeeva, L. N. (2015). Praktika formirovaniya programmnoy byudzheta na primere Samarskoy oblasti [The practice of formation of the program budget on the example of Samara region]. *Economic sciences*, 7(128), 98. (in Russian)



maximize the efficiency of socio-economic development tasks, and allows combining state development strategies and separate administrative-territorial units. That is why the implementation of program-based budgeting method will give an opportunity to increase the effectiveness of budget usage of the UTC coming from the achieved results of a certain budget program<sup>20</sup>.

Budget programs finance social, investment, scientific, ecological measures at the state and budget levels. Financial relations are built via the system of budget programs between state and local authorities, main pursers of budget money, entities<sup>21</sup>. According to the Budget Code, a budget program is an amalgamation of measures aimed at reaching common goals, tasks, and expected result, defining and realization by a purser of budget money according to the responsibilities, which have been assigned to him<sup>22</sup>.

Budget program is an essential element of program-based budgeting that connects general state programs with those from different ministry departments and establishments and local authorities.

The Budget Code of Ukraine allocates the provisions of the implementation of a medium-term budget planning and program-based budgeting method of making up and fulfilment of local budgets, including UTC budgets; major conditions of the given schedule have also been determined. It will give an opportunity to create a medium-term budget at all levels of a budget system involving international practice in prospect<sup>23</sup>.

In comparison with program-based budgeting, statutory (ratio/normative) method does not contribute to the backgrounded and target division of budget money for different socio-economic activities. At the statutory method of budget planning, efficiency and productivity are absent while dividing financial resources, pursers of budget money have no opportunity to manage budget money freely to achieve the goals

---

<sup>20</sup> Chuhunov, O. I. (2015). Planuvannia vydatkiv mistsevykh biudzhativ u systemi finansovo-ekonomichnoho rehuliuвання [The planning of local budgets expenditures in the system of financial and economic regulation]. *Bulletin of the Chernivtsi Trade and Economic Institute. Economic Sciences*, 3, 163–175. (in Ukrainian)

<sup>21</sup> Uskov, I. V. (2012). Programmno-tselevoy metod planirovaniya kak osnova razvitiya sistemyi mestnyih finansov [Program-target planning method as a basis of local finance system development]. *Economical Bulletin of Donbas*, 1 (27), 104–108. (in Russian)

<sup>22</sup> Biudzhetniy kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)

<sup>23</sup> Karamushka, L. (2015). Seredniostrokove planuvannia vydatkiv mistsevykh biudzhativ [The mid-term planning of local budget expenditures]. *Bulletin of KNTEU*, 2, 85–95. (in Ukrainian)

on qualitative social services, investment project realization at the level of territorial subdivisions, and there is no substantiated and effective monitoring system of budget fulfilment.

The application of the program-based method of planning budget expenditures of the UTC is connected with the necessity to solve a complex of issues at the local level that bear a system feature. It means that in the course of allotting finances pursers of budget UTC's money can hardly get the objective perspective of their activity, that is: reaching targets and accomplishing tasks, defining priority directions to spend budget money, and arranging actions and measures in order to increase the level of service quality for the locals<sup>24</sup>.

The abovementioned issues are getting more complex due to a range of factors within financing management of the UTC<sup>25</sup>:

1) lack of common agreement as to the providing for necessary financial resources and practically achieved results of the UTC, enterprises, and establishments;

2) absence of strictly set methodological regulations for evaluating expenditure effectiveness that narrows the power of the UTC to increase the efficiency of their implementation;

3) double-check measures are not ideal, they are aimed at the evaluation of quality services, target and effective use of budget money.

The abovementioned problematic aspects make it necessary to systematize and realize a range of managerial decisions and measures, provided with the necessary resources and the monitoring system for checking the results of their fulfilment. The most appropriate and suitable extension of program-based budgeting, from the point of view of the following criteria, will help to realize the complex of connected measures and involvement of the necessary financial provision.

Starting from 2015, the UTC under the conduct of administrative-territorial reformation and establishment of institutional entities, there was adopted direct inter-budget relations with the state budget. It preconditioned the implementation of program budgeting method within

---

<sup>24</sup> Moiseenko, M. A. (2013). Razvitie programmno-tselevogo byudzhethnogo planirovaniya kak instrumenta povysheniya effektivnosti rashodov mestnogo byudzheta [Development of program-target budget planning as a tool for improving the efficiency of local budget expenditures]. Dis. ... cand.econ. sciences: 08.00.10. Rostov-on-Don. (in Russian)

<sup>25</sup> Moiseenko, M. A. (2013). Razvitie programmno-tselevogo byudzhethnogo planirovaniya kak instrumenta povysheniya effektivnosti rashodov mestnogo byudzheta [Development of program-target budget planning as a tool for improving the efficiency of local budget expenditures]. Dis. ... cand.econ. sciences: 08.00.10. Rostov-on-Don. (in Russian)

the budget process based on medium-term planning. According to the Budget Code of Ukraine, program budgeting in terms of the budget process means management of budget money to achieve certain results at budget's expense money using the evaluation of the effectiveness of budget money at all the stages of budget process<sup>26</sup>. Specifically, the implementation of the given method at the local level as to the composing of budget projects that are related to the state budget was scheduled for 2017.

According to Article 20 of the Budget Code of Ukraine, the main components of program-based method of planning within the budget process are: budget programs, productive indexes of their estimation, responsible performers, and identifications of budget programs<sup>27</sup>.

Methodological approaches as to planning budget expenditures of the UTC on the grounds of program-based budgeting method that are connected with backgrounding of the particular managerial decisions in order to achieve the set assignments are shown in Figure 1.

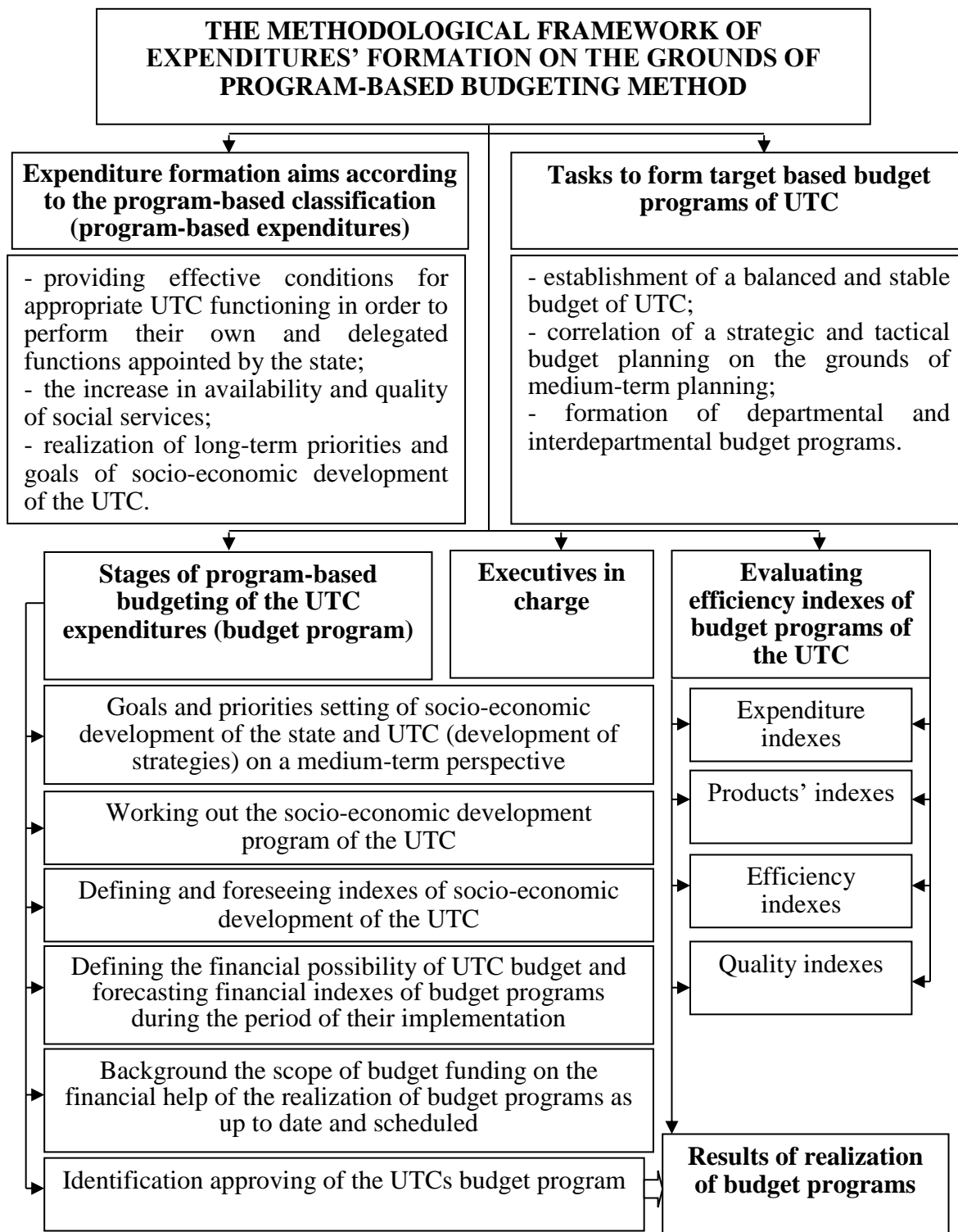
Program-based method of budget planning of the UTC aims at providing the direct connection between the division of resources and accomplishing socio-economic policy's goals to develop the UTC. The main instrument for it, in this case, is long-term regional target development programs. The correlation of priority program directions of socio-economic development and the measures taken for target budget programs are able to provide the increase in efficiency of local authorities' activities, the reduction in irrational, non-elaborated expenditures, and correspondingly, to avoid ineffective waste of budget money. Thus, passing to program-based budget on the grounds of program-based budgeting method requires the improvement of the quality of managing budget expenditures, their backgrounding, direction to reach quantitative measuring results, connection between different program instruments, and the increase in rates of covering by program means of budget money<sup>28</sup>.

---

<sup>26</sup> Biudzhetni kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)

<sup>27</sup> Biudzhetni kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)

<sup>28</sup> Orlov, I. Yu. (2016). Napravleniya razvitiya programmno-tselevogo upravleniya regionalnoy ekonomikoy (na primere respubliky Tatarstan) [The directions of development of program-target management of the regional economy (for example, The Republic of Tatarstan)]. *Kazan social and humanitarian bulletin*, 3 (20), 53–58. (in Russian)



**Figure 1. The methodological framework of expenditure's formation on the grounds of program-based budgeting method**

*Source: developed by the author<sup>29</sup>*

<sup>29</sup> Tkacheva, T. Yu. (2014). Kontseptsiya dostizheniya garmonizatsii byudzhethno-nalogovyih otnosheniy na osnove soglasovaniya interesov ekonomicheskikh sub'ektov [The concept of achieving harmonization of

Special attention within program-based budgeting of expenditures must be paid to the control of the achieved final goals of budget fulfilment: scheduling, the use of budget money at all levels of the budget system, as well as monitoring of the profits received from budget money based on the fulfilment of target budget programs. In this case, the method of program planning, controlling fulfilment and monitoring is considered while using the budget and is based on efficient goal settings, as well as assignments in local authorities' activity, budget money beneficiaries, and also while implementing the indexes that characterize qualitative and quantitative parameters of the given tasks' realization and budget program fulfilment. The following indexes belong to the expenditure indexes, goods indexes, productivity and quality according to the Order of The Ministry of Finances of Ukraine as of 10.12.2010 № 1536 "On Productivity of Budget Program".

It is necessary to refer to the introduction of a medium-term budget planning that is one of the main elements of the full-fledged introduction of program-based target method in the budget process at the state and local level. As the implementation of a medium-term budget planning primarily at the local level will allow local authorities to agree their strategic scheduled actions with the resources in terms of preparing budget projects for the next upcoming year, as well as a local budget for two years. It will also be beneficial while building an effective budget policy for a much longer term, taking into consideration the socio-economic interests of the corresponding territorial communities<sup>30</sup>.

Taking up a medium-term budget scheduling, first of all, requires defining target-based tasks of its organization. Thorough research of the international planning experience and national methodology practice in the sphere of budget planning in terms of conducting a state reformation allows the following functions that will have to fulfil medium-term plans, namely<sup>31</sup>:

- 1) the outlook of the consequences of decisions made in terms of state socio-economic strategy of the country's development;
- 2) the instrument for implementing a medium-term fiscal policy;

---

fiscal relations based on the harmonization of the interests of economic entities]. Dis. ... dr. econ. sciences: 08.00.10. Orel. (in Russian)

<sup>30</sup> Naboka, T. S. (2015). Upravlinnia vydatkami biudzhetu ta napriamky yoho vdoskonalennia v Ukraini [The management of budget expenditures and directions of improvement in Ukraine]. Dis. ... cand. econ. sciences: 08.00.08. Kyiv: KNEU. (in Ukrainian)

<sup>31</sup> Shinkaruk, E. V. (2007). Sovershenstvovanie srednesrochnogo byudzhetnogo planirovaniya [Improving the mid-term budget planning]. *Finance and credit*, 23, 4-7. (in Russian)

3) the means for making this process more transparent and efficient referring budget money division;

4) the instrument for providing stable and effective budget policy.

Medium-term planning of expenditures of the UTC lies in the fact that budget pursers define the plan of their activity for 3 years' term, as well the amount of budget money necessary for reaching those goals set in the documentation of the UTC. Correspondingly, the main aim of medium-term planning of budget expenditures of the UTC is to provide the more efficient application of the limited budget resources due to a realistic evaluation of inflows in the prospect and defining the priorities in financing budget expenditures by means of foreseeing for a few budget periods<sup>32</sup>.

The implication of a medium-term budget planning of the expenditures of the UTC presupposes the so-called "an average-term triennial period" when a budget is approved for the current year, however, the fiscal estimations of budgets are endorsed separately. After the triennial period has finished, the approved projects become the background for the new budget and the third year is added to them. Thus, the abovementioned planning provides budget stability, prediction, and opportunity to react to a changeable situation, restructuring of the mandate, the realization of new priorities of the budget policy<sup>33</sup>.

As the projects of local budgets for the upcoming scheduled period starting from 2020 will have to be based on the indexes defined in the prospects of the local budget that have been approved in a year before the planned one according to the Budget Code of Ukraine<sup>34</sup>.

As it is stated in Article 75 of the Budget Code of Ukraine, local fiscal authorities will have to compose local budget outlook together with other main budget pursers taking goals and priorities into consideration on three years. These regulations have been defined in program-based and outlook documents of the economic and social development of Ukraine and a certain territory, accounting the Budget Declaration<sup>35</sup>.

---

<sup>32</sup> Karamushka, L. (2015). Seredniostrokove planuvannia vydatkiv mistsevykh biudzhetyv [The mid-term planning of local budget expenditures]. *Bulletin of KNTEU*, 2, 85-95. (in Ukrainian)

<sup>33</sup> Lunina, I. O. (2006) Derzhavni finansy ta reformuvannia mizhbiudzhethnykh vidnosyn [Public finances and of inter-budgetary relations reformation]. Kyiv: Naukova dumka. (in Ukrainian)

<sup>34</sup> Biudzhethnyi kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)

<sup>35</sup> Biudzhethnyi kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)

A medium-term budget prognosis of the UTC is one of the main documents that are made up in terms of budget planning at the corresponding territorial level; its major parameters must correspond to the directions of the UTC's economic development. The working out and implementation of a medium-term plan could only be possible on the backgrounds of a system approach to form the goals of the state and regional budget policy, the factors that influence it, the development of alternative development directions. If there is the lack of clearly fixed and estimated complex points of the development, there appear many issues that are hardly possible to solve, including the monitoring of certain territories' development, providing the united process of state management, the evaluation of the effectiveness and efficiency of the state and regional policy and local authorities that perform it, reaching stated targets and solving the existing problems in socio-economic sphere<sup>36</sup>.

The indexes of UTC budgets can be used by the local authorities of the UTC while managing economic processes to find out negative trends, providing stability, as well as preventing issues while making calculations of a budget, complex outlook, and the estimation of performing budget policy, finding out the necessity and means for realization of particular measures to solve socio-economic tasks and satisfying citizens' needs.

The participants that take part in the UTC expenditures' planning under the conditions of a medium-term budget planning and program-based budgeting must make not only local fiscal department and local authorities but also all pursers of budget money. The main tasks of the local and state authorities should be working out the programs of socio-economic development of the country and territories, the realization of effective state and local budget policy on its basis, backgrounding the necessary amount of expenses to achieve the set goals and tasks, and developing a complex of programs, means, and offers as to the financing of scheduled expenditures.

## CONCLUSION

UTC expenditures are one of the major elements in the system of socio-economic development management that run the processes of

---

<sup>36</sup> Dzankisova, I. H. (2012). Osobennosti planirovaniya rashodov byudzheta v usloviyah reformirovaniya byudzhethnogo protsesssa [The peculiarities of planning of budget expenditures in the context of budget process reforming]. *Bulletin of the Khetagurov North Ossetian State University: Social sciences*, 1, 375–382. (in Russian)

territorial infrastructure under the conditions of implementing administrative-territorial reformation and the system of state expenditures in general. As the main aim of the UTC system expenditures' function serves citizens' needs satisfaction on a certain community territory according to the principle of subsidiary. That is why the necessity of complex research of methodological regulations of the formation and scheduling of the UTC expenditures arises. Its main aim is to improve its efficiency.

A medium-term budget planning implementation for the UTC budget expenditures will give entities of inter-budget relations an opportunity to determine their strategic goals and tasks of the development with the existing and prospective financial resources in the course of project preparation of the UTC on the corresponding year, and on two more scheduled periods that will give an opportunity to reach the above stated results and form a long-term budget policy of the development of a corresponding territorial community and the state in particular<sup>37</sup>.

So, we can assume that a program-based budgeting method is one of the main instruments of efficient management and budget fulfilment aiming at the results and maximum satisfaction of citizens' needs. The given method presupposes setting and selecting priority goals and tasks of budget money use, as well as the development of common measures on their reaching within fixed terms.

## **SUMMARY**

On the grounds of scientific researches of the financial study, there was given the author's interpretation of expenditures' essence of united territorial communities. We have done the research on the classifications of budget expenditures of the united territorial communities with the aim of a thorough authority distribution and the competence of state and local authorities. In terms of the research, attention is paid to the necessity to work out a methodology for medium-term planning of budget expenditures of the united territorial communities on the grounds of program-based budgeting method implementation. Moreover, the local authorities will be able to improve management efficiency and

---

<sup>37</sup> Muzyka-Stefanchuk, O. A. Orhany publichnoi vldy yak subiekty biudzhetykh pravovidnosyn: monohrafiia [Bodies of public authority as subjects of budgetary relations]. Retrieved Apr. 12, 2019, from: [https://jurisprudence.club/finansovoe-pravo\\_706/osoblivosti-zdiysnennya-byudjetnogo-48264.html](https://jurisprudence.club/finansovoe-pravo_706/osoblivosti-zdiysnennya-byudjetnogo-48264.html) (in Ukrainian)



financial resources' application in order to provide their citizens with the best possible social security and services on a corresponding territory.

## REFERENCES

1. Ashmarina, E. M., & Shohin, S. O. (Ed.). (2009). *Finansovoe pravo* [Financial Law]. Moscow: OOO "Izdatelstvo "Elit". (in Russian)
2. Biudzhetni kodeks Ukrainy [The Budget Code of Ukraine]. Retrieved Apr. 12, 2019, from: <http://zakon2.rada.gov.ua/laws/show/2456-17> (in Ukrainian)
3. Chechetov, M. V., Chechetova, N. F., & Berezhna, A. Yu. (2004). *Biudzhetni menedzhment* [Budget Management]. Kharkiv: INZhEK. (in Ukrainian)
4. Chernyish, E. A., Molchanova, N. P., Novikova, A. A., & Saltanova, T. A. (2000). *Prognozirovaniye i planirovaniye v usloviyah ryinka* [Forecasting and planning in the market conditions]. Moscow: PRIOR. (in Russian)
5. Chuhunov, O. I. (2015). Planuvannya vydatkiv mistsevykh biudzhativ u systemi finansovo-ekonomichnoho rehuliuвання [The planning of local budgets expenditures in the system of financial and economic regulation]. *Bulletin of the Chernivtsi Trade and Economic Institute. Economic Sciences*, 3, 163–175. (in Ukrainian)
6. Demianyshyn, V., & Tuliuliuk, A. (2008). Problemy sutnosti ta skladu vydatkiv mistsevykh biudzhativ [The problems of essence and composition of local budgets expenditures]. *The world of finance*, 3(16), 135–144. (in Ukrainian)
7. Dzankisova, I. H. (2012). Osobennosti planirovaniya rashodov byudzheta v usloviyah reformirovaniya byudzhethnogo protsessa [The peculiarities of planning of budget expenditures in the context of budget process reforming]. *Bulletin of the Khetagurov North Ossetian State University: Social sciences*, 1, 375–382. (in Russian)
8. Fedosov, V. M. (Ed.). (2004). *Biudzhetni menedzhment* [Budget management]. Kyiv: KNEU. (in Ukrainian)
9. Kachanova, E. A. (2014). Strategicheskie prioritety formirovaniya finansov munitsipalnykh obrazovaniy v usloviyah reformirovaniya byudzhethnogo ustroystva [Strategic priorities of the formation of municipal formations finance in the context of the budget reform]. Dis ... dr. econ. sciences: 08.00.10. Moskow. (in Russian)

10. Karamushka, L. (2015). Seredniostrokove planuvannia vydatkiv mistsevykh biudzhativ [The mid-term planning of local budget expenditures]. *Bulletin of KNTEU*, 2, 85–95. (in Ukrainian)

11. Koval, S. L. (2014). Vydatky mistsevykh biudzhativ: problemy ta shliakhy [Local budget expenditures: problems and ways]. Formation of the model of power distribution "Center-Territory": theory and practice: collection of scientific-pract. conf. Ternopil: TNEU. (in Ukrainian)

12. Kozlov, S. N. (2012) Tehnologiya podgotovki programmnoho byudzheta [The technology of Program Budget Preparation]. *Bulletin of NSREI*, 7(14), 39–54. (in Russian)

13. Lunina, I. O. (2006) Derzhavni finansy ta reformuvannia mizhbiudzhethnykh vidnosyn [Public finances and of inter-budgetary relations reformation]. Kyiv: Naukova dumka. (in Ukrainian)

14. Moiseenko, M. A. (2013) Razvitie programmno-tselevogo byudzhethnogo planirovaniya kak instrumenta povyisheniya effektivnosti rashodov mestnogo byudzheta [Development of program-target budget planning as a tool for improving the efficiency of local budget expenditures]. Dis. ... cand.econ. sciences: 08.00.10. Rostov-on-Don. (in Russian)

15. Mulendeeva, L. N. (2015). Praktika formirovaniya programmnoho byudzheta na primere Samarskoy oblasti [The practice of formation of the program budget on the example of Samara region]. *Economic sciences*, 7(128), 98–101. (in Russian)

16. Muzyka-Stefanchuk, O. A. Orhany publichnoi vlady yak subiekty biudzhethnykh pravovidnosyn: monohrafiia [Bodies of public authority as subjects of budgetary relations]. Retrieved Apr. 12, 2019, from: [https://jurisprudence.club/finansovoe-pravo\\_706/osoblivosti-zdiysnennya-byudjetnogo-48264.html](https://jurisprudence.club/finansovoe-pravo_706/osoblivosti-zdiysnennya-byudjetnogo-48264.html). (in Ukrainian)

17. Naboka, T. S. (2015). Upravlinnia vydatkamy biudzhetu ta napriamky yoho vdoskonalennia v Ukraini [The management of budget expenditures and directions of improvement in Ukraine]. Dis. ... cand. econ. sciences: 08.00.08. Kyiv: KNEU. (in Ukrainian)

18. Orlov, I. Yu. (2016). Napravleniya razvitiya programmno-tselevogo upravleniya regionalnoy ekonomikoy (na primere respubliki Tatarstan) [The directions of development of program-target management of the regional economy (for example, The Republic of Tatarstan)]. *Kazan social and humanitarian bulletin*, 3(20), 53–58. (in Russian)

19. Prosianyk, N. V. (2013). Rol derzhavnogo upravlinnia vydatkamy mistsevykh biudzhetiv u rozvytku miskoho kompleksu: zarubizhnyi dosvid [The role of public administration of local budgets expenditures in the development of the urban complex: foreign experience]. *Business Inform*, 6, 13–17. (in Ukrainian)
20. Shapoval, S. (2016). Planuvannia vydatkiv biudzhetu v systemi finansovo-ekonomichnoho rehuliuвання [Planning of budget expenditures in the system of financial and economic regulation]. *Foreign Trade: Economics, Finance, Law*, 4, 108–116. (in Ukrainian)
21. Shinkaruk, E. V. (2007). Planirovanie rashodov byudzheta v usloviyah reformirovaniya byudzhethnogo protsessa v Rossiyskoy Federatsii [Budget expenditures planning in the context of reforming the budget process in the Russian Federation]. Dis. ... cand. econ sciences: 08.00.10. Moscow. (in Russian)
22. Shinkaruk, E. V. (2007). Sovershenstvovanie srednesrochnogo byudzhethnogo planirovaniya [Improving the mid-term budget planning]. *Finance and credit*, 23, 4–7. (in Russian)
23. Stryuchenko, E. S. (2006). Otsenka effektivnosti rashodov byudzheta (na primere Sverdlovskoy oblasti) [The evaluation of the effectiveness of budget expenditures (for example, Sverdlovsk region)]. Abstract. dis.... cand. econ. sciences: 08.00.10. Yekaterinburg. (in Russian)
24. Sukrusheva, H. O. (2011). Neobkhidnist prohnozuvannia vydatkiv mistsevykh biudzhetiv v suchasnykh umovakh rozvytku ekonomiky Ukrainy [The necessity of forecasting of local budgets expenditures in the current conditions of the development of the Ukrainian economy]. *Bulletin of Economy of Transport and Industry*, 36, 86–89. (in Ukrainian)
25. Tkacheva, T. Yu. (2014). Kontseptsiya dostizheniya garmoznizatsii byudzhethno-nalogovykh otnosheniy na osnove soglasovaniya interesov ekonomicheskikh subektov [The concept of achieving harmonization of fiscal relations based on the harmonization of the interests of economic entities]. Dis. ... dr. econ. sciences: 08.00.10. Orel. (in Russian)
26. Uskov, I. V. (2012). Programmno-tselevoy metod planirovaniya kak osnova razvitiya sistemyi mestnykh finansov [Program-target planning method as a basis of local finance system development]. *Economical Bulletin of Donbas*, 1(27), 104–108. (in Russian)

27. Vyznachennia ta klasyfikatsiia vydatkiv mistsevykh biudzhetyv [The definition and the classification of local budgets expenditures]. Retrieved Apr. 12, 2019, from: <http://www.govforc.com/index.php?id=237> (in Ukrainian)

28. Zhadan, O. V. (2018). Ekonomichna klasyfikatsiia vydatkiv: natsionalnyi i mizhnarodnyi dosvid [The economic classification of expenditures: national and international experience]. *Scientific review*, 8(51), 22–34. (in Ukrainian)

**Information about the author:**

**Shchur R. I.**

Candidate of Economic Sciences,  
Associate Professor, Department of Finance,  
Vasyl Stefanyk Precarpathian National University, Ukraine

## **CHAPTER 15**

### **IMPLEMENTATION OF OUTSOURCING AT THE CONSTRUCTION COMPANIES**

**Spiridonova K. O.**

#### **INTRODUCTION**

Crisis situation which has influenced the Ukrainian economy since 2014 worsened financial and economic condition of many companies. It makes especially important to work out effective measures connected with costs management. One of the most important ways of costs minimization is releasing from non-profile and not efficient business processes that have negative influence on financial position of the company, lead to expenses increasing, profitability reduction, slackening of economic growth rates and as a result decreasing of the company's competitiveness. One of the last tendencies of business development and increasing of the companies' competitiveness is outsourcing strategy that means delivering some business processes or functions to other companies. The problems of outsourcing are highlighted in the researches of Jean-Louis Bravard, B. Anikin, Robert Morgan, V. Sinyaev, V. Skakun. However, the specific of the building industry has not been fully determined. The purpose of the article is to determine the reasons and main steps of outsourcing implementation for the building companies.

#### **15.1. Ways and necessity of cost reduction**

In order to develop an effective system of Ukrainian construction companies' management the main factors that influence their operational profit were analyzed and the most essential ones were determined. On the basis of economic indicators (net income, production cost, administrative expenses, distribution expenses, other operational costs and other operational income) of twenty-six Ukrainian construction enterprises during three periods trend analysis was made. With the purpose of determination dependence between operational profit of construction companies and their cost trend models of costs and income were made as well as coefficients of determination and correlation were estimated. The results of the estimation are shown in table 1.

Table 1

**Dependence between operational profit, expenses  
and incomes of construction companies**

Index	Coefficient of correlation	Coefficient of determination
<b>2016</b>		
Operational profit / net income	0,484789	0,5997
Operational profit /production costs	0,488801	0,7496
Operational profit / administrative expenses	0,099144	0,5956
Operational profit / other operational expenses	0,302611	0,6693
Operational profit / other operational incomes	0,475049	0,6465
Operational profit / distribution expenses	0,328557	0,4116
<b>2017</b>		
Operational profit / net income	0,697987	0,566
Operational profit /production costs	0,786516	0,6435
Operational profit / administrative expenses	0,69	0,691398
Operational profit / other operational expenses	0,869429	0,8385
Operational profit / other operational incomes	-0,13687	0,6223
Operational profit / distribution expenses	0,254713	0,6608
<b>2018</b>		
Operational profit / net income	0,73031	0,678
Operational profit /production costs	0,679605	0,6236
Operational profit / administrative expenses	0,739317	0,693
Operational profit / other operational expenses	0,676287	0,6822
Operational profit / other operational incomes	0,660986	0,5968
Operational profit / distribution expenses	0,424687	0,6606

The result of the analysis shows that net income had the greatest influence on the operational profit during the analyzed period, although the rate of its growth exceeded the rate of operational profit growth. It is obvious that the possibility of net income increasing is connected with the factors of the external environment, in particular with the market condition, demand and solvency of customers, economic situation in the country.

Thus, it is important to study the cost factors that are easier to control. Production expenses were the most important cost factor during the analyzed period. Considering the specifics of the construction industry distribution expenses make little influence on operational profit of construction companies, because their largest part includes transportation and package costs, that is not typical for construction company.

Analysis of statistical data of Ukrainian construction industry showed that financial and economic condition of construction companies is unfavorable, and their effectiveness is low. Profitability of operating activities in construction during 2018 made 3%. Therefore the positive trend is that the index increased in 2018 comparing to 2017 when it was 1.7% and 2016 when it was negative -0.4%<sup>38</sup>.

Therefore, it is possible to make the conclusion that in order to increase operational profit and effectiveness of construction companies' activity it is necessary to develop and implement series of measures that will decrease the main costs of construction companies, particularly their production cost.

Nowadays business management considers outsourcing one of the most effective anticrisis measures that enables to strengthen business competitiveness. More and more Ukrainian companies deliver some part of their production or business processes to the other companies. The number of companies using outsourcing increases constantly.

The most widespread ways of costs minimization are marketing and distribution expenses. However, it is important to implement modern managerial techniques and tools in order to increase efficiency of enterprises' activity. Effects of their realization are shown in table 2<sup>39</sup>.

---

<sup>38</sup> Офіційний сайт Державного комітету статистики України. Оперативна статистична інформація. URL: <http://www.ukrstat.gov.ua/>

<sup>39</sup> Білорус О.Г., Гаврилюк О.В. Глобальний конкурентний аутсорсинг : монографія. Київ : КНЕУ, 2010. 349 с.

Table 2

**Impact of managerial tools on enterprises' activity**

Instruments	Companies satisfied with the result, %	Companies unsatisfied with the result, %
Benchmarking	71	78
Strategic planning	63	69
Mission and vision	61	68
CRM	62	63
Outsourcing	63	62
Balanced Scorecard	51	55
Consumer segmentation	48	55
Business-process engineering	48	52
Key competence	47	48
Mergers and acquisitions	46	46
Strategic alliance	42	45
Supply chain management	44	43
Scenario planning	37	44
Knowledge management	37	44
Strategy of growth	32	41
Staff dismissal	42	29
Total quality management	32	36

**15.2. Essence, structure and characteristics of outsourcing**

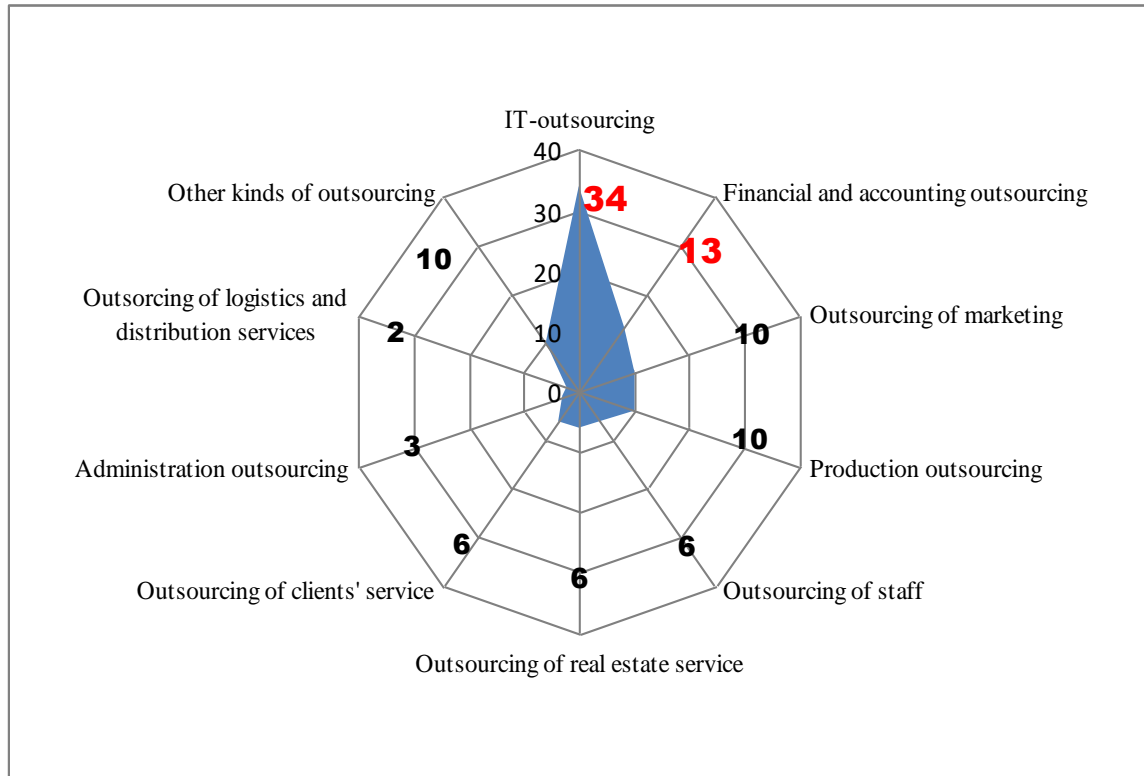
Outsourcing is the business practice of hiring a party outside a company to perform services and create goods that traditionally were performed in-house by the company's own employees and staff. Outsourcing is a practice usually undertaken by companies as a cost-cutting measure.

The main reasons of outsourcing implementation are: increasing of competition on building market, high demands to quality of production and services, considerable depreciation of fixed assets, high cost of new equipment, necessity of companies' activity increasing.

Structure of outsourcing services in foreign corporations is shown on Figure 1<sup>40</sup>.

<sup>40</sup> Чмут О.В., Осадчий А.Д. Сутність аутсорсингу та тенденції його розвитку на міжнародних ринках. *Глобальні та національні проблеми економіки*. 2017. Випуск 17. С. 116–119.





**Figure 1. Structure of outsourcing services in foreign companies, %**

The most widespread type of outsourcing is outsourcing of IT-services and accounting and financial outsourcing (outsourcing of operation with securities, registration, reorganization and liquidation of an enterprise, making an audit, optimization of taxation system). While some industries can't function remotely, IT services are the easiest jobs to complete from any location<sup>41</sup>.

The largest consumer of business processes outsourcing is Northern American market (the USA and Canada) with the share of American companies using outsourcing of 87%. The second market is Western Europe. The third is Japan<sup>42</sup>.

Each form of outsourcing has its advantages that lead to increasing effectiveness of the company's competitiveness. The criteria and characteristics of the main forms of outsourcing are shown in table 3<sup>43</sup>.

<sup>41</sup> Кошкаръова Є.Л. Сучасні тенденції світового ринку ІТ-аутсорсингу. *Вісник Харківського національного університету імені Каразіна*. 2016. Вип. 91. С. 153–160.

<sup>42</sup> Михайлов Д.М. Аутсорсинг. Новая система организации бизнеса. Москва : КНОРУС, 2006. 256 с.

<sup>43</sup> Аникин Б.А. Аутсорсинг и аутстаффинг: высокие технологии менеджмента. Москва : ИНФРА-М, 2007. 187 с.

Table 3

**Characteristics of outsourcing forms**

Criteria	Forms of outsourcing	Characteristics
Market coordination of relations according to the outsourcing agreement	External outsourcing	High flexibility in the choice of the partner-outsourcer and conditions of the agreement; market factors of price formation; outsourcer is a business partner
Hierarchy coordination of relations according to the outsourcing agreement	Internal outsourcing	High level of control of partner-outsourcer activity and quality of work executed; opportunity to influence the price of services
Establishment of joint enterprise	Internal outsourcing	Keeping of financial control, presence on the market; diversification opportunities
Internal resources of the company-client are attracted to the work execution	Partial outsourcing	Outsourcer takes responsibility only for executions of some kinds or parts of work; risk reduction; opportunity of maintenance of know-how development; training during the project; opportunity of individual decisions taking
Work execution is fulfilled fully at the expense of outsourcer's resources	Complete outsourcing	Outsourcer takes full responsibility for work execution; opportunity of standard decision implementation; decreasing of service cost; reduction of management levels
Carrying out interconnected functions (business-processes)	Outsourcing of business-processes	Decentralization of management; decapitalization; business restructuring

Usage of production outsourcing in the industrial companies of the USA is shown in table 4<sup>44</sup>.

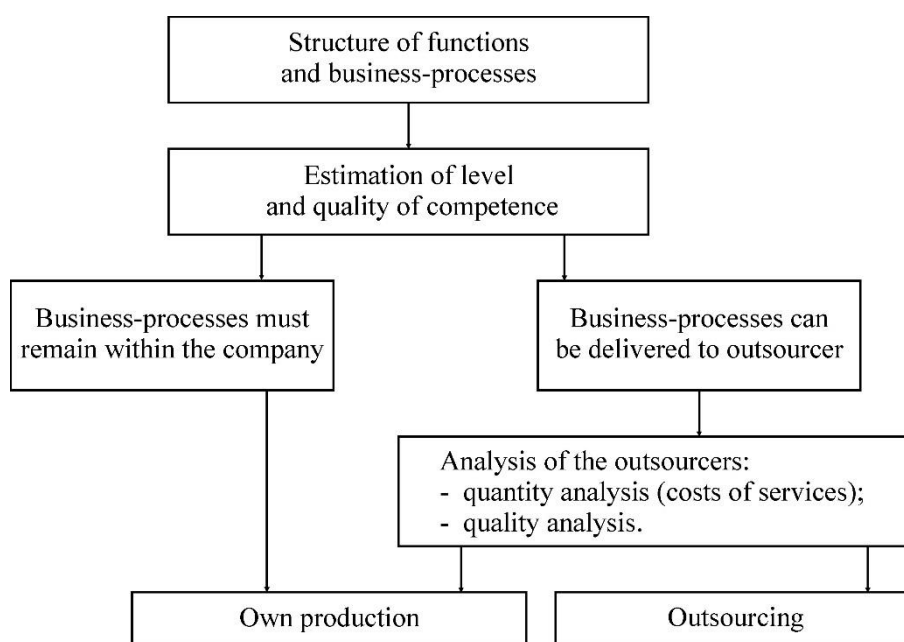
<sup>44</sup> Дідух О.В. Основні види аутсорсингу в господарській діяльності підприємств. *Вісник Хмельницького національного університету*. 2012. № 2. С. 29–32.

Table 4

**Usage of production outsourcing  
in the industrial companies of the USA, %**

Sphere	Isn't used	Partial outsourcing	Total outsourcing
Delivery	83,3	14,3	2,5
Maintenance of equipment	53,6	43,8	2,6
Basic production	41,2	54,9	3,8
Storage and distribution	69,5	26,3	4,1
Information technology	55,4	39,3	5,1
Transportation	28,3	27	44,7

Block scheme of taking the decision concerning outsourcing implementation is shown on figure 2<sup>45</sup>.



**Figure 2. Block scheme of taking decision  
on outsourcing implementation**

One of the main stages while taking the decision connecting outsourcing is choice of the partner-outsourcer. Experts name the following key aspects<sup>46</sup>:

<sup>45</sup> Бравар Ж.-Л., Морган Р. Эффективный аутсорсинг: понимание, планирование и использование успешных аутсорсинговых отношений. Днепропетровск : Баланс Бизнес-Букс, 2007. 288 с.

- Experience of successful cooperation with other companies, their recommendations, reputation, and availability of successful projects with the description of the criteria of their estimation;
- High level of professionalism and significant work experience of the personnel of the outsourcing company, availability of clear business-processes, permanent raising of personnel's qualification;
- Effective work of the outsourcing company;
- Cost of outsourcing services;
- Strong corporative culture of the outsourcing company, motivation of the personnel, system of material and moral incentives;
- Understanding of the tasks that outsourcing company has to fulfill, their correct structure, detailing;
- Period of the outsourcing company's work on the market;
- Wide geographical coverage: possibility to work in different regions of Ukraine;
- Concept of work on the outsourcing market, philosophy of the company;
- Availability of web site of the outsourcing company;
- Structure of the organization;
- Achievement of set tasks in time;
- Reputation of the outsourcing company.

While choosing business-processes or functions that are expedient to fulfill using outsourcing it is recommended to compare costs on the purchase of the results of making these functions by outsourcer and costs on own production.

If the relation is following:

Costs on the own production / costs on the purchase  $>1$ , the company should choose outsourcing.

If the relation is following:

Costs on the own production / costs on the purchase  $<1$ , realization of the business-processes with the own forces is more effective because using outsourcing will not lead to decreasing of costs<sup>47</sup>.

There are main conditions that provide realization of the successful outsourcing strategy:

---

<sup>46</sup> Календжян С.О. Аутсорсинг и делегирование полномочий в деятельности в деятельности компаний. Москва : Дело, 2003. 272 с.

<sup>47</sup> Скакун В.А. Оптимізація фінансових потоків при аутсорсингу бізнес-процесів у будівництві. *Економічний простір*. 2009. № 22/1. С. 204–214.

- Support of effective relations between directors that stipulates availability of common work methods;
- clear criteria that enable to determine economic effect by means of comparison of making the service by own forces and outsourcing company using the main parameters: costs, volume of services and quality;
- Appointment of responsible person that are engaged in search for partners, making lucrative agreements, and operative solving of current or problem situations;
- Regular analysis of the activity, delivery of information about current work;
- Familiarization of the personnel with specifics of the company-customer's activity.

### **15.3. Advantages and disadvantages of outsourcing**

The benefits of outsourcing can be substantial – from cost savings and efficiency gains to greater competitive advantage.

The most important benefits of outsourcing include:

- improved focus on core business activities – outsourcing can free up the company to focus on its strengths, allowing the staff to concentrate on their main tasks and on the future strategy;
- increased efficiency – choosing an outsourcing company that specializes in the process or service the company can gain a more productive, efficient service, often of greater quality;
- controlled costs – cost-savings achieved by outsourcing allow the company to release capital for investment in other areas of business;
- greater competitive advantage – outsourcing can help the company leverage knowledge and skills along with complete supply chain.

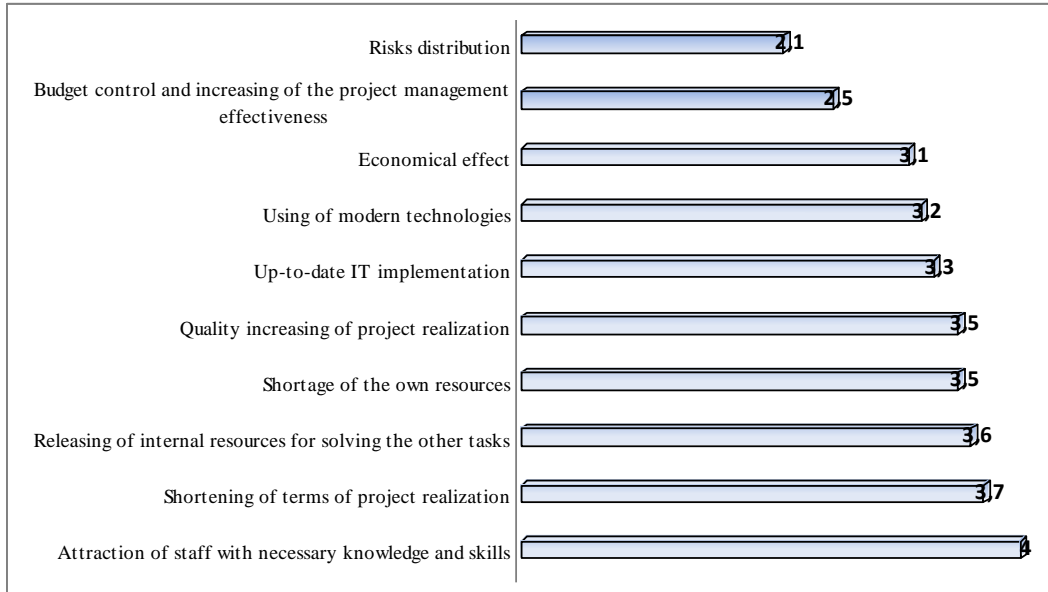
The main advantages of outsourcing for the companies are shown on figure 3<sup>48</sup>.

Therefore outsourcing can also help to make business more flexible, able to adapt to changing market conditions and challenges, while providing cost savings and service level improvements.

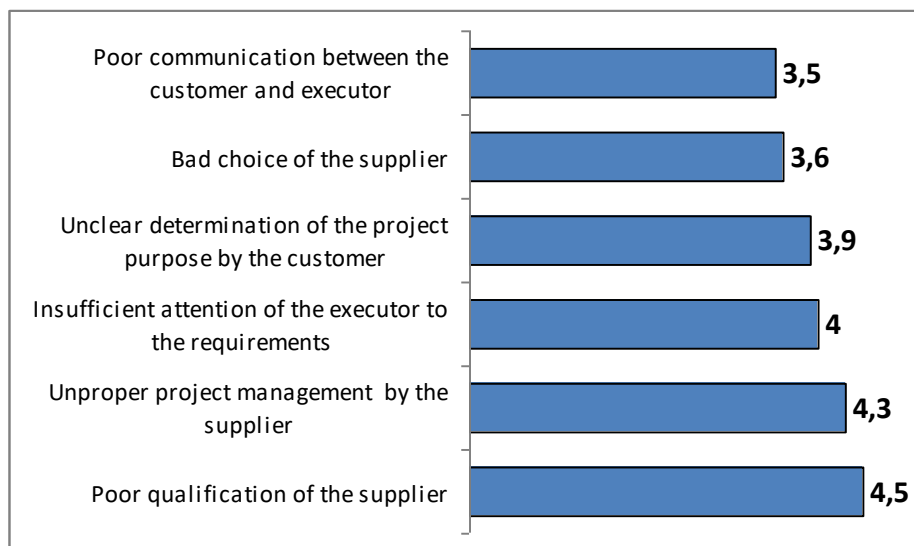
But using outsourcing can make negative influence on the activity of a company (figure 4)<sup>49</sup>.

---

<sup>48</sup> Ржепішевська В.В., Головка С.А. Аутсорсинг як інноваційна кадрова стратегія управління бізнесом. *Економіка та управління підприємствами. Економіка і регіон*. 2015. № 1 (50). С. 62–67.



**Figure 3. The advantages of outsourcing**



**Figure 4. Main risks of outsourcing usage**

Considering that the main risks of using outsourcing schemes are connected with poor qualification and insufficient level of management it is necessary to develop criteria for choosing the outsourcer responsible for control of quality, terms of delivery and providing services. The main criteria can be<sup>50</sup>:

<sup>49</sup> Загородній А.Г. Аутсорсінг та його вплив на витрати підприємства. *Фінанси України*. 2009. № 9. С. 87–97.

<sup>50</sup> Синяев В.В. Развитие коммерческой системы аутсорсинга в сфере строительных услуг (теория, методология, практика) : автореф. дисс. на соискание ученой степени д.э.н. Москва : МЭСИ, 2009. 42 с.

- qualification of outsourcing company;
- manufacturing facilities and licenses, certification of quality system control;
- using new technologies (modern machines and equipment);
- term of functioning on the market;
- positive history of the projects fulfilled, positive references;
- high rating of economic sustainability;
- cost of services.

In general, ordering service in a specialized company is about 20% cheaper than keeping own staff within the company.

Company Walker International examined 1000 companies of different branches. The research allowed making the conclusion that 27% of these companies use outsourcing for payroll operations. Table 5 shows the results of the researches<sup>51</sup>.

Table 5

**Functions that companies delivered or plan to deliver to outsourcing**

Business-function or process	Companies that delivered business-function or process to outsourcing, % of the companies examined	Companies that plan to deliver business-function or process to outsourcing, % of the companies examined
Payroll operations	27	26
Calculation and planning of taxation expenditures	21	27
Support of computer financing systems	16	27
Accounting and financing	13	24
Business trips accounting	12	31
Note for receiving	12	20
Note for payment	9	21
Financial reports	7	19
Other financial functions	7	32

<sup>51</sup> Зозульок О. Аутсорсинг як інструмент підвищення конкурентоспроможності вітчизняних підприємств в умовах глобалізації. *Економіка України*. 2009. № 8. С. 16–24.

The main reasons of low effectiveness of outsourcing operations in Ukraine<sup>52</sup>:

- short time experience of the Ukrainian companies on the outsourcing market;
- noncompliance with obligations as to the quality of services by the outsourcer;
- improper understanding of the company's strategy by the outsourcer;
- unpredictable increasing of prices for the services by the outsourcer;
- decreasing the control over the functions passed to outsourcing.

To increase the effectiveness of outsourcing a lot of attention should be paid to systematization and analysis of the information used while taking the decision about using outsourcing strategy.

The main stages of outsourcing<sup>53</sup>:

- 1) analysis of the company's processes to determine the strategic ones and those possible to outsource;
- 2) choice of criteria to outsource business-processes or functions;
- 3) costs calculation and comparing expenditures while outsourcing and doing functions and business-processes within the company;
- 4) choice of the partner (outsourcer);
- 5) determination of the cooperation level between the outsourcer and the company;
- 6) making an agreement with the outsourcer;
- 7) monitoring and controlling the work of the outsourcer;
- 8) analysis of outsourcing using and correcting.

Taking a decision of outsourcing implementation is shown on figure 5.

In order to take a decision about using outsourcing strategy a company should make the following steps:

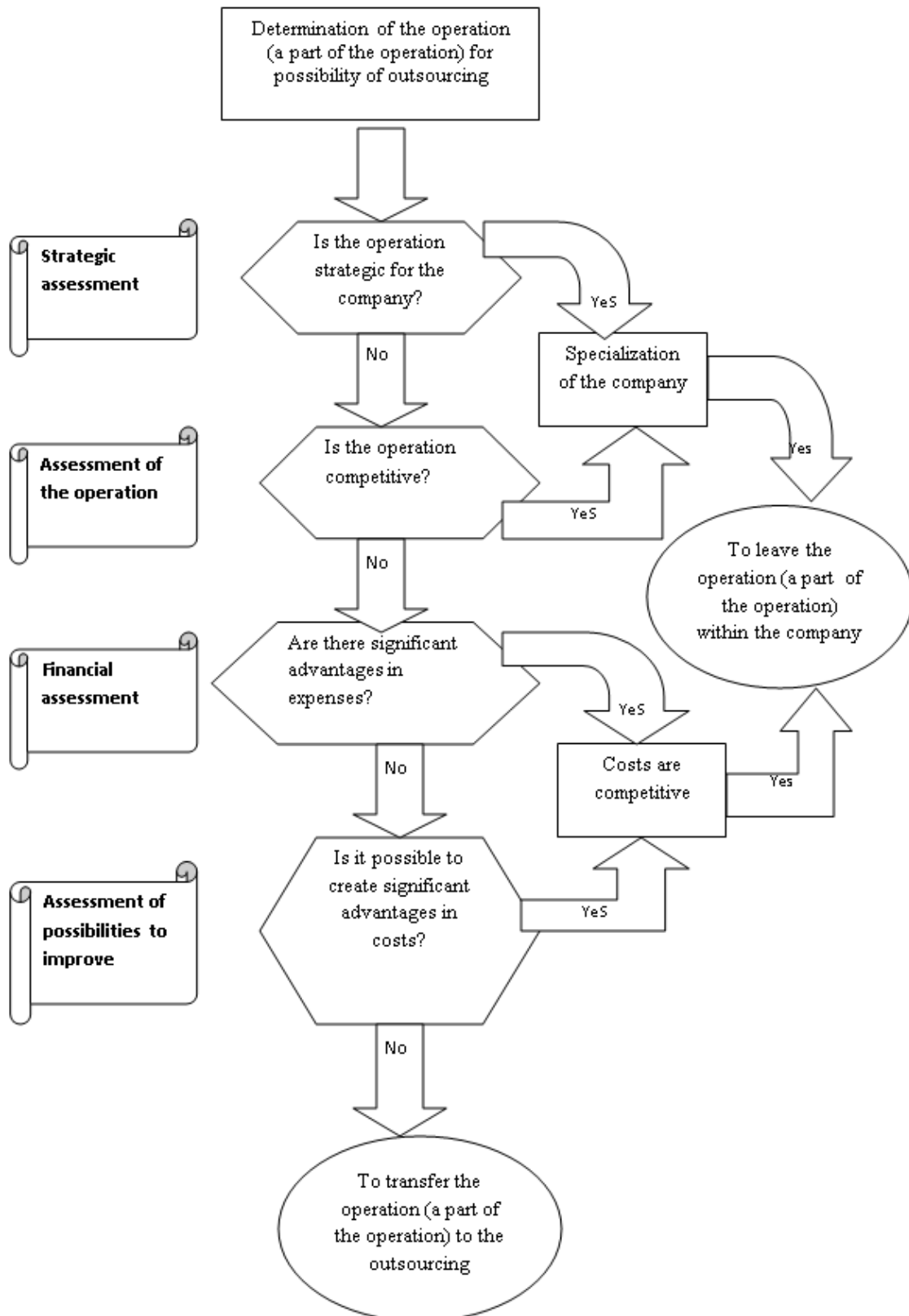
- strategic assessment that helps to determine if the business process or operation is strategically important for the company. So it is necessary to assess if it is significant for the company's strategy;
- assessment of the operation that helps to determine if the operation is competitive;

---

<sup>52</sup> Заводовська І.І. Передумови та перспективи розвитку сучасного бізнесу на основі аутсорсингу. URL: <http://dspace.nbuv.gov.ua/bitstream/handle/123456789/15042/12-Zavodska.pdf?sequence=1>

<sup>53</sup> Тищенко О.М., Хаустова В.С. Аутсорсинг як фактор ефективності підприємств будівельної галузі. URL: [http://www.problecon.com/pdf/2012/4\\_0/129\\_135.pdf](http://www.problecon.com/pdf/2012/4_0/129_135.pdf)





**Figure 5. Algorithm of determination of outsourcing usage**

– financial assessment that includes expenses analysis comparing with the market;

– assessment of possibilities to improve that helps to determine if it is possible to create significant advantages in costs.

In order to determine what business process and functions are necessary to leave the company should divide all its business process and operation into development or strategically important processes that determine the main directions of the company's development; the main or operational processes providing goods and services with quality and value; additional processes that create company's infrastructure; managerial processes (planning, analysis, control, coordination).

One of the ways to assess competitiveness of business operation is to create centers of financial responsibility as a part or subunit of a company in which the manager has some degree of authority and responsibility.

Responsibility centers can be classified by the scope of responsibility assigned and decision-making authority given to individual managers<sup>54</sup>.

Cost centers are segments in which the managers are responsible only for costs but have no revenue responsibilities. When it is possible to measure only the expenses or costs and not the revenue earned from a responsibility center, it is known as Cost or Expense Centre. Thus, in a cost center the manager is responsible only for costs.

When a responsibility center gets revenue from output, it will be called a Profit Centre. When the output is meant for outsiders, then the revenue will be measured from the price charged from customers. If the output is meant for other responsibility center, then management takes a decision whether to treat the center as profit center or not.

An investment center is an entity segment in which a manager can control not only revenues and costs but also investment. The manager of an investment center is made responsible for properly utilizing the assets used in his center. He is expected to earn a fair return on the amount employed in assets in his center. Measurement of assets causes a lot of problems<sup>55</sup>.

---

<sup>54</sup> Черкас А.В. Проблематика впровадження контролінгу на вітчизняних підприємствах. *Економіка і управління*. 2013. № 4. С. 140–143.

<sup>55</sup> Богачова А.В. Передумови створення центрів відповідальності за формування собівартості на промислових підприємствах. *Економіка та управління підприємствами*. 2014. Випуск 1(123). С. 10–12.

It becomes difficult to determine the amount of assets employed in a responsibility center. Some assets may be used in a responsibility center but their actual possession may be with some other department. Some assets may be used by two or more responsibility centers and it becomes difficult to determine which type of the center it could be related to. Investment Centers may be used for big responsibility centers where assets will be in exclusive possession of that kind of center<sup>56</sup>.

Therefore, Profit Centers and Investment Centers are responsible for development of business processes and operations and they are strategically important. So, it is necessary to leave their fulfillment within the company.

If the business process is neither strategic for the company nor competitive the company should transfer the operation (a part of the operation) to the outsourcing company and it will bring benefits.

Advantages of using outsourcing for the employer are obvious. Keeping the function of managing the employees, the enterprise is free of employer-employee relations with the personnel taken out of the staff but still working for the enterprise.

But it can also have negative influence on the company's activity. That's why it is necessary to organize it, analyze its results and control this instrument.

## **CONCLUSION**

In order to maximize profits, businesses need to keep their expenses down. Today in the crisis conditions of the Ukrainian economy alternative ways of costs reductions are outsourcing and outstaffing.

Therefore implementing of these instruments allows to reduce expenses, increase profit and quality and as a result competitiveness of the company due to specialization and concentration on the core functions and business operations.

Outsourcing has positive influence on the competitiveness and effectiveness of the building company due to costs reduction and concentration on the most priority business-processes. Businesses that hire remote employees can save on office space, healthcare, and other

---

<sup>56</sup> Russell G. W. The changing role of the financial controller. Access mode: <http://www.gaaaccounting.com/the-changingrole-of-thefinancial-controller/>

benefits, and fixed salaries controlled by their location. But there are some risks while using outsourcing strategy connected with poor qualification and improper project management of the company providing outsourcing services.

But present approaches to grounding of feasibility of outsourcing base on the quality criteria of estimation that are determine be expert method and don't provide the instrumentation of clear quantity measuring of the effect of outsourcing implementation.

### **SUMMARY**

The article is devoted to the problem of outsourcing implementation as one the most efficient instruments of cost reduction. In order to prove necessity of outsourcing usage the main factors that influence operational profit of construction companies were determined. The main types and forms of outsourcing are presented. Advantages and the main risks are analysed. The main stages of outsourcing were developed, among them: determination strategic business processes of the company; comparing expenses while outsourcing and performing services by the company; choice of the outsourcing company and making an agreement; control of the outsourcers' work.

In order to minimize risks the main key aspects of choosing outsourcing company were formed and the main stages of determination of business processes that should be passed to the outsourcing company are developed

### **REFERENCES:**

1. Аникин Б.А. Аутсорсинг и аутстаффинг: высокие технологии менеджмента. Москва : ИНФРА-М, 2007. 187 с.
2. Білорус О.Г., Гаврилюк О.В. Глобальний конкурентний аутсорсинг : монографія. Київ : КНЕУ, 2010. 349 с.
3. Богачова А.В. Передумови створення центрів відповідальності за формування собівартості на промислових підприємствах. *Економіка та управління підприємствами*. 2014. Випуск 1(123). С. 10–12.
4. Бравар Ж.-Л., Морган Р. Эффективный аутсорсинг: понимание, планирование и использование успешных аутсорсинговых отношений. Днепропетровск : Баланс Бизнес-Букс, 2007. 288 с.

5. Дідух О.В. Основні види аутсорсингу в господарській діяльності підприємств. *Вісник Хмельницького національного університету*. 2012. № 2. С. 29–32.

6. Заводовська І.І. Передумови та перспективи розвитку сучасного бізнесу на основі аутсорсингу. URL: <http://dspace.nbuv.gov.ua/bitstream/handle/123456789/15042/12-Zavodska.pdf?sequence=1>

7. Загородній А.Г. Аутсорсинг та його вплив на витрати підприємства. *Фінанси України*. 2009. № 9. С. 87–97.

8. Зозульок О. Аутсорсинг як інструмент підвищення конкурентоспроможності вітчизняних підприємств в умовах глобалізації. *Економіка України*. 2009. № 8. С. 16–24.

9. Календжян С.О. Аутсорсинг и делегирование полномочий в деятельности в деятельности компаний. Москва : Дело, 2003. 272 с.

10. Кошкарьова Є.Л. Сучасні тенденції світового ринку ІТ-аутсорсингу. *Вісник Харківського національного університету імені Каразіна*. 2016. Вип. 91. С. 153–160.

11. Михайлов Д.М. Аутсорсинг. Новая система организации бизнеса. Москва : КНОРУС, 2006. 256 с.

12. Офіційний сайт Державного комітету статистики України. Оперативна статистична інформація. URL: <http://www.ukrstat.gov.ua/>

13. Ржепішевська В.В., Головка С.А. Аутсорсинг як інноваційна кадрова стратегія управління бізнесом. *Економіка та управління підприємствами. Економіка і регіон*. 2015. № 1 (50). С. 62–67.

14. Russell G. W. The changing role of the financial controller. Access mode: <http://www.gaaaccounting.com/the-changingrole-of-thefinancial-controller/>

15. Синяев В.В. Развитие коммерческой системы аутсорсинга в сфере строительных услуг (теория, методология, практика) : автореф. дисс. на соискание ученой степени д.э.н. Москва : МЭСИ. 2009. 42 с.

16. Скакун В.А. Оптимізація фінансових потоків при аутсорсингу бізнес-процесів у будівництві. *Економічний простір*. 2009. № 22/1. С. 204–214.

17. Тищенко О.М., Хаустова В.Є. Аутсорсинг як фактор ефективності підприємств будівельної галузі. URL: [http://www.problecon.com/pdf/2012/4\\_0/129\\_135.pdf](http://www.problecon.com/pdf/2012/4_0/129_135.pdf)

18. Черкас А.В. Проблематика впровадження контролінгу на вітчизняних підприємствах. *Економіка і управління*. 2013. № 4. С. 140–143.

19. Чмут О.В., Осадчий А.Д. Сутність аутсорсингу та тенденції його розвитку на міжнародних ринках. *Глобальні та національні проблеми економіки*. Випуск 17. 2017. С. 116–119.

**Information about the author:**

**Spiridonova K. O.**

Candidate of Economic Sciences,  
Associate Professor at Department of Economics  
and Entrepreneurship,  
Prydniprovskya State Academy of Civil Engineering  
and Architecture, Ukraine



Publishing house “Liha-Pres”  
9 Kastelivka str., Lviv, 79012, Ukraine  
44 Lubicka str., Toruń, 87-100, Poland

---

Printed by the publishing house “Liha-Pres”  
Passed for printing: September 21, 2019.  
A run of 150 copies.