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ECONOMIC EVALUATION OF ADMINISTRATION SYSTEMS IN THE CONTEXT OF MANAGEMENT BUSINESS PROCESSES REENGINEERING

Abstract. The article deals with the peculiarities of an economic evaluation of administrative systems in the context of management business processes reengineering. In particular, methodological approaches to the economic evaluation of such systems are described and characterized. It is concluded that under present conditions most of the projects on construction or improvement of administrative systems belong to the category of investment projects, which, accordingly, are related to investment costs. Consequently, this necessitates the implementation of commonly used in investment management methodical approaches for the economic evaluation of the investments' efficiency in the administration systems. The main approaches to the economic evaluation of administrative systems in the frameworks of management business processes reengineering are outlined and characterized. They include traditional financial methods, probabilistic methods, qualitative analysis tools, financial, qualitative or combined models, portfolio analysis, budget approach, project approach. Thus, the traditional financial methods of the economic evaluation of the administration systems in the management of enterprises

provide for the calculation of the payback period, the net present value, the internal or average rate of return, the profitability index, the level of investments' return, etc. Among the methods and approaches to solving the problem, the estimated Total Cost of Ownership (TCO), IT Scorecard (consideration of customer projections, finance, processes and training and development in the frameworks of administrative processes in the enterprise and administration systems) on enterprise and administration systems), Activity Based Costing (ABC), Cost/Schedule Control Systems Criteria (C/SCSC), Applied Information Economics (AIE), Total Value of Opportunities (TVO), Total Economic Impact (TEI), Rapid Economic Justification (REJ), etc. The hypothesis about the influence of administrative systems on the resulting indicators of a business entity was confirmed based on the results of calculations. This problem has been solved using correlation-regression analysis. Net income from sales of products (which is known to be one of the most representative absolute indicators of the economic efficiency of production and economic activity of the enterprise) was selected as the resulting (or dependent) variable. Among the independent

variables (factor characteristics), the indicators of the level of administrative systems formation (R_{sfr}) and the level of their stability (R_{stk}) were chosen to solve the problem. Appropriate calculations to verify the hypothesis were done for the activities of a number of domestic business entities.

Key words: administration, business process, economic evaluation, reengineering, system, management.

Introduction

In modern companies, considerable attention is given to the problems of formation, use and economic evaluation of administration systems in management in the conditions of transition to new management standards, as well as in the frameworks of management business processes reengineering. Under these circumstances, managers do not restrict their interest in the problems of such systems after the successful implementation of new management standards, realizing that the administration system is the key to competitive advantages in a dynamic operating environment. Often, the need to rebuild such systems is due both to customer requirements and to a significant gap in this direction between customers and their competitors (that enables to identify, in particular, benchmarking). It often happens in business that the decision to improve the administration system is conditioned by the need to implement a quality management system and its requirements regarding the completeness, timeliness, efficiency and focus of information and document security during the influence of the management system on the control of all management technology stages. One way or another, any system of administration in modern companies is characterized by dynamism and requires constant monitoring of its state and trends, first of all, from the position of the economic component. This is especially true in the context of enterprises' management business processes reengineering.

Literature review and methodical approaches

Different levels of administration, construction and economic evaluation of corresponding systems are considered in works of O. Avdieieva, I. Adizes, I. Alieksieiev, N. Bakanova, L. Batchenko, O. Bezborodova, M. Biesiedin, M. Bondarchuk, I. Borysenko, M. Bublyk, I. Vishka, M. Voinarenko,

Yu. Volohin, N. Havkalova, P. Hlushchenko, S. Honhalo, S. Davymuka, B. Dosmukhamedov, I. Drahan, O. Dudchenko, N. Epifanova, O. Zamazii, H. Zakharchyn, H. Kaihorodtsev, T. Kamenska, Z. Kvi, A. Kisielov, N. Kvak, V. Klochkov, O. Koval, A. Kovalchuk, O. Kostiuk, T. Kravtsova, A. Kravchenko, A. Krasnobelmova, V. Kruhlov, O. Kuzmin, V. Kulba, A. Kuprin, I. Kurshatova, O. Lazor, S. Liebiediev, K. Li, L. Lihonenko, L. Lypych, I. Litvinova, Yu. Mazneva, T. Maknalti, A. Mandrykin, L. Marshavina, Yu. Myronenko, S. Mosondz, V. Nahaiev, H. Okhrimenko, M. Petrychko, Y. Petrovych, M. Pleshakova-Borovyńska, O. Podoliakin, K. Poelman, Ye. Sakhno, T. Svitlychna, T. Semenchuk, I. Skvortsov, O. Sierov, A. Solonar, Yu. Taraskina, V. Tymtsunyk, A. Uhrumova, L. Usachenko, L. Fionova, M. Chynchyn, I. Yakovliev, I. Yaremko and others. The works of these authors relates, in particular, to the strategic and tactical aspects of administration in organizations, its connection with business processes, the impact of administration on the processes of management decisions making, approaches to assessing the effectiveness of the construction and use of administrative systems, the design of these systems, the highlighting and characterizing of their elements, motivation of employees in the sphere of administrative activity, etc.

Despite a considerable number of developments in this area, a number of urgent tasks on this topic are still not resolved. Thus, the economic aspects of the evaluation of administrative systems in the frameworks of the management business processes reengineering are considered fragmentary only. Therefore, the purpose of the article is to outline the main provisions of such evaluation, the consideration of the relevant methodological provisions and the identification of the impact of administrative systems on the enterprises' economic activity indicators.

Different methods of scientific research were used to achieve the set goal and to solve the tasks: grouping and systematization methods – to distinguish methodological approaches to the economic evaluation of administrative systems; correlation-regression analysis – to identify the impact of these systems on the economic activity indicators of the enterprise; the method of expert assessments – to identify the level of stability and formation of administrative systems at enterprises.

General Provisions for the Economic Assessment of Administration Systems

In the realities of domestic business, the formation and use of full-fledged administration systems in its content to a greater extent belongs to the category of investment projects, which are associated with investment costs. Consequently, this necessitates the implementation of commonly used in investment management methodical approaches for the economic evaluation of the investments' efficiency in the administration systems at the management of enterprises. It is known that the ratio of investment costs and outcomes is a base for these approaches. A wide range of evaluation methods in investment management provides with an opportunity to distinguish between alternative options for investment decisions, including construction, development or improvement of administrative systems issues.

For practical reasons, the choice of any approach to the economic evaluation of investment projects for the formation and development of administration systems in the management of enterprises is determined by various factors, in particular, the time constraints of the calculations, the level of their accuracy, the level of information support on costs and cash income of the project, etc. Among other conditions influencing such evaluation processes, it is worth noting:

- level of personnel qualification in the field of investment projects evaluation;
- goals and objectives of the assessment, which, in particular, are determined by the requirements of investors, and also related to the type of the enterprise's activity and the specificity of its investment projects for the formation or development of administrative systems;
- the state of the economy, in particular, in the context of existing and potential inflation processes, etc.

Considering the problem of the economic evaluation of administrative systems in the context of management business processes reengineering, it is appropriate to agree with G. Kajgorodcev and A. Kravchenko (2015, p. 5) that the economic efficiency of information systems is significantly lower than in the case of other innovative solutions in the sphere of production. Authors explain this by

the nature of information processes, which are characterized by their fundamental content.

Despite the importance and necessity of administering systems for domestic business in the present, it is nevertheless necessary to point out the considerable cost of implementation of most projects, their formation or improvement, especially when it comes to the application of modern information technologies in such systems. To this end, economic entities are compelled to accumulate financial, material, personnel and other types of resources, while taking into account a variety of possible risks. Obviously, under these conditions, a thorough economic evaluation of the project decisions' effectiveness should be carried out. This can be a prerequisite not only for risks minimization but also for carrying out economically reasonable current or capital costs. The problem is exacerbated by the implementation of large volumes of corporate information systems in the management of enterprises with complex architecture.

It should be noted that the economic substantiation of projects for the formation or improvement of administrative systems in the context of reengineering management business processes is more actualized in the context of the implementation of such projects with high budget, and provided that financial resources are planned separately for their implementation (which, as practice shows, often displayed even on a separate company budget). Under these conditions, it is important not only to plan the necessary expenses but also to work on them with the entities responsible for the company, as well as to agree on the planned budget according to the general budget of the entity.

On the basis of the scientific research results of A. Anisiforov and L. Anisiforova (2014, p. 14–15), the main preconditions to the effectiveness of economic evaluation of administration systems in the context of management business processes reengineering were distinguished, namely:

- the need to determine the real usefulness of introducing or improving administrative systems received by the enterprise or other interested entities (contractors, investors, owners, etc.);
- the need to choose such an alternative variant of IT solutions in administration systems, which will provide the opportunity to obtain the

most beneficial effects with the minimum cost of various resources;

- the need to outline staffing, financial, time and other constraints to achieve the expected economic and other effects;

- the need to determine the level of compliance of the expected effects to desired and the level of compliance with the established restrictions for each alternative version of the administration system in the enterprise.

It is important for the economic evaluation of the administration systems in the context of management business processes reengineering to identify significant types of all costs and benefits that most represent the economic component in the processes of implementation or improvement of these systems. In the analyzed context, it is important to use an adequate mechanism for economic diagnosis of administration systems and to apply (when it is possible) software for automating calculations.

The specifics of the economic evaluation of the administration systems in the context of management business processes reengineering is that these systems primarily aim at increasing the level of effectiveness of the management subsystem on the control one at all stages of management technology on the basis of information, documentation, case management and formalization of management procedures. Therefore, the administration system should provide the possibility of generating reliable and operational information that will be used at various levels of the organizational governance structure (since management decisions are made here, and not only at the institutional level). Thus, the costs and benefits of an economic nature associated with the construction, use or improvement of these systems; they directly or indirectly penetrate all levels of the organizational structure of management. It should be noted that the classical approaches to the economic evaluation of administrative systems involve the definition of the revenue and expenditure parts of the projects concerned, followed by their comparison in the form of absolute or relative values.

Methodological approaches to the economic evaluation of administration systems

Considering the problem of the economic evaluation of administration systems in the

frameworks of management business processes reengineering, one should agree with the opinion of N. Glushak (2008, p. 85), which distinguishes between two important parameters for assessing the effectiveness of information technology. The first one is the answer to the question: “what amount of consumers is satisfied with the information system and how much it costs to the organization”. Another aspect is “to what extent the consumer uses his information”. In this context, the author proposes to take into account two aspects of the evaluation of the effectiveness of administrative decisions on information systems, which are also typical for administration systems. The first of these efficiency aspects is the target aspect that reflects the level of the goals achievement of the enterprise (how much the administration system with all its parameters provides with the ability to make adequate the goals of the enterprise according to the requirements of the environment or, e.g. choose the most appropriate strategies for the organization that would also meet the set goals). The cost-effective aspect of evaluating the effectiveness of administrative systems is based on the criterion of minimizing costs, taking into account the relationship “volume – quality”.

In the light of the foregoing, it is worth pointing out that for practical considerations during the economic evaluation of administration systems in the context of management business processes reengineering, it is important to calculate both overall and comparative efficiency for more complete information.

Taking into account the results of the research of M. Bekker (2010, p. 5), it should be noted that the economic evaluation of administrative systems in the context of reengineering management business processes can be carried out using the following main approaches:

- traditional financial techniques;
- probabilistic methods;
- qualitative analysis tools;
- financial, qualitative or combined models;
- portfolio analysis;
- budgetary approach;
- the project approach.

Considering some of these techniques that can be applied to the economic evaluation of

administration systems in the management of enterprises, first of all, it should be highlighted the method used to calculate the minimum of costs, which was determined by the formula (Anisiforov and Anisiforova, 2014, p. 19):

$$K_i \times E_n + C_i \rightarrow \min, \quad (1)$$

where K_i is a volume of capital investments for each option of construction or improvement of the administration system, monetary units; E_n is a normative coefficient of capital investments' efficiency for each option of construction or improvement of the administration system, unit fractions; C_i is a cost price of each option for the construction or improvement of the administration system, monetary units.

Obviously, this approach can indeed be applied to the economic evaluation of administration systems in the context of management business processes reengineering, provided that such capital cost systems are formed or improved, and if it is necessary to compare at least two variants of alternative projects.

Considering the traditional financial methods of the economic evaluation of administration systems in the management of enterprises, it should be noted that they are the ones used to diagnose any investment project and are most often reflected in the investment analysis. The most common among them to solve this problem can be (Anisiforov and Anisiforova, 2014; Zamlynskyi, 2014; Skvortsov, 2003; Shemaiev and Romodan, 2014; Yastremska, 2004):

- payback period;
- net present value;
- internal rate of return;
- the average rate of return;
- modified internal rate of return;
- profitability index;
- the level of investment return, etc.

As it is known, due to the calculation of the payback period, information can be obtained when an investment project for the formation or improvement of the administration system will bring profit to the enterprise. This is one of the most common indicators to project design assessment in investment analysis. The basic formula for calculating its value provided that the

cash income is uniformly distributed over the years is (Komarova, 2014, p. 61):

$$P_p = \frac{I_z}{N_s}, \quad (2)$$

where P_p is a payback period of the investment project on the formation or improvement of the administration system, years; I_z is a total value of investments into the implementation of the project for the formation or improvement of the administration system, monetary units; N_s is an average annual cash income based on the results of the formation or improvement of the administration system, monetary units.

Given the irregularity of cash incomes according to the results of formation or improvement of the administration system over the years, the payback period "will equal the period of time (the number of years) for which total net cash inflows will exceed the amount of investment" (Komarova, 2014, p. 62).

Considering the possibility of the practical application of the indicator of the administration system formation or improvement investment project payback period, it should be emphasized the need to clearly identify the average annual revenues from the system or administrative systems (which in practice is rather difficult or sometimes impossible at all). There is also a significant lack of practical application of this indicator – a disregard for the cost of money in time, which is especially important for complex and long-term projects for the formation or improvement of administration systems.

It is possible to carry out an economic evaluation of the administration systems in the management of enterprises by calculating the Net Present Value, which is to indicate the "ultimate absolute effect received from the implementation of an investment decision, and is defined as the difference between the total value of the reduced (discounted) net cash flows during the period of investment decision operation and the total value of reduced (discounted) investment funds for its realization" (Morshcheniuk, 2009, p. 110), i.e.:

$$NPV = PV - I_0, \quad (3)$$

where NPV is an amount of the net present value of the investment project for the formation or

improvement of the administration system, monetary units; I_0 is a total cost of investments in the implementation of the project for the formation or improvement of the administration system in the zero period, monetary units; PV is a value of the current cost of income from an investment project for the formation or improvement of the administration system, monetary units.

The current cost of revenue (PV) from an investment project for the administration system formation or improvement is calculated as follows (Yankovyi, Melnyk and Yankovyi, 2013, p. 51):

$$PV = \sum_{t=0}^n \frac{N_t}{(1+r)^t}, \quad (4)$$

where N_t is a cash income based on the results of the administration system formation or improvement in the period t , monetary units; r is a discount rate, unit fractions; n is a number of periods.

Thus, the calculation of the net present value of the investment project for the administration system formation or improvement involves determining the total cost of the investment in the project implementation in the zero period (in other words, there should be determined the amount of investment obtained for the relevant project implementation). Then the current value of the proceeds from an investment project for the administration system formation or improvement is calculated. Therefore, the cash flow received for this purpose is discounted to the current date. At the final stage, the amount of such a revenue current value is compared to the total cost of investments in the project implementation for the administration system formation or improvement in the zero period.

Indicator of the payback internal rate of the investment project for the administration system formation or improvement in the management of enterprises is calculated as “discount rate, according to which the net present value of cash flow from the investment project is zero – if the calculated rate is higher than the loan interest rate or the standard refinancing rate, the project is considered to be profitable” (Anisiforov and Anisiforova, 2014, p. 29). The same authors note that the modified internal return rate is “the discount rate,

which balances the project revenues and expenses; it is the rate at which the terminal value (future value of all cash inflows) will be reduced to the present moment and will be equal to the real value of all project costs (outflows)” (2014, p. 30). The formulas for calculating these indicators are (Gavrilenko, 2013; Zamlynskyi, 2014; Komarova, 2014; Morshcheniuk, 2009; Skvortsov, 2003):

$$NPV_{irr} = \sum_{t=1}^n \frac{N_t}{(1+IRR)^t} - \sum_{t=0}^n \frac{I_t}{(1+IRR)^t} = 0, \quad (5)$$

where N_t is a cash income based on the results of the administration system formation or improvement in the period t , monetary units; IRR is an interest rate at which $NPV = 0$; I_t is a volume of investments in the administration system formation or improvement (expenses) in the t -period; n is a total number of periods (intervals, steps, etc.)

$$\sum_{t=0}^n \frac{I_t}{(1+r)^t} = \frac{\sum_{i=1}^n N_t \times (1+d)^{n-t}}{(1+MIRR)^n}, \quad (6)$$

where d is a level of reinvestments, unit fractions; $MIRR$ is a modified internal return rate; r is a discount rate, unit fractions.

The economic evaluation of administration systems in enterprise management taking into account the European integration processes can be implemented using the profitability index (PI), which in its content shows the ratio of the present value of the future cash flow to the initial investment in the project for the formation or improvement of administration systems. Thus, this indicator shows the level of profit received for each expenditure unit (Komarova, 2014; Morshcheniuk, 2009; Skvortsov, 2003):

$$PI = \frac{NPV}{I_0}. \quad (7)$$

Taking into account the research results of A. Anisiforov and L. Anisiforova (2014, pp. 39-77), other methods of the economic evaluation of administration systems in the context of management business processes reengineering can be distinguished, namely:

- Total Cost of Ownership (TCO);
- IT Scorecard (consideration of customer projections, finance, processes and training and

development in the frameworks of administrative processes in the enterprise and administration systems);

- Activity Based Costing (ABC);
- research on Cost/Schedule Control Systems Criteria (C/SCSC);
- method of Applied Information Economics (AIE);
- defining Total Value of Opportunities (TVO);
- defining Total Economic Impact (TEI);
- method of Rapid Economic Justification (REJ), etc.

Among the mentioned above methods and approaches to the economic evaluation of administration systems in the management of enterprises, it is appropriate to separately emphasize on the significant strengths of the Total Cost of Ownership (TCO). As P. Gontard, L. Stankevich, O. Gerasimova and V. Hlamov (2015, p. 89) note, TCO should be interpreted as “an innovative concept aimed at creating an understanding of the real value of conducting business with a specific supplier relative and a particular product or service”. Regarding the administration system, the concept of aggregate cost of ownership involves the calculation of all direct and indirect costs that arise at any stage of the construction and use of such a system during its period of operation (for example, component purchase, installation, transportation, debugging, testing, information support, technical support, upgrade, integration, etc.).

Taking into account the key provisions of the approach from the standpoint of the total cost of ownership, it should be noted that the administration system involves two expenditure groups: direct (or budget) and indirect (hidden or extrabudgetary); during the period of use of these systems extrabudgetary costs still take a significantly larger share in the aggregate cost of ownership, so managers should identify, track, diagnose and predict it.

In the analyzed context the total cost of ownership is an excellent tool for thoroughly analyzing all possible costs associated with the construction and use of administration systems in the management of enterprises. On the other hand, it requires the identification of each part of both

direct and indirect costs (for example, the cost of purchasing equipment, software, outsourcing, salaries of specialists, system design and implementation, etc.). Due to TCO, experts and analysts have the opportunity to reasonably compare the costs associated with administration systems with the results obtained. Also, if necessary, it is possible to find the most economically advisable areas for reducing the cost of a general project of the administration system construction or improvement.

An economic assessment of the administration systems in the management of enterprises from the point of view of the Total Economic Impact (TEI), for example, will cover both financial and nonfinancial aspects of the formation, use and improvement of these systems (Fig. 1).

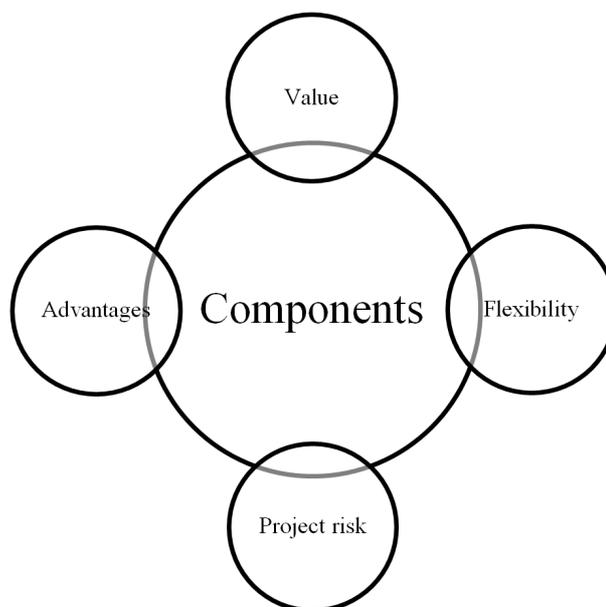


Fig. 1. Basic components of the economic evaluation of administration systems in the management of enterprises taking into account TEI

Note: formed according to Anisiforov and Anisiforova, Filippov and Shul'djasheva (Anisiforov and Anisiforova, 2014, p. 80; Filippov and Shul'djasheva, 2015, p. 57–62)

In particular, the unit “value” in the concept is calculated using the method of the total cost of ownership, therefore, involves obtaining accurate valuations. The “advantages” and “flexibility” blocks, instead, apply a number of qualitative assessments in addition to the values mentioned.

As V. Filippov and O. Shul'djasheva (2015, p. 61) point out, the risk as a component of the TEI model “serves as a filter, which gathers various uncertainties in assessing the benefits received”. Obviously, such risks can occur at any stage of the formation, use or improvement of administrative systems in the context of management business processes reengineering.

A certain combination of different techniques for evaluating administration systems in enterprise management can be traced within the Rapid Economic Justification (REJ) method. Taking into account the results of the research N. Levkina (2009, p. 24), the REJ method involves the implementation of a series of successive stages (Fig. 2).

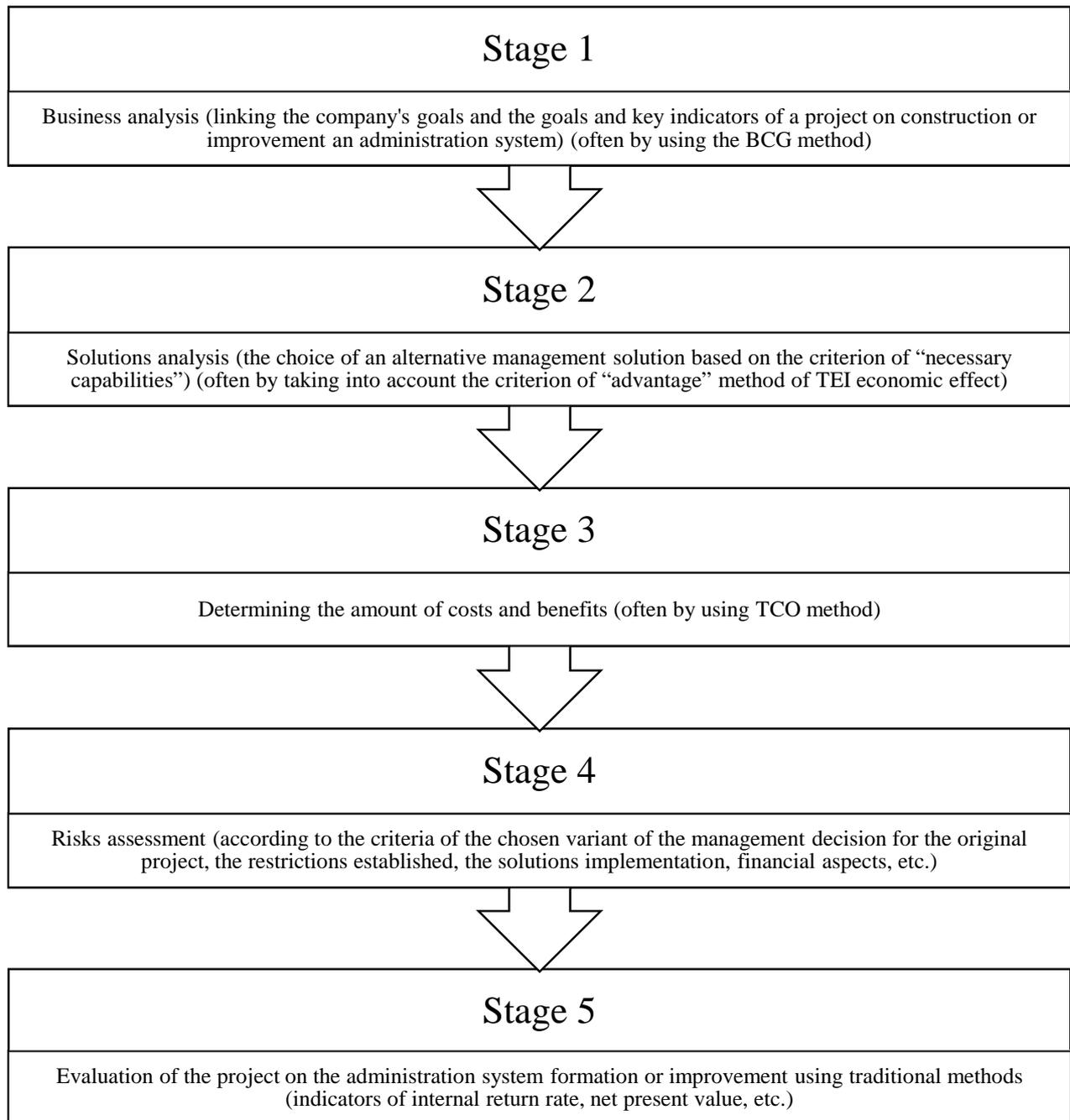


Fig. 2. Stages of applying the REJ method to projects for the administration systems formation or improvement in the management of enterprises

Note: formed according to Levkina (Levkina, 2009, p. 24)

Despite its name, this method can be considered one of the most difficult during the diagnosis of administrative systems from the standpoint of the economic component. At the same time, he is known to be an excellent combination of the administrative activity subjects' interests and managers of different levels, first of all, from the point of view of finding and identifying common interests in the construction and improvement of these systems. Thus, the basic idea behind the REJ method is to identify the relationship between costs (for example, costs for the administration system development) and the company's business priorities at a specific point in time.

One of the modern techniques that can be applied to the administration systems economic evaluation in enterprise management is the Total Value of Opportunities (TVO) methodology. This approach, unlike many others, shifts the emphasis towards reflecting the economic results of the formation or improvement of these systems. As it is noted by A. Anisiforov and L. Anisiforova (2014, p. 77), the advantage of this technique is the high level of flexibility, which allows to "adapt it to different management levels in the organization and to the relative importance of financial and non-financial factors". The authors singled out 5 particular directions analyzed within the TVO model (Fig. 3).

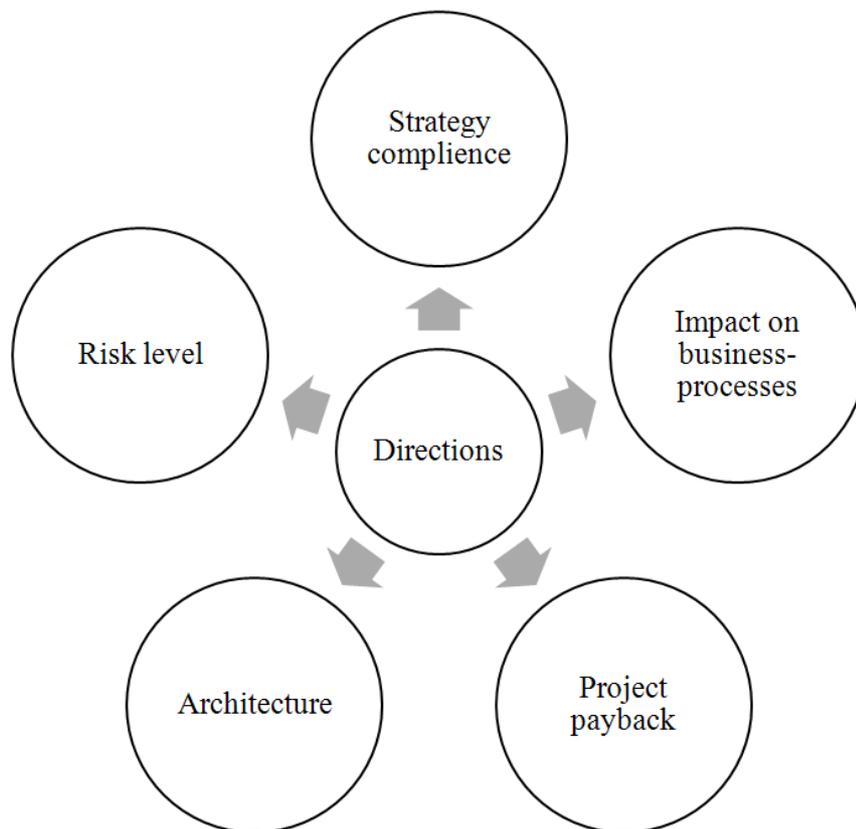


Fig. 3. Definitive directions of the economic evaluation of administrative systems in the management of enterprises within the TVO model

Note: formed according to Anisiforov and Anisiforova (Anisiforov and Anisiforova, 2014, p. 77–78)

Therefore, a project on the administration system formation or improvement in the context of management business processes reengineering from the standpoint of the methodology of

calculating the aggregate opportunities value can be considered effective if it:

- contributes to the organization's strategic goals achievement (direction "strategy compliance");

- positively affects the effectiveness and efficiency of a company's business processes (the direction "impact on business processes");

- corresponds to the existing information and documentary environment in the organization (direction "architecture") (the need to provide a certain level of hardware and software compliances of project decisions);

- indicates the cost-effectiveness of the project's implementation (direction "project payback");

- is within the acceptable level of risk (direction "risk level").

The study of theory and practice makes it possible to conclude that approaches to the economic evaluation of administrative systems in the context of management business processes reengineering vary greatly depending on the scale of the relevant projects. For example, in one case, such a project may involve the introduction of an internal information network in the company, and in the other, it may be needed a complete replacement of computer, switching, network and other technical equipment and the introduction of applicable software, personnel training, etc.

Influence of administrative systems on economic indicators of enterprises' activity

Practical experience shows that quite often the administration system is being implemented, developed and improved for economic reasons: to help increase income and profits, optimize costs, mobilize internal reserves, etc. In the analyzed context, the hypothesis about the influence of such systems on the resulting indicators of a business entity was provided. This problem was solved using correlation-regression analysis, which is one

of the most common approaches in economic science to solving similar problems. Net income from sales of products (which is known to be one of the most representative absolute indicators of the economic efficiency of enterprise's production and economic activity) was chosen as the resulting (dependent) variable. In addition, this indicator the most fully illustrates the effectiveness of management decisions made by a business entity (implemented using administrative systems).

Among the independent variables (factor characteristics), the indicators of the administrative systems formation level (R_{sfr}) and the level of their stability (R_{stk}) are chosen to solve the problem.

Thus, the formula for the corresponding correlation-regression model is:

$$y = b_0 + b_1x_1 + b_2x_2, \tag{8}$$

where y is a dependent variable (volume of net income from sales of products, ths. UAH); x_1, x_2 are independent variables (the level of administration system formation and the level of its stability); b_1, b_2 are model parameters.

Appropriate calculations for the formed hypothesis check are made in the activities of a number of domestic business entities, in particular, private joint-stock company "Khmelnychchyna-Auto" and state enterprise "Novator". The construction of correlation-regression models for these enterprises was carried out using the Analysis Data module of MS Excel. At the same time, the significance of the models is estimated with a reliability of 95 % according to Fisher's criterion. The number of observations in each case was the same – 16 periods. According to the calculations, the corresponding regression models were obtained (Table 1).

Table 1

Regression dependence of net income from the parameters of the administration system

Enterprises	Regression models	R^2	Estimated value of Fisher's F-criterion	Table value of Fisher's F-criterion
"Khmelnychchyna-Auto"	$y = 12,4 + 5,24x_1 + 6,68x_2$	0,86	43,41	3,81
"Novator"	$y = 2,29 + 2,5x_1 + 4,16x_2$	0,87	46,25	3,81

Symbols: y is the dependent variable (volume of net income from sales of products, ths. UAH); x_1, x_2 are the level of administration system formation and the level of its stability.

Source: calculated by authors

Thus, the regression dependences from the parameters of the administration system of domestic enterprises in Table 1 confirm the hypothesis concerning the influence of such systems on the resulting performance indicators of the business entity. Each of the constructed models is adequate and suitable for practical use, which is confirmed by calculations of the coefficient R^2 , the calculated values of Fisher's F-criterion and their comparison with tabular values.

Conclusions and prospects for further research

Thus, the methodical approaches to the economic evaluation of administration systems in the management of enterprises are considered and it is established that under present conditions most of the projects on construction or improvement of administrative systems belong to the category of investment projects, which, accordingly, are related to investment costs. Consequently, this necessitates the implementation of commonly used in investment management methodical approaches for the economic evaluation of the investments' efficiency in the administration systems.

The main approaches to the economic evaluation of administrative systems in the frameworks of management business processes reengineering are outlined and characterized. They include traditional financial methods, probabilistic methods, qualitative analysis tools, financial, qualitative or combined models, portfolio analysis, budget approach, project approach. Thus, the traditional financial methods of the economic evaluation of the administration systems in the management of enterprises provide for the calculation of the payback period, the net present value, the internal or average rate of return, the profitability index, the level of investments' return, etc. Among the methods and approaches to solving the problem, the estimated Total Cost of Ownership (TCO), IT Scorecard (consideration of customer projections, finance, processes and training and development in the frameworks of administrative processes in the enterprise and administration systems) on enterprise and administration systems), Activity Based Costing (ABC), Cost/Schedule Control Systems Criteria (C/SCSC), Applied Information Economics (AIE),

Total Value of Opportunities (TVO), Total Economic Impact (TEI), Rapid Economic Justification (REJ), etc.

The hypothesis about the influence of administrative systems on the resulting indicators of a business entity was confirmed based on the results of calculations. This problem has been solved using correlation-regression analysis. Net income from sales of products (which is known to be one of the most representative absolute indicators of the economic efficiency of production and economic activity of the enterprise) was selected as the resulting (or dependent) variable. Among the independent variables (factor characteristics), the indicators of the level of administrative systems formation (R_{sfr}) and the level of their stability (R_{stk}) were chosen to solve the problem.

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**RESERVE AND REGULATORY OBJECTS IN ACCOUNTING
THEORY AND PRACTICE: ORIGINS AND EVOLUTION
OF THE WORLD ACCOUNTING THOUGHT WITHIN
THE FRAMEWORK OF THE DEVELOPMENTS BY THE WESTERN
UKRAINIAN SCIENTISTS OF THE 19TH – MIDDLE 20TH CENT.
(OPINION FROM THE MODERN AGE PERSPECTIVE)**

Abstract. There are growing risks in the conduct of financial and economic activities by economic agents in the conditions of the modern economy, and because a reliable information base is needed both for management purposes and for market counterparties regarding the means actually available at an enterprise to overcome the risk of loss (reduction) of capital. Accounting and public reporting is the only tool that provides information in formalized data on the size of the reserve and insurance potential established by an entity. However, there are a number of problematic issues in modern theory and practice regarding the objective display of reserve and regulatory objects in the accounting and their provision in the public financial (corporate) reporting that actualize the multi-vectoral research both in the subject area of knowledge and in the system of interdisciplinary researches. The hypothesis of this research is the assumption of elaboration in past developments, including Western Ukrainian scholars, relevant to the modern theory and practice of ideas that can objectively be considered appropriate for the improvement of modern accounting of capital reserves, a means to enhance the validity of managerial decisions to a more adequate information provision. The article analyses the historical stages of the development of reserve and regulatory objects of accounting, evaluates

the fundamental principles of the formation of accounting reserves in different accounting concepts in the evolutionary aspect by distinguishing the relevant ones among them for modern research. The scientific legitimacy of the ways and approaches proposed in this article to improve the conceptual foundations of the reservation system in modern accounting rests upon the use of historically formed ideas and is based on the following approaches: it is argued that accounting tools are an important component of any paradigm of reserve management, the only formalized information tool for disclosing the real state of the security of the capital employed by an enterprise; the formation of reserves is a consequence of one of the principles of accounting – the assumption of continuity of an enterprise, embodied in the modern concept (paradigms) of sustainable development. Using general scientific and interdisciplinary methods of cognition, traditional methods for historical-analytical analysis (historical and retrospective, historical and comparative methods) and the techniques special for the sphere of accounting, the theoretical generalization was conducted of systematic approaches to organization of computational practise, evolutionary disposition of reserve and regulatory articles in accounting system and their characteristic positioning in separate accounting concepts and theories. A separate

component of the study is the historiographical analysis and assessment of accounting reservation in unexplored works of Western Ukrainian theoreticians and in the practice of accounting. On the basis of the performed exploration, the following reasoning was provided regarding the author's conclusions about the appropriateness of the use of certain aspects of the historical developments in respect of regulatory principles in modern norms and regulation in any system of accounting standardization and the suggestions were substantiated about ways to adapt public accounting and financial reporting needs of modern economic conditions. On the basis of the received results, the expediency of use of approaches and techniques of organic and econometric balance theories was substantiated for the development of modern accounting reserve and regulatory objects, which confirms the relevance of research of such direction in general, and of this one in particular.

Key words: accounting, balance theories, objects, reserves, reserve capital, reserve funds, regulators, targeted financing, provision, methodology.

Introduction

The instability of the general economic environment in economies of any type objectively and naturally leads to an increase in risks in various processes of the functioning of economic entities. Such natural circumstances cause the need for economic entities to create their own protective functions in the form of various tools and financial instruments. High degree of uncertainty of the modern business environment and unpredictable appearance in it of multifactorial risks and factors of negative impact on the stable activity of the economic structures actualize the task of developing the protection tools of the capital involved in turnover, which are effective in practice. The search for efficient management structures capable of supporting sustainable functioning of entities is identified primarily with the creation of reserve system adequate to the economy-wide conditions, which is capable of neutralizing or minimizing the effects of external environmental impact. Formation of the system of effective tools for management technologies oriented to such purposes is carried out involving the accounting information in this system concerning reserve and insurance objects (formation of compensation sources in the accounting system). In many cases, it is recognized

that in the context of developing a protective mechanism for a particular enterprise, “the problem of accounting and analytical support that meets the needs of actual reserves managing becomes of particular relevance” [1, p. 213].

The reserves imperative for accounting (reserve capital) and allowable reserves of economic character (reserves of potential opportunities) and reservation objects numerous for such content and destination, which are additionally formed in accounting according to the statutory regulations of a particular enterprise or defined for the needs of increasing the rationality of management system, provide the system of protective functions of an enterprise selected and implemented in practice systematically and in conjunction with other instruments. In terms of creating a backup (insurance) and regulatory objects, the accounting system is a tool of soft infrastructure, including in the management of deliberately risk operations (insurance of the possible loss of core capital). Compared with other tools for managing capital reserves, the accounting and reporting system is distinguished by the fact that it reflects a standardized system of indicators that reveals the target orientation of the formed objects. From a theoretical point of view, it is rightfully to assume that in the financial instruments (methodological and methodical arsenal), the appropriate mechanisms were laid down to counter risks (for example, blocking the process of distribution of profits, using them as a source of creation of reserves and making it impossible to output the part of a functioning capital from a company). From this point of view, it is right to consider that the adequacy of the accounting methodology for reserve objects makes it possible to increase the efficiency of management in the parameters of the risk management concept.

Despite the existing system of modern principles of formation of accounting reserves (accounting regulations and recommendations), theoreticians and practitioners noted the possibility of manipulating accounting methodology in relation to this type of objects. In particular, the emphasis is on inadequate quality verification of these objects, which reduces the objectivity and transparency of financial reporting, causing the

emergence of information risks, primarily for external users. Accounting novations that were spread through the “advisory” nature of international and national standardizations of financial reporting, in many cases allow ambiguous idea of the reflected potential of an enterprise’s capability of stable operation over the security of working capital. Specifically, the balance as a public form of reporting should not only represent an opportunity to cover company’s liabilities with its assets, but also disclose the extent of the provision of enterprise with safety and insurance sources to save cost of the capital employed (assessment of credit and investment risk, risk of bankruptcy, etc.).

Based on existing problems in modern practice, there is a clear need to improve the methods of forming a more adequate system of accounting reserve and regulatory objects. To address these problems, scientists often substantiate the practicality of referral to past developments in respect of such objects (methodological arsenal in the subject field of knowledge), some ideas in which are recognised as appropriate and relevant for modern developments: “the study of the condition of the reservation systems is impossible without a historical understanding of their formation and development” [3, p. 68]; “the search for ways to overcome existing problems and improve the accounting of reserves is associated with the study of the stages of their development and implementation in accounting” [4, p. 130]. In general, it can be noted that in a large number of issue-related works, it is recognized that “the topic of the historical development of reserves and the study of the views of various scholars on their reflection in accounting is relevant” [5, p. 211].

Depreciation and wear of the core capital are considered as similar objects in the article, which also form the idea of external users on the level of loss of the initial value of fixed capital (physical and moral deterioration of economic resources). With the technological development and constitutional significance of intangible component in the economic potential of modern business entities, the problems of calculating the wear and depreciation of fixed capital and their displaying in the accounting system became more intensified, actualising the scientific research towards the

production and substantiation of the accounting concept of depreciation and wear-and-tear of fixed economic resources that is adequate for modern economy. The view on deprecation and wear-and-tear of either reserve, regulatory or stock (accumulation of target capital) objects in the entire evolution of accounting remains uncoordinated. The conclusion made by well-known scholars in the field of accounting is relevant for both past accounting concepts and for the modern accounting system: “... the expressions “depreciation” and “depreciation provision” confuse both those who read the accounting statements and the accountants themselves” [2]. As well as in relation to the reserves, the researchers substantiate the expediency of applying to the past works and in developing the modern concept of depreciation: “in order to improve accounting of operations on accrual of depreciation of the fixed assets at the current stage, it is necessary to take into account the experience and achievements of past generations, use the results of searches of their predecessors and use the knowledge and skills acquired by them” [6, p. 482]; “it is expedient to conduct in-depth studies of the economic essence of the accounting concept of depreciation in its historical development” [7].

The information presented reveals a general view on the existing theoretical and applied problem, substantiates the scientific validity of the direction, as well as the nature and relevance of this study.

Literature review

Results of the analysis of the works by scientists from different countries confirm that there are numerous problems of conceptual, methodological and systematic nature in the modern accounting of reserve and regulatory objects, the problems of objective calculation by accounting methods of wear and depreciation of fixed assets. Historiographic analysis of the formation of systems of reservation and expression of regulatory objects in accounting also proves that these objects during the entire evolution of accounting have also been the subject of discussion in various national schools and scholars. In particular, as M. O. Kozlova states, despite the fact that during the whole historic period, “the scientists

debated about the inclusion of an accounting object in the reserve, fund, capital or regulative category, but the conventionality about these concepts was not achieved even until the early 21st century". [8] Yu. V. Pikush and L. M. Pylypenko also note that at present "many aspects of the theoretical positions in the research of scientists are recognized as speculative regarding the correctness of the use of such concepts as "reserve", "reserve capital", "fund", "regulator", "provision" [5, p. 211]

The analysis of the content and the results of recent research and publications also indicates the lack of a precise and formalized conceptual categorical apparatus in the field of accounting reserves and regulations. Lack of clear content of accounting objects of this type causes the problem of the methodological basis of the accounting system in general, depriving the unambiguous methodology of accounting for individual objects of this group. For example, D. I. Ponokova, based on the results of a targeted scientific research on the modern accounting of such objects, makes the following conclusion: "the reserves, which are formed in the accounting statements are purely financial in nature, ... they do not represent any stocks or values, and the financial result is reserved and the evaluation of the main objects of accounting surveillance is determined (revenue, expenses, assets, equity and liabilities)" [9]. A similar conclusion regarding the accounting and audit of capital reserves was obtained on the basis of the results of the case study by M. M. Oryshchenko [10].

In many modern researches, the unresolved question of mixing reserve and regulatory articles is also referred to the speculative moments – specification of objects due to the content, subordination and disposition of financial accounts in the general conceptual and methodological basis of accounting within any standardization. It is noted in research that with regard to depreciation and wear, there are still no mutually acceptable terms – such account that is common for the modern practice of accounting called "Wear-and-tear (depreciation) of non-current assets" is considered regulated as relating to the account "Non-current assets", or the stock one, i.e. such that it shows the assembled sources of funds for their restoration. In this context, Ya. V. Sokolov

points out that "the diametrically opposite understanding of depreciation by two world-renowned schools (institutionalist – as a reserve, personalistic – as a regulator) was one of the differences in the interpretation of modern accounting theory" [11]. The identification of depreciation with a depreciation fund by the known scientist G. Hatfield described as follows: "Only sick imagination of people can recognize the depreciation as a fund"; this position was supported by J. Chenaux-Repond: "it is absolutely unclear how a source of cash flow is formed from the value of the object of the basic means that decreases as a result of its operation, which in addition must act as a source of renovation" [12, p. 161]. A similar view was followed by another well-known scientist of the German accounting school A. Römer: "it is unknown with which means of amortization the reserves are created as it is a loss of property" [13, p. 17].

Regarding the achievements of Western Ukrainian scholars in the nineteenth and mid-twentieth centuries, where the principles of the German accounting school dominated, we will note that they remain largely unexplored, and the source base developed by us gives enough evidence to draw a significant place for such objects in their development [14; 15; 16; 17; 18; 19; 20; 22; 23; 24]. We will only briefly indicate here the importance of these objects in their development. Thus, in the work "Cost in the Economy and in the Balance Sheets" [22] in the section "Accounting of the Components of Property" (original "Konta składników majątkowych"), the considerable attention is given to the part of the capital, especially to the reserve funds. The author's technique of displaying the formation and use of reserve funds in the accounts of contributions to capital (original "Konta wkładek kapitałowych") is presented. In the work [15], Au Juliusz also highlights the issue of accounting of the reserve capitals because of the value of the components of the valued property (original "Szacowanie czyli oznaczenie wartości części składowych majątku").

When considering accounting systems (original "Formy rachunkowe"), the positioning of regulatory articles in accounting systems with a critical analysis of their reflection in accounting was considered in the work [16]. Similarly, the

reserve and regulatory objects of accounting are set out in the textbook "Theoretical and Practical Accounting" [14], where these objects are classified as the main objectives of accounting. When considering the accounts for trading enterprises in the textbook [20], the reserve accounts are given a fundamental role among all capital accounts in the formation of the basic foundation of accounting. In this case, their important role in the processes of calculating the cost of capital (original "Obliczenie kapitału końcowego", "Obliczenie kapitału początkowego, zasu i stopy procentowe"). In particular, in section V of the textbook called "Use of Accounting in Public Commercial Companies" (original "Zastosowanie księgowości pojedynczej jawnych w spółkach handlowych") and in the section VI called "Accounting of Partnership Interests" (original "Księgowanie interesów partycypacyjnych"), back-up and regulation accounts are positioned as such that have a significant place in the accounting in terms of insurance of a public company's own capital, and their guidance in reporting is the information potential for partners.

The most detailed capital reserves are disclosed when developing the econometric balance theory [17]. In particular, in the section VII called "Grouping of Assets and Capital" (original "Gruppierung des Vermögens und Kapitals"), "Reserve Assets and Reserve Capital (original "Reservevermögen und Reservekapital") were separately identified, interconnected and considered. "General Information on Reserve Funds" (original "Allgemeines über Reservefonds") is primarily considered in details in the textbook with allocation of accounting display of information about the "Real Backup Funds" (original "Wirkliche Reservefonds") and "Anticipative Provisions" (original "Antizipativ-Reserven"), i.e. those that are formed by the expected events. The accounting of objects on the "Hidden Reserves" (original "Stille Reserven") and the "External (Neutral) Reserves" (original "Fremde (neutral) Reserven") have been selected and proposed. To ensure the accounting methodology of these objects, the "Reserve Capital Accounts" (original "Reservekapitalkonten"), "Capital Reserve Accounts" (original "Kapitalreservekonten") were substantiated. The

traditional objects that are filed as "False Reserves" (original "Falsche Reserven") were critically considered. The cost measurement of reserve and regulatory objects was generalized, for which the "Evaluation of Reserve Capital" (original "Die Bewertung der Reservekapitalien") and "Evaluation of Capital Reserves" (original "Die Bewertung der Kapitalreserven") were proposed.

To underline the existence of weighty developments, we will provide the historiographic sources of information that indicate the recognition by modern foreign scientists of the importance of developments by Western Ukrainian theoreticians and practitioners for the world theory of accounting. For example, T. V. Yeriomenko, while conducting a critical analysis (2016) of the global and German concepts of accounting depreciation indicates that "P. Ciompa, as far back as in 1910, distinctly outlined one of the problems of contemporary German accounting – the contradiction between the principles and methods of depreciation, in particular arguing that an indirect way to display amortization leads to overestimation of the balance sheet, coming into conflict with the requirements of comprehensibility (Bilananzklarheit) and the objectivity of balance (Bilanzwahrheit) [25, p. 13].

Results of the analysis of the literature sources of historiographic character in relation to recognized international development and processing of previously unexplored developments by Western Ukrainian theoreticians and practitioners allow us to formulate a conclusion that the main problems of the formalized measuring of reserve and regulatory facilities during the evolution of accounting system are connected with the fact that different types of capital reserving have distinctive characteristics, are difficult in being subjected to either formalization or cost verification, and therefore are accounted differently [26]. Regarding the problems of accounting of reserve and regulatory objects, the relevant recognition issues, valuation issues and classification issues are put forward. The works of the leading scientists indicate that the substantiated formation of reserve and regulatory objects and also currently "can be defined only by clear formulations, because there are no analogues in the real world to them" [27, p. 205].

The purpose of the article is the study of the economic nature evolution of reserve and regulatory objects and parameters of the conceptual and methodological foundations of their accounting display, the historiographical analysis of methodical and procedural principles in the developments of the world accounting thought and in the developments of Western Ukrainian scientists, as well as formulation of proposals on their basis regarding the use of certain ideas of past developments for the improvement of modern accounting and reporting.

Methodological approach

The methodological basis of the study consists of general scientific methods and methods of scientific perception that are special for the subject area of knowledge. The selection of appropriate methods is due to the nature, subject and defined purpose of this study. The current research methodology provides a wide range of research components: analysis of the results of publications, which reveals the problems of modern accounting of reserve and regulatory objects; generalization of scientific and research sources of historiographical character, investigating the rational aspects of the accounting of reserves during historical evolution; elaboration of previously unexplored scientific and applied developments of Western Ukrainian theoreticians and practitioners. The outstanding spectrum and coordinates of the study determine the use of system methodological arsenal. The scientific and educational methods of abstracting and concretization were used as basic, which provided the opportunity to borrow experience from conducting historical and economic research on the formation of an evolutionary idea about the subject of research. The method of historiographical comparative analysis, the historical and comparative method (comparison of objects in time and space) belong to the specific methods that make up the main methodological scientific research tools. Abstract-logical and systematic-structural methods were used for theoretical-methodological clarification of the processes of formation and evolution of categorical concepts and content of separated reserve and regulatory objects in the general system of accounting.

With the help of systemic usage of the following methods, the comprehensive research of materials was conducted with contents of different aspects according to the principles and approaches defined by the JEL Code Classification in the field of scientific and economic research. The chosen methods provide processing of materials related to the block: M41 – Accounting, which is part of M4 – Accounting and Auditing of the section M – Business Administration and Business Economics; Marketing; Accounting. The chosen methods allow us to rationally process the materials belonging to block B – History of Economic Thought, Methodology, and Heterodox Approaches, in particular, section B15 – Historical; Institutional; Evolutionary from the History of Economic Thought block. The ideas proposed, like other studies of this type, are based on historiography and source base, and therefore the chosen methods provide block N01 – Development of the Discipline: Historiographical; Sources and Methods from Group N – Economic History.

Various mechanisms and tools for protecting enterprises from the effects of unpredictable negative events in one or another sense are provided in the main financial and economic concepts: model of economic growth (R. Solow), the creation of market value (Modigliani–Miller), the theory of equilibrium (Arrow), the monetary theory (Friedman), the theory of optimum distribution of resources (L. V. Kantorovych), the static and dynamic economic theory (P. Samuelson). Within the framework of non-stop technologies, new terms of management activity were introduced – the Business Impact Analysis (BIA), Business Continuity Planning (BCP), Disaster Recovery Planning (DRP). However, to ensure the practical effectiveness of these concepts, the development of monitoring tools in them as a preventative function is a necessary condition for the “creation of a single reserve, i.e. the aggregate reserves that provide a continuous activity” [1, p. 217]. In such a system, regardless of its classification, shaping of the reserves of capital by accounting plays an important role, as well as an objective reflection of the accrued wear and tear (lost value of the share capital) and depreciation (transferred value of non-current assets). There is no doubt that the system of reserve and insurance

objects should be created in accordance with the conditions of the general economic environment and the features of the operation of the enterprise, while the reflected loss of stock capital (physical and moral wear) – in line with technological progress.

The classic rule of the economy is that “what is measured and evaluated can be managed” refers mostly to the problems of managing reserves, and therefore accounting information on the value of these objects plays an important role. The same extent applies to information on the residual (lost) value of fixed capital or its estimated real productive value. Accounting belongs to the tools of soft infrastructure of enterprise’s management, and therefore the processes of constructing regulatory objects have the appropriate character – subordination to the requirements of management system (from the point of view of modern paradigms – risk management). Analytical reviews of the effectiveness of risk management by modern companies, evaluation of the tools of identification and formalisation of the existing and potential risks that were used in these processes confirm the existing problems in the efficiency of risk management embedded in practice (it acquires especially clear obviousness during financial crises). The problematical character of overcoming (mitigation of efficiency) or neutralizing the risks in the post-crisis period makes many experts recognize the importance of accounting, financial reporting, and its audit as important tools of identification and evaluation of risks, an effective mechanism to prevent them.

In the conventional sense, the reserves formalized in the accounting system are considered a source of coverage of possible or expected additional costs or losses formed in accordance with the established methodology. From a financial and economic point of view, it is a question of a real reserve of economic values (liquid assets of tangible or intangible type), created by the enterprise, or cash for specific fixed-purpose insurance purposes. In contrast, under the regulatory accounting, it is expedient in our opinion to recognize the objects that are intended only to refine the assessment of the actual existing assets and capital of the enterprise. After all, from the standpoint of the modern practice, the notion

that “the reserves can be characterized as false accounting objects that are created in order to cover possible costs and losses and have the target character use” has been discussed enough in our previous studies [26]. Here, the emphasis is put on the delineated differences of real capital reserves from the estimated, pointing not only to our own opinion, but additionally involving the substantiation of Western Ukrainian scientists in the past regarding the language terms of that time and that are still used regarding the payment from the reserve capital (capital reserves): “payments and return of capital are impossible, payments can be made only with property having the energy that is equivalent of capital. Thus, the reserve capital is only the energy of property that is represented by its own real reserve funds” [17, p. 113];

The wording provided (by which not only content-related understanding is hidden, but also the techniques derived from it) should be recognized as absolutely accurate both in terms of economic matter of this object, and the “classical” methodology of accounting system. At present, reserves are more simply understood to mean “accumulated” profits that are undistributed (blocked from distribution) by a company. However, the capital reserves, hidden by accounting methods, continue to be used in the business environment without any changes. Therefore, reserves in the accounting system created in such a way provide only an imaginary function of information nature, without providing for the separation of the stock of any assets (monetary funds). Historical analysis of the reflection in the accounting of reserving procedures shows that in its origins, the principles of creating reserves were intended to provide not only information support, but also the real formation of the necessary “reserve” of the assets. The critical consideration of modern accounting makes it possible to note that the content of the formation of reserve articles lies in the coordinates of formation of only imaginary reserves (reserve funds as fictitious values). According to modern standardization, it is not really possible to establish whether the valuation article, reserve funds or real capital reserves are indicated in the balance sheet of any modern company.

In the vast majority of accounting conventions, the account of reserve capital (in some use of reserve funds) is regarded as such that in real practice, this procedure should prevent back when as a result of loss of property capital (unprofitable financial and economic activities, the impact of factors of the overall economic environment, action of market contractors, etc.) on other capital accounts (accounts of main (charter) capital, as well as accounts of foreign capital (liabilities)) would not be reduced. In fact, in the opinion of the authors of this article, items of protective action on the accounts of reserve capitals can be created from any sources, and not just from profits or operating costs as it is common almost everywhere, – as long as the productive-efficient nature is embedded in them.

The most objective views on the accounting objects “reserves” should include those that consider this object as a source of covering the possible or expected costs or losses of a business entity, representing a real stock of liquid assets, created by the enterprise in accordance with current legislation and internal corporate tactics and strategies, including in the performance of high-risk financial and economic transactions (projects). Proceeding from the peculiarities of the activity of a particular enterprise, the system of such objects is characterized by a special order of formation and the target nature of use. However, there is objectively the complexity of the clear wording of this type of accounts (reserve, regulatory, stock) in practice, as well as the development of formalized methods of calculating the corresponding amounts based on the character and financial and economic validity of creation and proper use of this kind of shell objects for a particular company (the specifics of company’s activities, the regulation and stability of the environment of its functioning, the level of social significance of the economic entity, its organizational and legal form, etc.).

To ensure the declared purpose of our research (analysis of past developments and a view from the modern age perspective on the problems and their solution), let’s briefly consider the evolution of accounting reserves and regulations. The notion of reserves as an economic category and the object of accounting has been changing, transforming, and acquiring new semantic meanings during history. Not only the content and composition of the reserve funds were changing, as

well as the source of their formation, but the purpose of their creation and targeted use changed above all. The information is provided in historical studies that reserves in the balance sheets (in one form or another) had occurred in the 14th – early 15th centuries already. In the historiographical literature on accounting, it is considered that sufficiently clear delimitation of the conceptual apparatus regarding the accounting view on reserve and regulative objects (balance articles) led the French scientist J. B. Dumarcher. He argued the disposition that in the system of accounting and balance consolidation of reserve objects (liabilities side of the balance-sheet), the active is in contrast to real property value, and the regulator – only to fictitious values. Regarding the evolution of reserves as an accounting object and balance sheet, the following approach is usually followed: at the stage of formation of accounting as a theoretically grounded accounting practice (14th–18th cent.), some enterprises started forming them independently at the expense of profits under the influence of practical necessity: “there was no legal framework, which would regulate the creation of reserves, so the companies had to form at the expense of their own revenue sources to cover the tax needs of the state and warning of bankruptcy – reserves for compensation of damages caused by questionable debts, the estimated reserves of a fiscal nature (for payment of taxes and duties)” [3, p. 68]. In the subsequent stages of the development of the accounting business, the estimated reserves got widespread, producing in general a sufficiently extensive reservation system: accumulation of target resources to cover losses; reserving of financial results for the rearrangement of profits in terms of reporting periods; reserving of financial results to compensate for possible risks and losses in order to reduce the tax base of profit, etc.

With the emergence and development of joint stock companies (19th cent.), there were legislative regulations regarding the formation of reserves as a component of owned capital: “the system of reserves was formed, which consisted of such categories, either confirmed by the Charter or legislatively regulated reserves, as well as the estimated reserves of the impairment of assets, estimated tax reserves (deferred taxes), depreciation, value reserves of target nature; estimated reserves of regulatory nature, hidden

reserves” [28, p. 11]. During this period and later, the norms on the ratio of statutory and reserve capital were legislatively consolidated. The reservation system in accounting evolved, acquiring a sufficiently voluminous structure: statutory legal reserves; estimated reserves with impairment of assets; estimated tax reserves (deferred taxes); depreciation as a process of creating a new source for the reproduction of fixed capital; target and regulatory valuation reserves; hidden reserves, etc.

In the case studies on contributions to the development of reserve accounting, the works of well-known scientists refer it most often. In particular, A. Zambelli, who suggested the use of accounts for the creation of reserves, also K. Arnold and G. Simon, who substantiated the need to reserve resources to cover losses using the **Delkredere** account [11, p. 67, 73, 239]. From the middle 19th century, various versions are included in the accounting systems of operating contracting accounts and the ones related to them based on the economic content and functional role, which E. P. Leote and A. Gilbo named the “artefact”. The accounts Depreciation, Delkredere, Reservations, Regulators started to be applied in the role of objects and in the system of methodical accounting techniques.

With regard to different approaches to the accounting disclosure of capital reserves, then from the financial and economic point of view (capital management of the enterprise), it is fully equivalent (informational equivalence) on which account the data on capital reserves comes into the picture in accounting. Theoretically, the main requirement is that the account of capital reserves should be really balanced with a property account, which shows the productive assets (real assets that are valued in the market). But from a legal point of view, it is important that capital reserves appear on a separate account (reserve capital (reserve funds)), because the members of a closed company or the shareholders of open (public) companies don't have legally justified claims to this type of capital, which cannot be said about the amount of undistributed profits.

The synthesis of static and dynamic approaches, taken as a principle of modern accounting, focused the view on the objects of

reserves to a greater extent as regulatory articles. Their use as false objects aims to provide higher objectivity to accounting objects, determined by the accrual method, current market value, changes in estimates, etc. For example, in accordance with IFRS 37 “Provisions, Contingent Liabilities and Contingent Assets”, the reserves mean the liabilities with indefinite period of use or with indefinite value. The provisions based on this standard differ from those in which they have a factor of uncertainty as to the maturity or amount of future costs and are used to settle future liabilities in the event of losses. Therefore, the reserves of this type are worth considering as the source of compensation for the adverse effects of risks arising in the process of financial-economic activity (formation (accrual) of reserves – the moment of their acceptance and use does not coincide in time).

The identical categorical concepts are used in the field of accounting, and therefore a considerable part of theoretical studies and practical implementations in accounting during the entire evolution of this system have been sent to objectivization – differentiation of concepts “reserve” and “regulator”. There is a number of common features and a thin line of distinctive characteristics between these objects. The common features of reserve and regulatory objects is that information about them is formed on sub-contract accounts, which are usually self-sufficient accounting objects (contractual and counter-passive accounts). Distinctive features of reserves and regulators are the most evident from the standpoint of the following features: 1) **reserves** are formed at the expense of *reduction of gross profits*, while the **regulators** – by means of *artificial refinement of the evaluation* of opposite balance sheet items; 2) **reserve** is a counterpart to *the existing evaluation* of balance sheet items, **regulator** is a *counterpart* to the overestimation of balance sheet items; 3) **reserves** are entered into the balance in order to *provide accurate estimate* of balance sheet items, **regulators** – for *specification* of estimation of balance articles in terms of convenience of practical activity. Scientists are of the opinion that the fund represents accumulation of money that may exceed the capital invested, acting as an additional source, and the reserve does not

represent a new accumulation of funds over the available capital. Therewith, the position is often disputed that “the fund is the new accumulation of money and often coming from above the cost of owned capital, while the reserves are usually generated from the accumulated capital (enterprise profits)” [29, p. 229].

Principles and techniques of forming reserves are often mentioned in all the classic balance theories that define their content and functional disposition in the methodological basis of the formed accounting system. The static balance theory in its baseline involves the formation of reserves, when the real obligations in relation to third parties are placed as a basis. In addition, taking into account by this theory of the principle of business activity continuation (static of continuation), the theory in relation to reserves delineates the point of view, which is focused on the liquidation of an enterprise and on the continuity of activities. In the context of the second principle, it is necessary to show the interconnection between the reporting periods that is implemented by the “introduction to the composition of a balance of active and passive anticipations, which today represent either costs or deferred income of future periods” [30, p.11]. Dynamic balance theory is established on the conceptual and methodological basis, which involves creating reserves for covering debt obligations and possible losses, as well as for ensuring future costs and payments. At the same time, the fact that the creation of these reserves should be justified by calculations and have the probable nature of expediency (necessity) of their formation is argued. Organic balance theory involves the creation of accounting and reporting reserves, taking into account the need to maintain the reproductive force (recoverable value) of assets.

The theories stated above, like other well-known developments have been sufficiently analysed by the general content and specific methods in foreign and domestic research. In this context, it is advisable to elaborate the developments of Western Ukrainian theoreticians and practitioners for the period determined in this study. First of all, the econometric balance theory, produced in educational institutions of Lviv (Lviv Trade School) in 1910 should be separately

represented. This theoretical (accounting-econometric) development positions the process of creating capital reserves (**reserve** as a technical accounting method) for balancing the real property value and capital (accommodation – counterbalance of property and capital) of an economic entity. In this theory, based on the primary and secondary econometric equations with the exit to the econometric quadrigue and economic octagon, the system of accounting reservation is substantiated: “a part of the net profit is sent to the reserve fund, and thus the part of the property is connected through the allocation of equal energy to it and it is given a form of reserve capital for our knowledge” [17, p. 114].

Representatives of Western Ukrainian accounting in their past scientific publications [17, 18, 22] formulated and substantiated (within the concepts of German accounting thought) postulates that strong financial position of the enterprise depends on the amount of reserves (the higher is the proportion of reserves, compared with the registered capital, the stronger is financial position). On the basis of this postulate, we have developed practical approaches to evaluation of sources of enterprise resource formation (productive power of capital), which, in our view, should be also used in the parameter of the modern financial and economic environment in the processes of constructing balance sheet analytical characteristics. During the considered period the most prominent in Galicia theoretical development in the field of accounting, including reserves accounting methods, was the work of Richard Reisch and Klemens Kreibig “Balance sheet and tax” (Bilanz und Steuer. Richard Reisch und Klemens Kreibig: I Band, Wien 1907; II Band, Wien 1909). However, in practice suggested in it methodological and conceptual foundations were hardly used, since these developments (II, p. 67) assumed that “reserve funds are the part of assets intended for distinct preservation without current use; they are actually own assets, including original net ones, not just their increase”. That is, any assets, not only income, could be the source of the reserves formation.

The use of income as a source of reserves was considered as its part retained “to strengthen the funds (assets) and also against possible losses

in future”, which is still debatable in terms of the possibility to increase resources productive energy through this accounting procedure. In a follow-up to their statement, Western Ukrainian scholars attempted to justify differences between the reserve fund in its traditional sense (a separate part of capital (reserve capital as a result of recapitalization)) and, by their definition, actual (real) funds (capital). It has been argued that in the first case, the reserved assets, used by the enterprise, are in fact visible only to the inspection bodies, and in real practice such reserve funds often have no value and, therefore, they are not capital [17, 21, 22]. In order to achieve the purpose of creating a real reserve capital a distinct management of assets was proposed, moreover, these assets should be reflected in a separate balance sheet. Such assets involved primarily the acquisition and holding of securities for such purposes.

Accounting techniques that implied only changes in capital items were critically assessed by the Eastern Galicia theoreticians. They came to the conclusion about inability to navigate in reserve funds in this case: “if this was the subject of legislation, then it would be necessary not only to adjust precisely the nomenclature of these funds, but also to prohibit completely improper or fictitious reserve funds” [17, p. 46]. The necessity of more rigid imperative regulation of reserve funds on the condition that enterprise undertake reserve assets management themselves was demonstrated on a typical example of the Imperial and Royal Supreme Court decision of December 20, 1906 (Beispiel einer Entscheidung des k.k. Obersten Gerichtshofes). On the basis of this decision the following example was given in the accounting literature: the guarantee funds (Garantiefonds), which were fictitious but were considered as paid in the amount of 150 000 crowns, were not able to cover the loss for the same amount.

Galician accounting academics supported the accounting proposal that earnings from such type of capital reserves should be attributed to incomes and losses, as it was suggested by Robert Stern in the well-known Austro-Hungarian Encyclopedia of Accounting (R. Stern. Buchhaltungs – Lexikon. – Wien und Leipzig, 1902).

Against the background of the above analysis of past developments of world and Western Ukrainian theorists, practical methods of accounting for reserves, we should note that in today's accounting the following groups of reserves are reflected in the balance sheet: bad debt reserve; provisions for expected future expenses and payments; reserves for impairment of assets (securities); reserve capital (coverage of operating (balance sheet) losses and expenses); capital reserves (special-purpose reserve funds) – deduction of a special purpose from the net income or financed out of the expenses for expected losses covering, compensation of risk and other expenses, which arise in the course of financial-economic activity and at profit distribution. In different countries the system of reserve objects is traditionally different. For example, in the paper [30] the liabilities and owner's equity side of the Germany balance sheet was presented, where besides registered capital (I), additional/reserve capital (II) is shown, and in Section III, “Reserve funds formed at the expense of income”, the following items are presented: 1) mandatory reserves; 2) reserve for own shares; 3) reserves created in accordance with the constituent documents and 4) other reserves formed at the expense of income. In addition, information about target valuation reserves is provided in section V of the balance sheet: 1) the reserve for pension payments; 2) the reserve for tax payments; 3) other reserves.

Growing importance of the modern subjects of market economy (companies, corporations) objectively predetermines the need for the formation and use of reserves of socio-economic character for capital insurance: the reserve for employees' participation in incomes; additional pension funds; special pension funds, etc. The creation of this type reserve subsystem should be the focus of attention for the theorists and practitioners in the field of accounting, thus, in our opinion, the necessary condition is the creation of a regulatory framework and imperative prescriptions regarding the formation of reserves for the pension funds protection.

On the basis of the analysis of the world historiographical literature, the elaboration of the Western Ukrainian theorists and practitioners developments, the existing contemporary well-known

expectations) in a modern economy by reducing the risk of equity losses.

Profit, as an additional cost of invested capital should reflect its direct dependency with the size of market value of this capital (conception of preservation the financial capital) and that is why it must be determined on such basis and meddle with the size of equity in the end of reporting period (pointer 8).

The legislative adjusting of creation the reserve capital should have stricter regulations. Reserve capital that is created according to legislative regulations due to profit, in unprofitable enterprises is absent. Equity remains unprotected in this case, so obviously it needs to increase the protective power of this instrument considered the fundamental and other objects of its creation (base of extra charge) (pointer 9).

As part of the proposed system of reserve and regulatory articles depreciation and amortization is also considered. In accounting practice there were always two concepts, which are close but at the same time different by economic meaning – “depreciation” and “amortization” of fixed assets. The dominant postulates of depreciation and amortization of fixed assets’ reflection in accounting and reporting are based on the idea of the French scientist Dumarchey J. B., who substantiated the amortization as a regulative rather than the reserve and therefore amortization should be equal to the depreciation amount. In spite of various methodological approaches (distinctive accrual on accounts of depreciation and amortization, synthesized combination of these objects in the accounting system) the amount of accrued amortization and depreciation has always been determined as identical.

In accounting amortization was associated with the transfer of property value to a newly created product and the depreciation was interpreted from the standpoint of object’s cost reduction (wear and tear or obsolescence). In particular, Matheson pointed out that “depreciation” was initially introduced into practice as a shortened version of the “diminution of value by reason of wear and tear” concept [2, p. 285]. In today's international standardization there are two standards – IAS 16 “Property, Plant and Equipment”, which describes amortization and

discloses mechanisms for its calculation and IAS 36 “Impairment of Assets”, which describes the appropriate process of accounting object’s book value change.

Critically assessing the current methodology for amortization and depreciation of non-current assets some scholars adhere to an extremely critical view: “Nowadays in the domestic theory and practice instead of methodological substantiation of the essence of fixed assets’ “depreciation” and “amortization” eclectic approach is applied by combining diametrically opposite interpretations of the famous scientists of late nineteenth and early twentieth centuries” [32, p. 63]. The impact of modern approaches to depreciation and amortization calculation on the book value of an economic entity is deeply disclosed in the paper [33] and the impact of different accrued amortization amounts depending on the used method on calculated financial results’ amount in the article [34]. In order to improve the accounting of amortization and depreciation as a result of obsolescence [35] “the methodological bases of fixed capital obsolescence accounting and reporting reflection of corporations are offered”. The proposed method involves “the creation of an appropriate capital reserve functionally aimed at ensuring the protection of a market-determined share capital from reduction” [35, p. 5].

The study of well-known foreign authors’ views is sufficiently given in historiographic sources. However, developments of Western Ukrainian scholars are not given at all. In particular, we note that in accounting field developments of Lviv scientists more than 100 years ago attention was drawn to the discrepancy in the calculation of amortization (depreciation) and capital loss: “The difference of initial value and value after one year should be written off (amortized), econometrically which is nothing but a reduction of property and capital ... with the traditional depreciation accrual this second economic action is completely absent” [17, p. 25].

Problems of property amortization and depreciation reflection in accounting took a significant place in works of Western Ukrainian theorists. Thus, in the manual for trade schools [21] problems of amortization and depreciation are disclosed in the section “Accounts for asset

components” (in original “O rachunkach dla składników majątkowych (rachunkach zapasowych”). More widespread problem aspects of the accounting methods of depreciation and amortization are given in the work [17]. They are researched in Section 5 “Property and Capital” (in original “Vermögen und Kapital”) as well as in Section 6 “Economic Actions” (in original – Die wirtschaftlichen Handlungen) where the change in property and capital value as a result of property cost reduction during operation is considered. These accounting procedures in the work are considered through the objectivity of “The ratio of assets to capital” (in original - Das Verhältnis des Vermögens zum Kapital) method. General impact of amortization and depreciation on the capital cost is reasonable to conduct on the basis of proposed accounting methods of “Changes in the value of assets and capital” (in original – Die Wertveränderungen des Vermögens und Kapitals). In works were used different approaches to the development of more objective methods for property amortization. For example, in the textbook [15], such accounting approaches are considered through “Property Components” (in original – Części składowe majątku), which are proposed to be solved on the basis of “Assessment or marking of property components’ value” (in original – Szacowanie czyli oznaczenie wartości części składowych majątku).

The new context of amortization accounting reflection is associated with attempts to link accumulated amortization (formed amortization fund) with fixed assets reduction due to assets’ wear and obsolescence equipotentially. Under inflation, as well as a result of the technological progress of some production means rapid replacement by others appeared a problem of information from Balance on the objectivity of fixed assets’ residual value, sources of non-current assets reproduction, the reliability of calculated amortization accruals as a part of costs to real loss of consumer value. A modern enterprise as a complex multidimensional economic system is considered in the coordinates of value assessment, in particular, according to the criteria for the preservation of subscribed share capital and the distribution of created value. The value of modern corporation capital should be considered not only from the point of view of self-increasing value, but also taking into account the physical and moral depreciation of tangible and intangible assets, representing the amount of capital. The loss of economic resources of their market value objectively reduces the value characteristics of the company's equity, which significantly increases the requirements for the development of adequate for the modern economy principles of depreciation and amortization of non-current assets. Interdependence of reversal flows of capital assets and reduction “weakening” of share capital is shown in Figure 2.

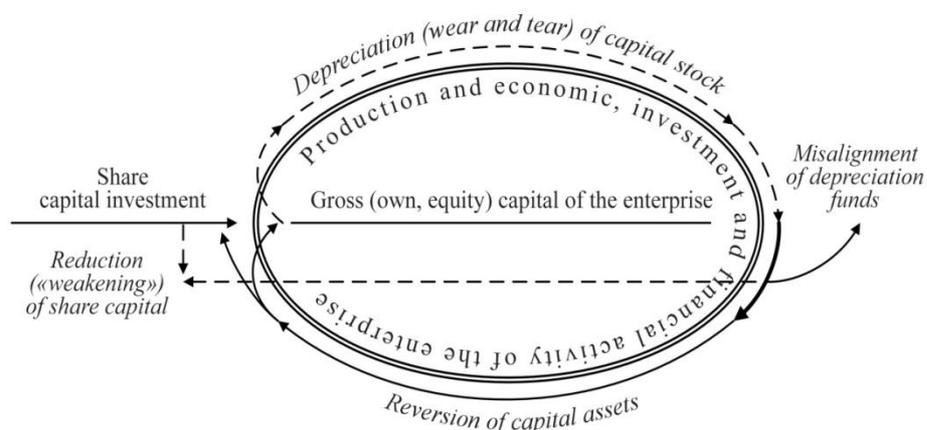


Fig. 2. Interdependence of the share capital value with the target direction of depreciation sources

Capital reserves (pointer 6) should provide abnormal supplies of material values and prepared

products, deferred expenses and also to insure doubtful and hopeless account receivable. Such

reserves are expedient, in addition, to balance with the size of deferred income, part of which also does not have the proper legal and financial provision (pointer 7). Such revenues in previous periods were included in the calculation of indexes, including indexes that characterize the cost of enterprise. It is suggested (pointer 11) to counterbalance equity with purchased goodwill in consolidation. The offered scheme foresees redemption of fictitious assets that arise up at the fact of purchasing goodwill (extrapolation of results is the overpriced expectations) in a modern economy by reducing the risk of equity losses.

Profit, as an additional cost of invested capital should reflect its direct dependency with the size of market value of this capital (conception of preservation the financial capital) and that is why it must be determined on such basis and meddle with the size of equity in the end of reporting period (pointer 8).

The legislative adjusting of creation the reserve capital should have stricter regulations. Reserve capital that is created according to legislative regulations due to profit, in unprofitable enterprises is absent. Equity remains unprotected in this case, so obviously it needs to increase the protective power of this instrument considered the fundamental and other objects of its creation (base of extra charge) (pointer 9).

Modern standardization (IAS, CAAP) of financial reporting in general and in particular, the balance is becoming more dependent on private-corporate motivational aspects but not financial and economic canons of theory and actual economic reality. The acceptance of certain format of balance has financial, economic and property consequences which are beneficial or not beneficial to certain groups of participants (management, shareholders, society, government and others like that). Prevailing of multinational corporations and different political forces in the separate state influence on a decision in the field of balance. This factor is well monitored on the basis of development the balance theory that finds direct expression in regulations of the International standards of financial reporting which is a combination of a little bit constrained positions, assumptions and principles, not ranged in a hierarchical structure. It is not clear which of

provisions are basic and primary, and which are derivative.

The first of problem questions is absence of standard "Property asset" part of which is "retained earnings". IMF now acknowledges that the adopted rules of financial reporting, corporate finance created "blurred indexes of estimation the default risk of portfolio investments" and that a fair value "regulates market instability" (look in IMF, *Containing Systemic Risks and Restoring Financial Soundness*, op cit. p. 64, 65). It is possible to mark that retreat of leading financial investments from still profess axiomatic approach in economic science.

There are a lot of development problems in economic science. With the collapse of capital markets, economic stagnation the turbulent Hosanna newest systems had subsided, models and tools and at the same time Requiem for a "liberal economy" and post-modernism methodology became obvious. Economists of "mainstream" and adherents of theoretical and methodological pluralism under pressure of religions of the financial and economic crisis were forced substantially to look over the set forth conceptual principles of economic science. On different levels (practical, theoretical, scientific) provides discussion about the necessity of creation the format "post-crisis model of business" which requires substantially different conceptual, methodological and methodical principles of financial and economic science. It goes both about ontology (theoretical character of economic reality) and by a gnosiology (process (sources, possibilities and facilities) of cognition). Now it becomes quite obvious that economic science lost the theory summarizing, integral system and corresponding method that were resulted the loss of system criterion, choice of which became partial and limited. Fata Morgana character of many developed theories, mimicry of capital image became the "curse of winners" for a lot of well-known companies in the world.

Conclusions

Real practice, not forecast of fund markets and capital markets, lack of satisfactory scientific explanation and grounds after methodologies of the formed systems and models of cost estimation

imposes requirement to develop significantly new principles and on the basis of improving the conceptual foundations of evaluating the cost parameters of the enterprise.

Use of mine-out principles in the formed systems of cost indexes as tools of the market mechanism, theoretical and practical principles of cost management that is connected with withstand and stable corporate and financial relations in the conditions of economic stagnation require new principles of forming the conceptual approaches and perfection the methodological bases of cost evaluation the enterprise and business, scientific validity of this process. According to such initial bases of improving the national assessment system of cost characteristics of the enterprise is also considered by the adaptation of methodological principles of evaluation procedures, approaches, methods and subordination of evaluation categories to the terms of the real economy.

Because of failures in assessing the cost parameters for big amount of subjects the technically-methodical and informational-analytic formed base can't consider as reliable instrument of analysis the cost changes in an economy. For providing the conception is required in the improvement of the methodological foundations of economic factors of measuring value and grounded on the synthesis of the formalized basis of financial indexes and not financial indicators.

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SOCIAL-CULTUROLOGICAL ASPECTS OF COMPETITION

Abstract. The social-cultural aspects of competition are highlighted as consistent pattern of its evolution. The role of social capital and social values in the competitive environment is emphasized. The accent is made on the refocusing of the key functions of the competition towards socialization. The importance of the development of fair competition, the emerging of the contemporary ethical competencies and culture of market behavior are stressed. Generalized and analyzed theoretical assertions of the past and modern researchers have caused the hypothesis of this study, which consists in assumption about the inevitability and objectivity of the spread of socio-cultural trends in the economic space, influencing the formation of the main directions and concepts of competition, rethinking the nature of competition, its content characteristics and basic functions. The scientific validity of the theses, covered in the article, is based on such approaches: the necessity of transition from the paradigm of “competitive struggle” to the paradigm of development of fair competition is substantiated; it is argued that the functions of competition will be transformed with the processes of socialization of labor, the growth of the role of social capital and the value of human factor in economic processes; it is proved that in the conditions of the expansion of integration processes and the growth of cultural integration, competition is filled with new content and requires an adequate mechanism; the position has been developed to identify the factors, forms, and the main positive and negative aspects of competition. An important component of the researches is the emphasizing of the role of social values as a motivator, aimed at the ethical relationships forming in a competitive environment.

Key words: competition, socio-cultural factor, functions of competition, social capital, social values, competitive behavior, culture of competition, competitive environment.

Problem definition

The competition in its socio-economic nature belongs to controversial phenomena, which combines both negative and positive hues. Even from the historical point of view, the concept evolved from understanding competition as literal ‘contest’, or ‘collision’, to rational behavior of market subjects in the context of limited resources. As behavior of economical agents is observed in the market field, the laws of the market and its structure should determine the behavior of the enterprises which are present in that market. However, all the market subjects are functioning in the socio-cultural space, and if its laws are neglected, the consequences may be unpredictable, in particular in the current era, rich in conflicts. Therefore it is reasonable to research competition through not only economical but also socio-cultural prism.

Analysis of the latest publications

Both foreign and local researchers have paid thorough attention in their publications to the matter of competition as an objective matter, when exploring different aspects of the phenomenon. Usually the scientists focus on the factors of competitiveness, increasing competitiveness on

macro- and microlevel, and competitiveness of the personnel [2; 4; 5; 8; 10; 11]. National researchers do not ignore the question of social responsibility and its role in boosting competitive advantages of the enterprises [3; 6; 12].

In the context of new exercises of the competition in current realities and economic transformation the attention is worth to be paid to publications [3; 7; 9; 13], which in particular state that 'competition is losing its traditional shapes and becomes global in its nature [3, p. 7], obtaining both positive and negative features'.

The global character of competitiveness in the context of the choice of forms and methods of competition is emphasized by domestic researchers. In particular, L. O. Zhylinska marks the irreversible process of globalization, "which significantly changes the conditions of enterprise management" [2, p. 73], so the struggle for sales markets is aggravating. Considering globalization as the latest factor in the impact on competition, the scientist proposes a set of measures aimed at increasing the competitiveness of industrial enterprises. Among such measures proposed in the article is to use a program-target approach, "which is most consistently and deeply manifested through the development and practical implementation of target programs" [2, p. 74].

N. Tarnavska considers the globalization factor for competitiveness more widely, investigating the problem of the global market and new manifestations of competition in the era of knowledge economy and the use of information technologies. Emphasizing the peculiarities of a new type of society, the scientist insists on the need "to carry out additional research on the nature of competition and its modern manifestations, a deep rethinking of the essence and driving forces of the transformation of management systems by domestic business entities, taking into account the dynamism and non-linearity of the development of market environment" [9, p. 5]. The change in the nature of competition, according to the author of the article, requires revision of the main functions of marketing, production, research and shifting the emphasis on the intellectual component of the product. In this direction, the author points to the role of competence in key competitive advantages. Other researchers share the view of the role of

intellectual capital and the competence of knowledge carriers in securing the competitiveness of a modern enterprise. [3; 8; 10]. Thus, in the monograph "Strategy of social development: mechanisms of decision-making" it is indicated that "at the beginning of the XXI century the main competitive advantage for any enterprise is its human resources. Moreover, in the strategic perspective, the significance of the human factor will grow" [3, p. 18].

It is obvious, that the problems of the socio-cultural context of competitiveness are closely linked to personnel and effective personnel policy, since, as scientists point out, "sustainable economic development and strengthening of enterprise competitiveness are the result of the implementation of personnel policy through the effective use of social, human and intellectual capital" [3, p. 17]. Considering personnel policy in a narrow and broad sense, the authors of the monograph emphasize that "the main goal of the implementation of personnel policy is the formation of additional competitive advantages by bringing social, human and intellectual capital in line with the chosen strategy of enterprise development through the application of certain measures" [3, p. 17], that is, the social aspect in the competitiveness of enterprises is partially present.

In the scientific community, a resource-based approach to the essential interpretation and consideration of competitiveness is widespread. It is precisely from such positions that scientists K. O. Kuznetsova, V.O Shpilyova. consider the system of factors of the external and internal environment that influence the formation of competitiveness of an enterprise. Thus, K. O Kuznetsova proposes to consider the logical and structural scheme of forming the competitiveness of the enterprise, which, according to the author, "allows us to visually follow the interaction of external and internal factors affecting this process; to separate the components that are "weak" sides when transferring the scheme to a particular enterprise, as well as to assess their impact in order to develop recommendations for their improvement. "[5, p. 222]. The author's approach to the reflection of the three levels of competitiveness, which have a mutual influence on each other: the lower level – competitiveness of products, the higher level –

competitiveness of the industry, the middle level – competitiveness of the enterprise, represents a scientific interest. All levels have their own components, however, the author considers the social component in a relationship with the political one only for the higher level (branch). The changing conditions of the present do not allow to take into account all the factors that affect competitiveness, and scientists appropriately point out that “a set of factors that determine the competitiveness of an enterprise is so significant and peculiar that it is impossible to propose a single methodology for the formation of the database, its processing and identification of significance for making corresponding decisions [10, p. 18]. However, let us note that considering the strategy of increasing competitiveness, among internal factors, V. O Shpilyova emphasizes the values and corporate culture, that is, the indirectly present socio-cultural context in the studied issues.

The change in the nature of competitive relations under the influence of globalization and other processes leads to a rethinking of the content of modern strategies of competitiveness and its filling with social aspects, social responsibility, which confirms the relevance and expediency to highlight the socio-cultural aspects of competition as an objective pattern of its evolutionary development. And these aspects are emphasized by Y. M. Melnyk [6], who in his article offers the author's vision of competitiveness and social competition of business, determines the factors of the micro and macro environment of social activity of the enterprise, direction and components of the social strategy. Y. M. Melnyk considers social competition in business”, as “the process of achieving competitive advantages on the basis of the system of relationships existing between the business entities and the society in which they operate, in order to achieve mutual economic and social effect” [6, p. 51], and considers social competitiveness as “one of the most important at the current stage of economic development” [6, p. 51].

The given review of modern literary sources outlines the breadth of competitiveness issues in the theoretically applied and conceptual dimensions, substantiates and emphasizes the scientific legitimacy, expediency and relevance

of developing the direction of research proposed in the article.

Analysis of the content and results of scientific research and publications also indicates that issues related to the socio-cultural aspects of competition as a special phenomenon of our time, are studied superficially, not tied systematically to the culturological factor, which becomes a model of contemporary thinking and development of the society as a whole.

Research objective

Highlighting of the socio-cultural aspects of competition as a consistent pattern in its evolutionary development.

Methodological approach

To reveal the content of the article and to achieve the goal, a set of scientific methods that ensured the conceptual integrity of the study, in particular: historical and logical – to study the evolutionary path of the nature of competition, which in its development was the industrial and informational stages; systemic – to form a conceptual approach to the disclosure of the nature of competition on the basis of socio-cultural aspects and to assess the competitive factors that influence the behavior of competing subjects; synergetic - to formulate the theoretical positions of the idea of transformation of the main functions of competition and the formation of a model of a competitive economy based on a combination of human and technological factors; methods of dialectical logic, induction and deduction – to substantiate the preconditions of the spread of the socio-cultural phenomenon in all spheres of economic and social life of society and the filling of competition with social content. In an applied sense, an important method of research is synthesis and analysis, which is used to account for the interaction of external and internal factors of influence on the emergence of new forms of competition.

Also, for the analysis of the subject of study were important methodological principles: objectivity – to outline the laws of the development of competition and change its functional role in the conditions of innovation and information economy; generalization – to outline the global and local

causes of the emergence of new competitive relationships and the expansion of objects of competition.

The main material

General tendencies of changes in macro-environment influence the development of economic theories, concepts and systems. The values determine key elements of competition and the dominating type of culture affects the behavior of market entities, theories of competition, decision making, strategic choices. Consequently, there is significant impact of culturological factors on the formation of key dimensions and concepts of competition. So, currently a vivid trend is observed. The evolution of socio-cultural phenomena penetrates all spheres of economic and social life, and requires to be considered on the theoretical levels.

From the logical point of view competition in its development has passed the industrial and informational stages, and has entered the phase of new stage with social humanistic features, which is being founded now. Each stage reflects the nature of competition, which is sometimes quite ambiguous. Nowadays the objective reality has obviously been formed for studying socio-culturological aspects of competition, linked to spreading socialization and growing role of social capital in economic processes. Social capital as well as social relationship is becoming important compound of the wide institutional environment, which covers the idea of competition. The development of the concept of social capital and the univocal acknowledgement of the global importance of social relations activate the demand for the values of social nature. In particular, these are compliance, trust, social accountability, cooperation, fairness etc. These and many other values are becoming a norm of social capital and are intertwined within the network of competitive environment as a progressive innovation. More and more enterprises frequently relate their mission to social principles. As the academics state, "social principles are closely linked with enterprise mission, that is, its socio-historical purpose: the sense of its work, and social need for the products (services). The social norms and standards are correspondingly determined by technical and economical characteristics of the

enterprise. The social development strategy is also influenced by available social perspective of the enterprise" [3, p. 22].

So with the change of focuses in the interpretation of the competition, its characteristics and key functions changed, too. The functions are: regulative, distributive, simulative, generating and protective. At the same time, the tasks, objects and its role in the market positioning have altered.

The regulative function of the competition is aimed at studying the needs and preferences of the consumer, and motivating entrepreneurs produce goods which consumers need. Under social factors an innovative product is becoming more competitive, as it contains not only economical but also social good. In this regard, it should be noted that competition is a self-regulator of the society. It shaped the social concepts of an individual and highlights the impact of competition on social development.

The distributive function on the enterprise level fosters the distribution of income in dependence with types of business. On the national level it encourages flow of capital between domains and spheres. Disregarding the fact that nowadays the flow of capital does not fully cover social sphere, in any case the growth of socio-cultural paradigm of management and establishment of socially focused economy will promote the development of social sector.

The motivating function is especially important, as it encourages search of innovative solutions to increase competitive demand of the product. Innovations become a value. That it, the competition is worth being seen in the categories of motivation and values, in particular, in terms of the competition between personnel. The competition promoted professional development and seek of new competencies, as well as robust entrepreneurial activity. However, in the socialized and spiritual society, the competition should not foster demand on solely material goods, stimulating consumerism. On the contrary, current managers have to put it as a goal of competition to stimulate the demand on competitive ideas, which are able to transform egoistic and aggressive aims of the enterprises, desiring to make the market comfortable for all.

The protective function is linked to viewing competition as a protective reaction and response,

not an aggressive and self-dominant one, but with a thorough consideration of its social consequences. The role of protective function grows in the conditions of concentrated capital and bigger businesses. The necessity of abiding to social standards requires lawful, transparent and open work.

Here it is reasonable to mention the need of wider practical usage of article 33 'Rules of professional ethics' of Ukrainian Law 'On the protection from unfair competition'. The norm should be rather mandatory than recommendatory. The rules have to be applied during negotiations, contracting, shaping statutes and other important documents. Abidance to the competition-related legal framework could increase the level of corporate social responsibility, having lowered the cases of unfair competition.

Fair competition is shaping modern ethical competencies and culture of behavior in the market through the corresponding values: order, accountability, entirety, obligation, etc. Human factor becomes significant competitive advantage. The high quality social capital may bring advantaged to any enterprise and economy as a whole. It is important to systematically increase level of life of the employees to achieve those competitive advantages. The economical processes have no sense of they do not take into account the value of human capital. Therefore, the enterprises and other employers should not only create jobs, but also intellectualize the production, and provide the required level of financial compensation, as low labor is not interested in innovation or efficiency. The formation of competitive economy based on the model of high quality and cost of human factor ought to be simultaneous with the technical compound. It implies heavy investments in both social sphere and production development. But only the combination of human and technical factors can achieve the innovative competitive advantages.

Currently competition becomes an important prerequisite of social life and economic development. It influences mindset matrix of a person and the whole society, and is at the same time an outcome of such development. Positive competition stimulates personal career building and innovations at enterprises. So a new task arises: to develop a mechanism of the competition impact on social processes.

The growth and development of social relations and cultural integration bring new sense

of competition. In the new global cultural perspective, the individual creative self-representation is strengthened, as well as personal world view. These factors are less influenced by institutions. It is important to create a system of adaptation, oriented at different levels of cultural and educational development of a person. However, it is not recommendable to unify the universe of images, making them primitive, mass-oriented and serial, which shapes a standard citizen of the world. The competition should concur under the principles of social policy, ecological and technical safety, harmony based on culture of behavior and law.

The content above is summarized by the opinion of the academics who state that "the competition bears both positive and negative sides, and their proportion depends on the types and forms of the competition, and influence of the regulating activity of the government on it. The competition is seen as flexible and thin mechanism. The flexibility of competitive mechanism is exposed in its momentous reaction on any inner changes. At the time when the changes have occurred, those enterprises, which had been most adaptive, would be in a winning position" [4, p. 270–271].

Summaries and perspective of further research

The competition, according to the economic law of competition, is a natural phenomenon and is active since the commodity production emerged. However, the global and local changes impacted the nature of competition, having widened its objects and the competitive field. At the same time they caused new competitive relations, which are called "hypercompetition". The competitive factors become acting systematically, entirely, rather than one by one. It causes unsafe competition with the varying interests of the competing parties. The behavior of the subjects is becoming more aggressive and brutal in the selection of means, and ignoring the law. It has to be noticed that there are parallel processes going on. The socialization of humanity, spreading of humanistic views, and building of civil society influence competition, directing it towards its socio-cultural compound.

The global factors, world order, religious trends, national traditions, and mindset postulates are shaping new values, which soon will have to

transform into new economic model of market behavior. So, the market institutions, normative and legal basis in the field of competition, ought to be formed due to the newly emerged values, with trust dominating among them. The new values are shaping the market behavior rules, so the competitive behavior should be fair, in accordance with the culture of competition and its environment.

Taking into account rapid spread of socio-cultural phenomenon across all spheres of social life, the competition is under its influence as well. Consequently, the conceptual research needs to be conducted, methodological search of functions and forms of competition should be deepened, and the mechanism of evaluation of the impact of socio-cultural factors on competitive strategies has to be developed.

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STRATEGIC PLANNING OF A CITY DEVELOPMENT ON THE RESULTS OF THE PREVIOUS STRATEGIC PLAN OF ITS DEVELOPMENT

Abstract. The goal of the article is to study the practice of strategic management of the development of territorial communities in Ukraine and to formulate recommendations on the principles of updating long-term and medium-term priorities of local development on this basis. According to the analytical review and the results of empirical studies, the main types of possible reactions of local authorities to change have been substantiated, among which are singled out the following ones as disregard of changes, delay of reaction, symptomatic response (reaction), partial gradual changes, radical changes. The analysis of the historical background and substantial logic of strategic planning practice transformation were carried out at the municipal level. Estimation of the current state of strategic planning of social-economic development of cities in Ukraine was conducted; the factors of influence on the formation of methodology of strategic plan development, which were implemented in local conditions, were defined. Based on the critical analysis of the methodological tools of strategic management of local development it is proved that the time for which strategic planning of city development is done, irrespective of time frames it is determined, contradicts the assumption of immutability of key environmental factors. On the basis of this, the problem of updating key categories of a strategic plan as a document that plays a formalizing role in the management of socio-economic development of the city for the long term period is particularly important. On the analysis of the case of updating strategic plan of development of

town Korosten it is shown that essential political, social, economic and demographic changes in Ukraine don't allow to replicate the goals and directions of the development of self-governing territorial communities for a future period by establishing only new indicators and parameters. Consequently, it is necessary to review desirable trajectories of development as well as criteria on the basis of which evaluation of the success of this process will be made according to requirements of a changing external environment. It is found that the effectiveness of the implementation of the previously adopted strategic plan of local development is a prerequisite for awareness of the local community about the relevance of the development and adoption of a new strategic document for the next period of time. At same time it was found that the significant changes that have occurred not only in our country but the whole world for the past 5–10 years require a substantial rethinking of priorities virtually for all Ukrainian cities. It is proved that the development of a new strategic plan should be based on an assessment of the city progress on the basis of statistical indicators, on the level of achievement of planned in the previous strategic plan goals and evaluation of the city by its inhabitants and local entrepreneurs. It is simultaneously necessary pay special attention to new opportunities and threats that have emerged since the development of a previous strategic plan.

Key words: strategic planning, socio-economic development, goals-tree, city, self-governing territorial community.

Formulation of the problem

The analysis of trends in socio-economic transformations gives grounds to state that the current stage of socio-economic development is characterized by rapid scientific and technical innovative changes, considerable influence of foreign global and regional markets, and increase of city competition. Local authorities should realize inevitable changes taking place in the external environment, accept them as a natural element of development processes. Thus local authorities should pay attention and make efforts in order to respond to changing factors in the external environment. Simultaneously, under current conditions of high turbulence in environment, predicting directions and force of changes is becoming much more complicated. The uncertainty factor inherent to any attempt of prognostication in the current situation in Ukraine is strengthened by a range of political, economic, geopolitical influences. That's why any attempts in implementation of the management process considering not only the current situation and solving current occurring problems, but also taking into consideration the directions in which processes in macroenvironment are developed and possible consequences of taking these or those decisions meet a considerable amount of cognitive barriers, overcoming of which becomes the main task. The situation becomes much more difficult in the case of such a complicated open socio-economic system which is a self-governing territorial community.

Suspense and practical novelty of such kind of tasks in case of Ukraine led to topicality of the research.

Analysis of recent publications on issues and definition of the general problem parts previously unsolved

The issues of strategic management at the territorial / local levels are at the focus of a number of scholars and practitioners. At the same time, in the Ukrainian context, the most relevant contemporary issues are studies related to the substantiation of the principles and benefits of decentralization of territorial management, the identification of priorities of local development, the definition of the optimal time of long-term planning in terms of strategic

management principles and fast changing conditions of the environment.

The necessity is to develop own strategies of city development at the local level, not "send them downwards" by regional or state authorities, because the world experience shows that even huge investments by a state into the programs developed at the upper level do not necessarily guarantee getting the expected results at the local level, is proven in the works of Miroshnikov I. S., Yanovskii V. V., Ushakova O. A. [4, 5].

To the definition of optimal time after which it is necessary thoroughly to reconsider the strategy of territorial development are dedicated works by Budovich Yu. I., Mahdanova R. V. [7, 8], however these works don't give the clear answer to this question.

Rethinking issues of the previous strategy of the city development is taken into consideration in the latest scientific works. While A., Jonas A. E., Gibbs D. [1], Rasoolimanesh M., Badarulzaman N. Jaafar M. [2] and Abashev D. A. [6], seek a balance in popular nowadays and often antagonistic priorities of development: entrepreneurship and environmental protection. In this context Hao Chen, Qiyang Wu, Gianquan Cheng, Zhifei-Ma, Weixuan Song, Ilinbayeva E. A., Kuznetsova O. P., Senchahov V. K. carry out a critical analysis of threats, which occur while using aggressive, offensive strategy of city development: Chinese "empty" cities and unrealistic financial base of Russian strategic plans in connection with the abrupt change of market conditions and economic sanctions [3, 9, 10, 11].

Nevertheless, it should be noted that the problem of strategy revision for local communities as well as procedures of strategic plan design that ensure positive continuum of local development in changing environment are presented incidentally and scantily in scientific literature.

Research methodology

The study is based on data from strategies of local communities' development in different parts of Ukraine and the results of the official monitoring of their implementation conducted by the authors by the order of the local self-governments. The sociological survey, as a part of the study, was conducted in April-May 2015 on a group of 579

inhabitants of Korosten city. The research sample was determined by random method; a printed standardized questionnaire was used.

The Objectives of the Article

The purpose of the authors' research was an analysis of practice of strategic planning of Ukrainian cities development and substantiation of expediency of actualization of long-term priorities of their development according of the results of implementation of the previous strategic plans.

Presentation of basic material of the research

The results of the analysis of local self-government practices allow us to classify the reaction of local authorities to changes in the external environment by integrating the criteria of the speed of such a reaction and the scale of transformations that are a result of this reaction. In particular, some typical reactions in this case are the following: ignoring changes, delay of reaction, symptomatic reaction, gradual partial changes, radical changes.

The first three reactions of local authority can be referred to reactive management model which provides for initiating internal changes only as reaction to those tendencies which are going on in the external environment. The last two ones are a reflection of the proactive model, when the changes in a city as a personified economic system are as they were ahead of time: local authorities initiate such changes which ensure permanence of socio-economic development over time by constant monitoring and predicting on its basis the development trends of the future. It is evidently seen that the proactive model of management is more progressive and adequate to the conditions of external environment with its uncontrollable factors. Its implementation in management practice of local authorities involves the usage of methods of strategic management.

According to the results of monitoring by the authors of the implementation of local communities' development strategies (Table 1), about 50 % of tasks, despite the certainty at the stage of the formation of documents, remain unfulfilled. We consider this as a clear example of the fact that, to a large extent, the lack of experience in long-term planning with regard to

resource constraints is present on the local level of self-governing and, consequently, the critical importance of prioritizing the use of their own efforts, including financial.

Table 1

The percentage of completed and uncompleted tasks of local communities development strategies based on the results of annual monitoring in 2018

Community	Task status	
	Completed	Uncompleted
Biloberizka	33.3	66.7
Verkhnia	66.7	33.3
Zavodske	57.9	42.1
Askania Nova	56.8	43.2
Kochubeivka	52.8	47.2

Sources: own research based on [12, 13, 14, 15, 16]

The results of historical analysis of local self-government practices suggest that in Ukraine the principles and mechanisms of strategic management began to be widely used by local authorities at the turn of the XX–XXI centuries. The absence of practice of territorial development planning on the principals of a market economy, protection of private property, self-financing and freedom of choice on the local level encourages to form the Ukrainian school of strategic management of local development under the influence of American and Canadian, West European, Polish, Lithuanian and Russian approaches. In a formalized form, each of them suggested such an element as Strategic Plan with a definite time frame (5–20 years). Such plan, apart from the other things, included more or less specified indicators for achieving defined goals and sometimes a possibility for actualization of the plan according to the conditions of external environment which are permanently changing.

Presence of the time frames that formally limit the horizon of strategic planning and management actions for achieving goals which are included in a corresponding strategic plan, are due to incoming forecasting limitations on available relevant information about the factors which will play the key role in the construction of external environmental in future. For the same reason, the mentioned above mechanism of the actualization of

a strategic plan at the criterion level as well as at the level of possible changes of goals/tasks was assumed. Without analyzing the reasons of success/failure in implementation of strategic management principles into practice of some local self-government authorities, we can state that from the methodological point of view the construction mentioned above provided an efficient mechanism of effective territorial management due to the priorities of strategic development goals.

The very possibility of changing (as a partial case of actualization) of goals and tasks defined in the document is predictable. Herewith, the revision of various parameters of a strategic plan in the process of its implementation can be painless in terms of the strategy to achieve the ultimate goal. However, every strategic development plan of a self-governing territorial community has its completion dates. Furthermore, there are sometimes situations (military operations, opening (closing) borders, merger/division of communities, etc.) when the further implementation of a strategic plan is useless. Therefore, the process of strategic management of local development should be uninterrupted, so the completion of one cycle of planning should automatically assume adopting a new document, in which new possible scenarios of developing events, priorities of making efforts of all stakeholders on the territory, goals and tasks, which are necessary to attain/complete in future, will be written. In this case, similar in form, the task of actualization has a far more complex content, as this stage of strategic management of local development disposes characteristics of probable course of events which are de facto a bifurcation point for a territory that is a subject of management.

Now the ideas of territories development long-term planning are widespread in Ukraine. According to our research, almost all regions and districts, more than 2/3 of cities have already developed strategic plans for complex/social-economic/sustainable development and, at least formally, use the principles of strategic management in their activities. Currently, many of these strategic plans come up to the strategic planning cycle finish (completion of validity period, for which a strategic plan of local development was designed), that automatically

creates the necessity, in parallel with the revision of goals achievement level, defined in the previous document, of priorities rating for a self-governing territorial community for a new perspective.

Another reason for the need to revise community development strategies is the adoption in 2020 of new regional development strategies in Ukraine – the documents that serve as partial benchmarks for local development strategies (at least in terms of matching their goals).

As noted above, at this stage, the parties who are subjects of local self-government, find extremely difficult, considering strategic importance and originality of tasks, to review the city development strategic directions and goals, which should further play extremely important role and be priorities for stakeholders (primarily for the local self-government). Significant political, social, economic and demographic changes in Ukraine do not allow replicating the goals and directions of future self-governing local communities' development by establishing solely new indicators and parameters.

Strategic planning period, regardless of time frames in each case, is too long to make assumptions that key external environmental factors are invariable. Thus, drawing of the document where the priorities for long-term local development are defined, should provide complete cycle of environment analysis, strengths and weaknesses analysis, process execution logics forecasting for the nearest future and thereupon new strategic goals determination. It seems quite probable that desired city development direction may largely disharmonize with ideas, important in the previous period of strategic planning. Extremely great risk of such situation is present in the case of high external environment turbulence – a situation typical for the Ukraine today.

In this context, we consider bright example to be Korosten town – the administrative center of the subregion, major transportation hub, important regional and national processing industry center, the town with a long history.

In 1986 Korosten and the surrounding area were suffered in the result of the Chernobyl nuclear power plant accident that adversely affected its development. The city is the largest settlement on the territory affected by the accident that is legally

classified as a zone of guaranteed voluntary resettlement. The city industrial development was negatively affected by economic crisis in the 1990s and economy structural changes in the 2000s – a number of industrial enterprises, namely porcelain factory, woodworking plant, twisted products factory and others, went out of business [17].

Therefore, at the stage of city development priorities rating during the preparation of the first

Korosten Strategic Plan Development for 2006–2014 (hereinafter – Strategic Plan 2006) in 2003–2005 the specialists, directly engaged in the new document preparing process, faced a dilemma of ecological state improvement necessity and a wish to develop tourism industry by using memory about the town with health and recreation center for children and existing previously (it should be noted – quite limited) infrastructure (Fig. 1).

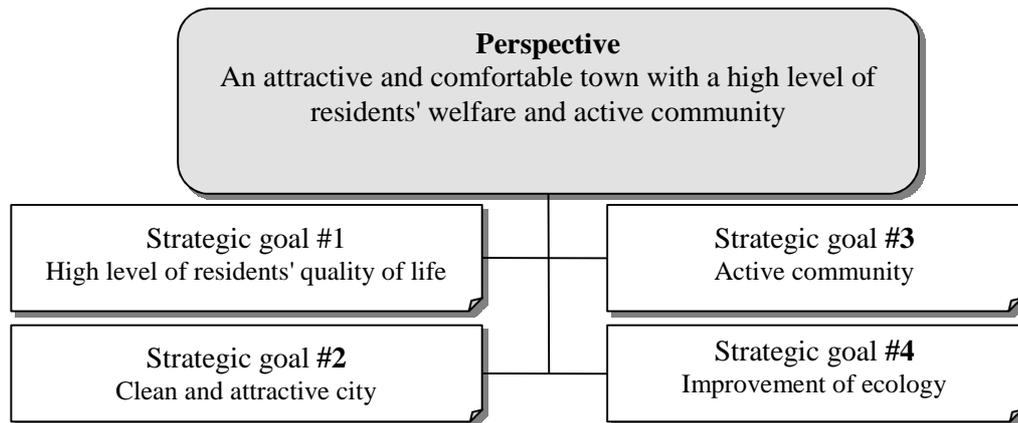


Fig. 1. Consolidated appearance of Korosten Development Strategic Plan goals-tree for 2006–2014
Source: [18]

An additional factor that influenced Korosten community current strategic choice was presented by the introduction of the first stage of the budget reform based on implementation of defined formula for cities of regional significance budget calculation and, related with this reform, local authorities specific expectations for the city budget possibilities to improve urban infrastructure and services.

The period from 2002 to 2004, when the Strategic Plan 2006 has been drawing, was marked by significant increase in GDP. Therefore, strategic priorities, as shown in Fig. 1, were focused on life quality improving, increasing of the city attractiveness for tourists and investors, community activity and improving of environmental situation.

However, in 2008 the world economy found itself in crisis, which affected the economy of Ukraine, by that time closely integrated into the world economy. This factor has influenced the economic possibilities of local governments, including Korosten, so many of Strategic Plan 2006 objectives remained unachieved.

At the beginning of Strategic Plan revision in 2014, the city already had experience in foreign

investors involving into new-created Korosten industrial park, some, maybe not systematic, experience in marketing activities (city popularization in Ukraine). For example, creation of one-of-a-kind historical sculpture garden with the figures associated with Korosten, initiation of potato pancake holiday as well as interesting innovations in the town management, including management services quality control system ISO 9000:2000, were introduced.

The situation accompanied the new strategic plan adoption was complicated by unfavorable external factors. That is why the stakeholders (coordinated by local authorities) started the inspection of the situation in main revision city life-support subsystems and the city's economic base. Finally, some of the goals identified in the Strategic Plan 2006 were fully or partially achieved by defined indicators. In particular, it concerns the local authorities efforts aimed at the local community activating, its feasible participation in decision making and implementation of the city development programs, increasing of the city residents' patriotism (Fig. 2, Fig. 3a).

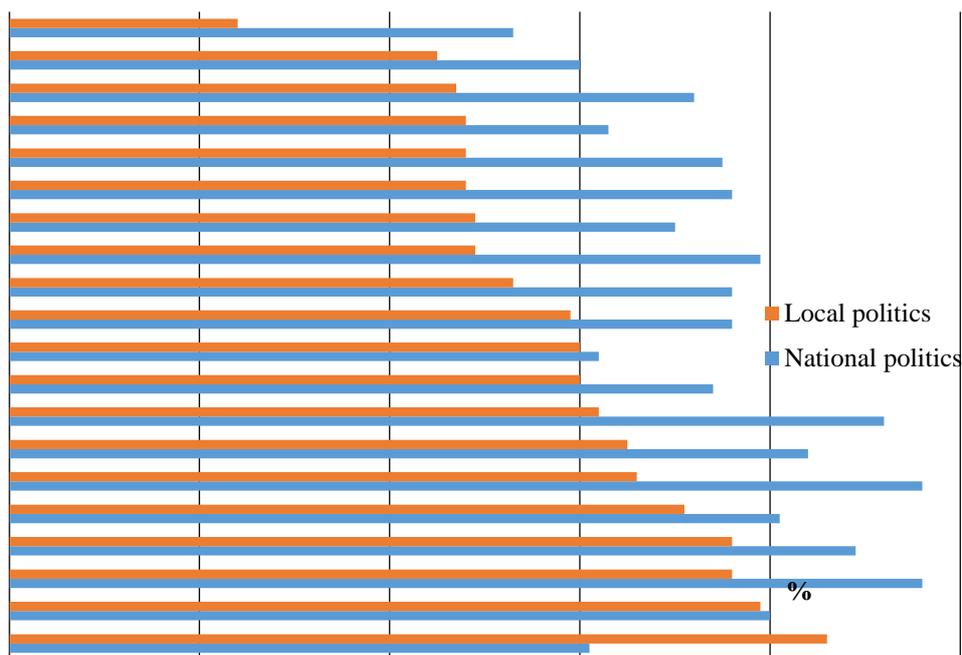


Fig. 2. The interest of selected cities' residents in various levels of politics

Source: [19]

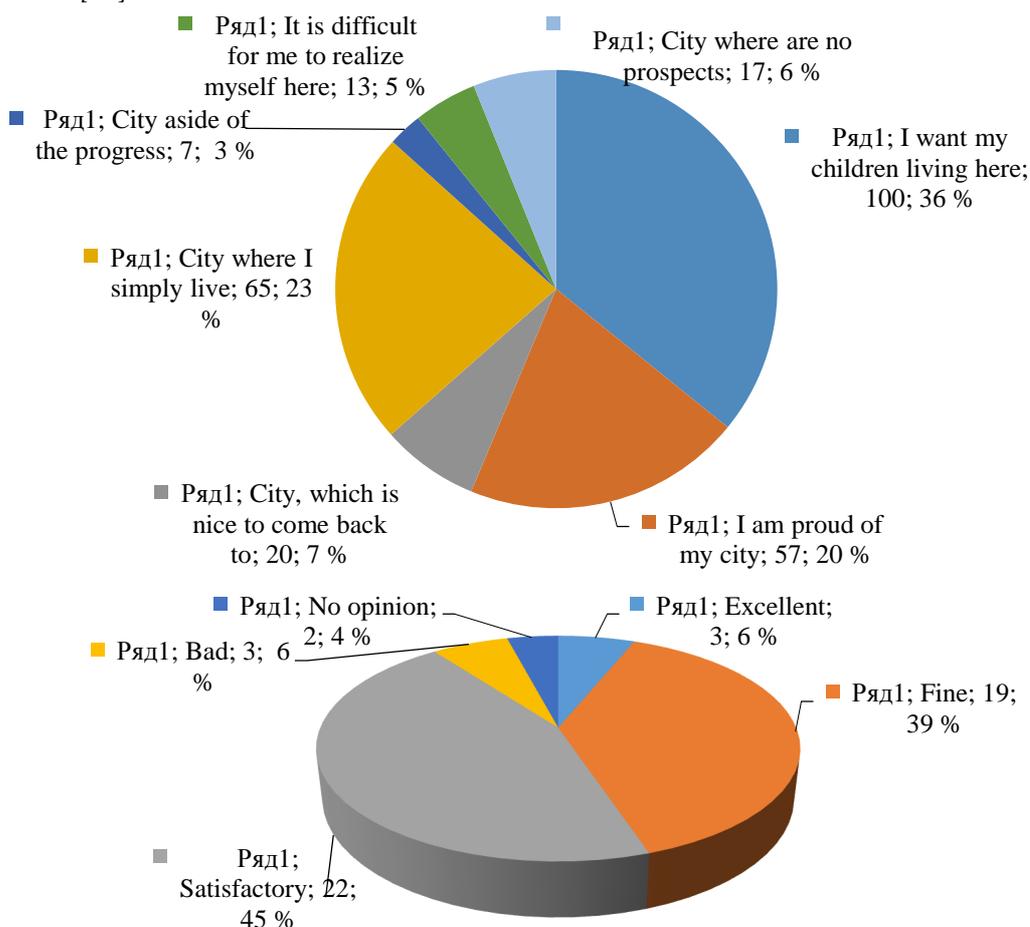


Fig. 3. Overall evaluation of the city as a place of residence (a) and as a place of doing business (b)
Source: own research

As we can see from Fig. 2, the results of comparative study, conducted by analytic center upon the Association of Cities of Ukraine request demonstrate the highest level of residents' engagement in local affairs, especially engagement in national rank challenges in Korosten. It can be affirmed that results represents an example of successful functioning of local authorities that managed, in spite of significant political tension in Ukraine, to convince residents that their lives depend on their own actions on local level.

The results of respondents questioning concerning the overall assessment of the city as a future place of their living, shown in Figure 3a, also confirm the specified thesis regarding the success in achieving of some identified in the Strategic Plan 2006 objectives: respondents' positive emotional attitude to Korosten appear to be the most popular among alternative variants of answers.

Effective internal communication system of the local self-government that provides transparency of its activities can be emphasized among the factors, promoting this success.

That is why the goal of creating an active community can be considered as achieved. Nevertheless complicated ecological situation in the city, competition for human resources with other cities (especially metropolitan cities like Kyiv) requires more support efforts from the local self-government aimed at creating / maintaining Korosten image of a city that is attractive for living. Moreover these efforts should be comprehensive and include activities directly connected with image as well as aimed at increasing environmental safety, improvement of socio-economic status of the residents.

The situation in case of the characteristics of the city as a place of doing business and the successful implementation of business initiatives is significantly different (Fig. 3b), which in return leads to increasing of the importance for local authorities to improve the perception of the city by this indicator. This statement finds further support in the evaluation of the major subsystems of city life the residents (Fig. 4).

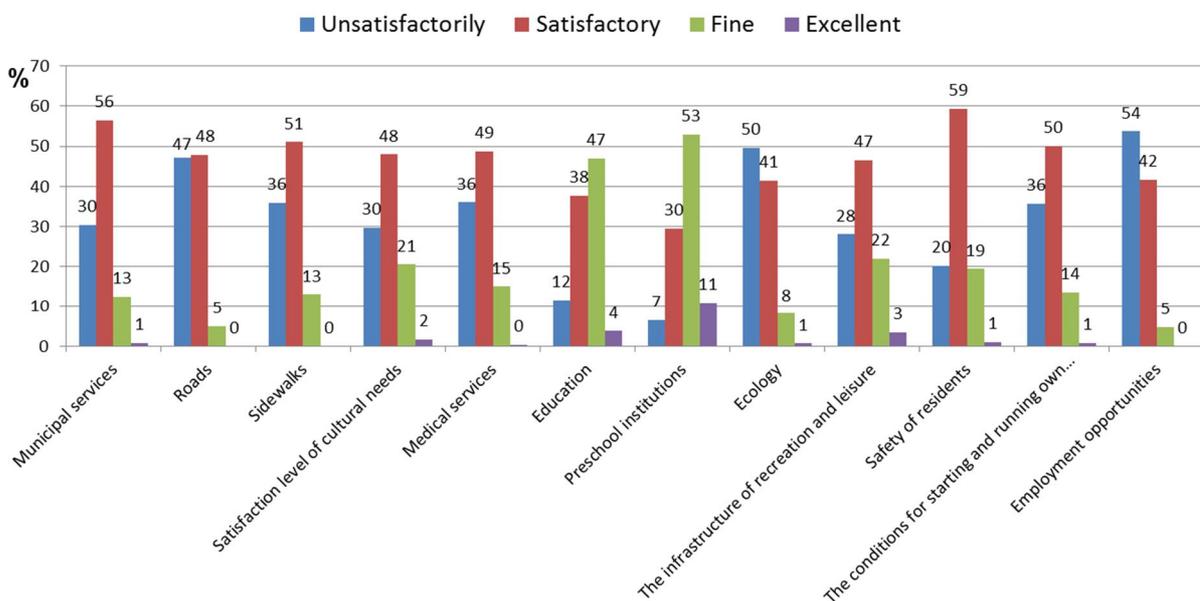


Fig. 4. Evaluation of the major subsystems of the city functioning (by the answers of the residents)

Source: own research

From the survey results presented in Fig. 4, the “painful points” in the Korosten city functional system are looming. Thus, priority gains the problems connected with economy, for research purposes formulated as “employability” and “conditions for starting and running your own

business.” Obviously, this serves as the basis for the rise of their importance rank in updated strategic plan. However, the level of educational services, operation of kindergartens cautiously got positive assessment, while during the design of the Strategic Plan 2006 [18] these areas received high

priority in the strategic goal “High level of residents' quality of life”.

Unsurprising the content of the conclusions of the evaluation by inhabitants of Korosten's development barriers (Fig. 5a) and major resources of the city (5b) coincides with the above-mentioned. The importance of such economic strategic issues as high unemployment and low presence of foreign investors in the local economy is emphasized. However, it is unconditionally positive that the city residents evaluated as the primary resources for of the city development the local entrepreneurial potential and an active community by itself. Conversely, they do not tend to expect ephemeral “assistance from the central government”. The inhabitants of Korosten do not

consider also as the primary resource for future development such passive by their nature assets as “free land” or “good geographical location” (Korosten is at the crossroad of three international transport corridors).

Analysis of Korosten's strengths and weaknesses, its external environment, in the context of the problems that to be resolved and opportunities that should be used to accelerate the development, served as informational and analytical foundation for the development new strategic plan of the city development. The consolidated appearance of Korosten Development Strategic Plan goals-tree for 2015–2025 is presented Fig. 6.

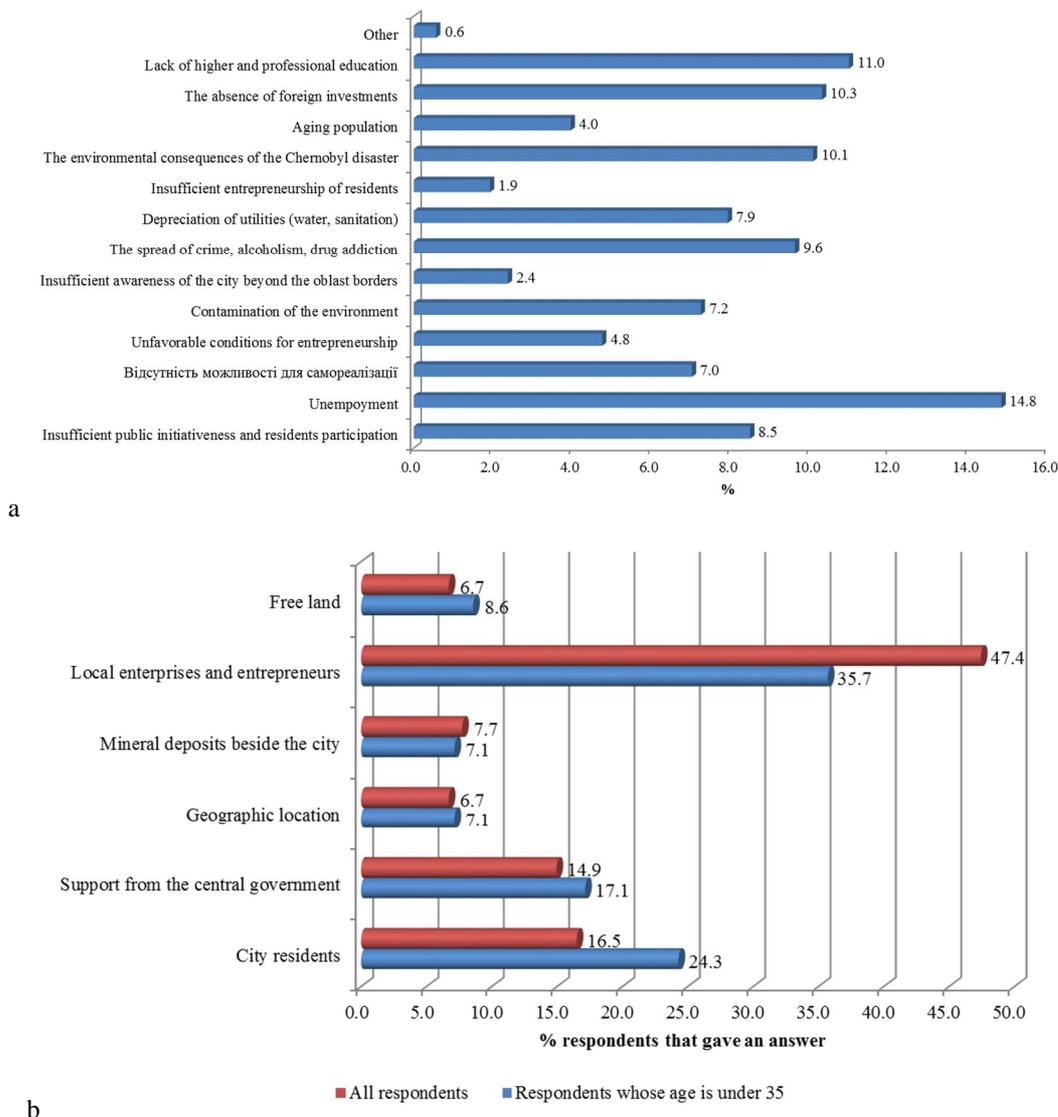


Fig. 5. Barriers (a) and basic resources (b) of the city development (by the answers of the residents)

Source: own research

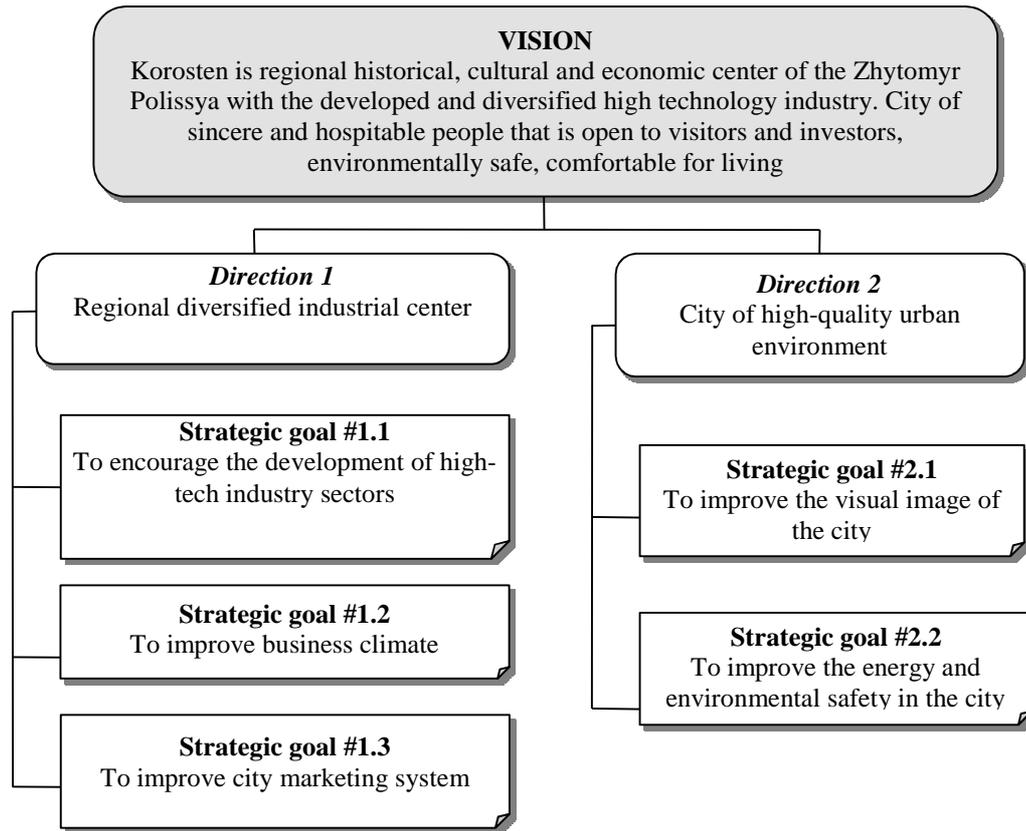


Fig. 6. Consolidated appearance of Korosten Development Strategic Plan goals-tree for 2015–2025
Source: [17]

According to the presented goals-tree the priorities of the new strategic plan are clearly looming:

- development of Korosten as an important regional industrial center with a diversified economic base;
- improvement of the urban environment (including issues of environmental and energy safety).

It is very important for the future implementation of a strategic plan of the city development to form and authorize an efficient team that will be responsible for the strategic plan implementation monitoring, will be capable of controlling the harmonization of other future local governments' operational plans, programs, and budgets with the strategic plan creating as well as will be courageous to propose necessary changes to the strategic plan of the city development. Our research of 25 strategic plans implementation in 2018 in Ukraine shows that practically none of these local governments does not possess such a team.

The conclusions and recommendations for further research

Ukrainian cities already have experience of their strategic development plans implementation. If the local self-government actually tried to implement the strategic plan during its validity, then this authority found its usefulness and will try to develop and implement a new strategic plan for the next period of time. Nevertheless significant changes that have occurred not only in our country but in the whole world in the last 5–10 years require deep rethinking of the priorities for practically all Ukrainian cities.

Developing of a new city development strategic plan should be based on an assessment of the progress of the city based on statistical indicators, the level of achievement of the previous strategic plan objectives and evaluation of the city development by its inhabitants and local entrepreneurs. The special attention should be paid to new opportunities and threats that have emerged since the development of the finished strategic plan.

The positive experience in implementing the strategic plan increases the chances that the new strategic plan will better meet local requirements, but the perception of the strategic plan by the new leadership of the city (in the studied case of Korosten, local authorities for the entire duration of the strategic plan implementation remained almost unchanged) requires further researches.

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AN APPROACH TO MODELLING THE IMPACT OF INTERNATIONAL MIGRATION ON THE ECONOMY OF RECEIVING COUNTRY

Abstract. Being an objective element of the global economic system, international migration produces a significant impact on the performance of individual countries nowadays. The economic impact of international migration is driven by various factors, primarily the type of international migration (labour migration, refugee migration, family migration, or student migration) and the legislation of a receiving country which determines the ability of international migrants to interact with the host country's economy and to produce the respective impact. The hypothesis of this study builds on the premise that legislation of the receiving country determines the "capabilities of migrants", that is a set of actions that can be performed by an international migrant on the territory of receiving country, the consequences of which will produce an impact on the economy of receiving country. We identified the following capabilities: the ability to enter and stay in the country; the ability to be employed; the ability to obtain social protection, education and citizenship; the ability to own and dispose of property. Capabilities are not firmly attached to particular types of international migration. For example, the capability to be employed is associated with such types of migrants as labour migrants, refugees, family and other migrants, depending on the country. The influence of international migrants on the economy of receiving country is determined not by the type of migration, but by the combination of actual capabilities that correspond to certain types of migration. We found

five combinations of migrants' capabilities that determine four types of economic relationships between the migrants and the receiving country's economy. Each type of economic interaction produces a different effect on the economy of receiving country and can be changed by means of expanding or constraining certain capabilities of migrants, which requires that respective amendments be introduced in the legislation of the receiving country. The scientific appropriateness of our approach to modelling the impact of international migration on the economy of receiving country is based on the analysis of the global legal framework for purposes of identifying the rights that ensure the respective capabilities of migrants, as well as on the application of SNA-2008 principles to modelling the impact of international migration on the economy of receiving country. In this study, we used the method of analysis to single out the rights that ensure the migrant's capabilities; the method of generalization to reveal attributes, based on which separate rights could be matched with respective capabilities; the method of explanation to describe the notions of "migrant's capabilities" and "type of economic interaction"; the method of classification to separate specific types of economic interaction; and the method of modelling to describe the relationship between the legislation of the receiving country, the migrants' capabilities, the types of international migrants, and the impact of such migrants on the economy of receiving country.

Key words: Impact on the economy, international migration, legislation, migrant's capabilities, modelling.

Introduction.

In result of globalization, international migration has become an inseparable element of economic systems in many countries. The influence of international migration is ambivalent and can strongly differ across countries. In this study, we focused on studying the influence of international migration exclusively on the receiving country. Separate studies suggest that international migration generates negative effects in some countries, whereas other investigations unambiguously prove that international migration is important for stable economic development in other countries.

The ambivalence of assessing the impact of international migration on the economy of a country is caused by many factors. In our opinion, the most important of them are the type of international migration (labour migration, refugee migration, family migration, etc.) and the respective legal rights which are associated with it. The rights determine the ability of migrants to interact with the economy of receiving country. In this work, we introduce the notion of "migrant's capabilities", which we understand as a set of actions defined by international and national legislation that an international migrant can perform on the territory of receiving country and that will bear consequences for the economy of receiving country.

This notion is important in the context of the suggested approach to modelling the impact of international migration on the economy of receiving country because it allows us to establish a functional relationship between the migration law of the receiving country and the impact of international migrants on the economy of such a country.

We define such capabilities as the ability to enter and reside, to be employed, to obtain social security, education and citizenship, and the ability to own and dispose of property. It is important to note that the aforementioned capabilities are not firmly attached to certain types of migration. The expansion of rights for certain types of migrants leads to them obtaining respective capabilities and vice versa. For example, the capability of employment is there not only for labour migrants,

but also for refugees, international students, and other types of migrants.

The combinations of migrant capabilities determine the type of interaction between the migrants and the economy of receiving country. We identified five combinations of migrant's capabilities that correspond to four types of economic interaction.

At the final stage of the theoretical part of this study, we developed a model for the impact of international migration on the economy of receiving country. The developed model allows us to estimate the impact of international migration taking into account the types of migration, as well as the legislation and economic conditions in the receiving country.

In accordance with the developed model, we calculated the impact of international migration on the economy of Germany in 2017. Germany was selected for this study because it is the country which hosts different types of migrants, and moreover, sufficient statistical data are available for this country in open-access format.

The results of our calculations revealed that the overall gain for the German economy from economic interaction with international migrants amounted to €51.3 bn or 0.62 % of its GDP in 2017. Illegal migrants produced a negative impact on the euro. The refugees and asylum seekers who received subsistence benefits funded by the German state budget did not produce a negative impact. Other types of migrants generated only positive impacts.

Literature review

The influence of international migration on the economy of receiving country has become subject of many studies. The proposed notion of "migrants' capabilities" was used (as a phrase) in separate articles to explain the migrants' interaction with economic, social and political systems of the receiving countries. In the research performed by Tysland (2016), the focus is made on the rights of labour migrants and the capabilities that arise from such rights. The mentioned work concentrates on the ability of migrants to interact with institutions in India, in particular judicial institutions. The migrant's capability is interpreted here as a set of respective rights granted to a migrant, which can change in line with the migrant's legal status and

her involvement in the labour market. Mauru (2017) focused her research on the legal status of migrants as the main factor which affects their ability to stay and be employed in the receiving country. At that, the author analyzes other studies and highlights the ideas of other authors, which is also important in the context of our research. In particular, the researchers of critical migration believe that it is only due to existence of borders that we can speak of international migration; otherwise, only internal mobility could have been possible (Tazzioli, 2015; De Genova, 2013). Therefore, international migration is a process that can and should be regulated (Tazzioli, 2015). The existence of borders creates an opportunity for the existence of heterogeneity in migration flows which is brought in by differences in legislation. However, the differences in legislation are produced by different factors, such as economic conditions in the receiving country, geographical location, as well as social, political and cultural factors. Legislation in this case stands in as an instrument for regulation of international migration.

Having performed an extensive review of the early 1950s' migration theories, de Haas (2010) acknowledged the ambivalence of international migration effects for the economies of participating countries. Ichino (1993) admitted that no clear conclusion could be drawn about the influence of migration on the economy of receiving country. Blanchflower, Seleheen and Shadforth (2007) carried out a review of numerous studies concerning the effects of migration on the labour market as a part of their research on the effects of migration from Eastern Europe to Great Britain. Their review showed that the relationship between the number of migrants and the wages of local employees could significantly vary depending on the country. In particular, a 10 % increase in the number of migrants in the USA induced a 1 % decrease in the wages of local workers (Friedberg and Hunt, 1995). A study carried out by Cortes (2006) indicated that if the number of migrants increased by 10 %, the wages of local workers decreased by 0.6 %, whereas wages of the migrants decreased by 8 %. The author also notes that although migration produces benefits for the economy of the USA, it also leads to redistribution of wealth, a decrease in the wages of low-skilled

employees and an increase in the wages of high-skilled employees. The research performed in Germany over the period from 1991 to 2005 showed that an increase in the number of labour migrants by 10 % was accompanied by an increase in unemployment among local population by 1.5 %. At the same time, as the number of foreign employees increased by 10 %, the wages of local medium-skilled employees were observed to increase by 0.2 %, whereas wages of local high-skilled employees increased by 1.3 % (Munz, Straubhaar, Vadean and Vadean, 2006).

The research on the relationship between the number of migrants and the GDP of the receiving country testifies to positive effects of migration. In particular, the World Bank Group notes that a 10 % increase in the number of low-skilled labour migrants in Malaysia contributed to a 1.1 % increase in the real GDP of the country (Djalal and Pontes, 2017, October 9). A 1 %-increase in net migration increases the rate of GDP growth by 0.1 % (Borjas, 1995).

The growing number of migrants also produces a positive effect on the bilateral trade between the countries involved in the migration process. Thus, a 10 %-increase in the number of immigrants in the USA increases its exports to the respective countries of origin by 4.7 %, whereas its imports from these countries increase by 8.3 % (Nairn, 2002).

The existing models and methods that can be used to calculate the influence of migration on the economy of receiving country were considered in the research carried out by Boubtane, Coulibaly and Rault (2013). The authors admit the complexity of their development due to availability of cross-dependencies among numerous variables that should be factored in when constructing and using such models and methods. The models and methods that were considered by the authors are based on determining the relationship between the net inflow of migration and the level of unemployment, and the respective linkages between the level of unemployment and the GDP and income levels in the receiving country. In their research on migration, Ortega and Peri (2005) focused on migration flows and established a causal relationship between the differences in the levels of GDP based on PPP valuation observed in the receiving and sending countries and the number of migrants. The authors acknowledged that

legislation of the receiving country played a significant role in this respect. Imposing constraints on the right to enter the country has led to a considerable decrease in the number of migrants in such a country and vice versa.

The aim of the article is to develop an approach to modelling the economic processes which arise in the receiving country taking into account the types of international migration.

Methodological approach

In this study, we used the method of analysis to single out the rights that define the capabilities of migrants; the method of generalization to identify the attributes based on which certain rights can be matched with respective capabilities; the method of explanation to describe the notion of “migrant’s capabilities” and “type of economic interaction”; the method of classification to single out specific types of economic interaction; the

method of modelling to explain the relationship between the legislation of the receiving country, the capabilities of migrants, the types of international migrants, and the impact of such migrants on the economy of receiving country.

Main findings

The International Organization for Migration, in its *Glossary on Migration* (2011), defines migration as “the movement of a person or a group of persons, either across an international border, or within a State. It is a population movement, encompassing any kind of movement of people, whatever its length, composition and causes; it includes migration of refugees, displaced persons, economic migrants, and persons moving for other purposes, including family reunification.”

The *World Migration Report 2000* (IOM 2000) generally classifies international migration into voluntary and involuntary migration, as well as specifies its separate subtypes as shown in Table 1.

Table 1

Classification of migration and types of migrants

Voluntary migration	Involuntary migration	Mixed migration
1	2	3
Labour migrants Family migrants Foreign students	Refugees Asylum seekers Displaced persons	Illegal migrants

Source: developed by the authors based on data the *World Migration Report* (2000)

The aforementioned classification of international migrants is generally acceptable since it is used in international agreements that determine the rights of migrants. In this work, we consider only those rights that determine the ability of migrants to affect the development of the receiving country’s economy.

Under the notion of “migrant’s capabilities” we understand a set of actions defined by international and national legislation, which can be performed by a migrant on the territory of the receiving country and which will bear consequences for the economy of the receiving country. For example, Article 23(1) of the Universal Declaration of Human Rights (1948) reads that “everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against

unemployment”. This right means that migrants also have the capability to be employed, as there is no indication that such employment should take place exclusively in the country of origin.

However, we have to understand that in the modern legal practice the states are primarily committed to guarantee a full set of rights to their citizens. Certain restrictions can apply to non-citizens. Article 22 of The Universal Declaration of Human Rights (1948) reads: “Everyone, as a member of society, has the right to social security <...> in accordance with the organization and resources of each State“. Article 2(3) of the *International Covenant on Economic, Social and Cultural Rights* (1966) establishes the right of the developing countries to determine by themselves to what extent they would guarantee the individual rights to non-nationals. Therefore, international

migrants can be granted the same rights, and thus, the same capabilities as do the nationals of the state. However, different countries can limit such rights in different ways, thus determining the migrant's way of interaction with the economy of such a country.

In their turn, the universally applicable international agreements within the UN framework clearly define the rights and the respective capabilities which can be granted to migrants and which lay the foundation for migrants' interaction with the economy of receiving country depending on the type of migration.

Taking into account the principle of the rule of law, the study considers only the universally applicable international treaties and some specific agreements regarding separate types of international migration.

The first and the main agreement in the sphere of human rights is the Universal Declaration of Human Rights (UN General Assembly, 1948), which affirms the fundamental rights of individuals that equally apply to migrants in their host countries. The Universal Declaration of Human Rights determines that each individual has the right to move freely and choose the country of residence (Article 13); to work (Article 23); to obtain social security (Article 22); to own and dispose of property (Article 17), etc. It should be separately noted that involuntary migrants have the right to enter the country in accordance with Article 14(1), which specifies the right of each individual to "seek and to enjoy in other countries asylum from persecution".

Another important agreement is the *International Covenant on Economic, Social and Cultural Rights* (1966). This agreement defines the rights of individuals to obtain work, social protection and education, and separately covers the protection and support for families and mothers.

The following international agreements deal with specific types of international migration.

The legal status of refugees is defined by the *Convention and Protocol Relating to the Status of Refugees* (1951). This Convention was ratified by 145 countries. In accordance with this international agreement, refugees can be granted the right to enter and stay, to be employed, to obtain social protection, and to have access to education. This agreement also establishes conditions for

recognition of the refugee status and acceptance of refugees, asylum-seekers and displaced persons.

A showcase agreement in the field of asylum-seekers' rights is the *Reception Standards for Asylum Seekers in the European Union* (2000). This agreement indicates that "The expression 'reception standards' refers to a set of measures related to the treatment of asylum seekers <...>. These measures range from adequate reception conditions upon arrival at the border, access to legal counselling, freedom of movement, accommodation, and adequate means of subsistence to access to education, medical care and employment. Special arrangements are necessary to cover the specific needs of children, women and elderly asylum seekers. States have a broad discretion to choose what forms and kinds of support they will offer to asylum seekers. These may range from 'in kind' support, such as accommodation, food and health care, to financial payment or work permits to allow self-sufficiency".

The international agreement which defines the legal status of labour migrants is the *International Convention on the Protection of the Rights of All Migrant Workers* (1990). The Convention specifies a list of persons defined as migrant workers, as well as their rights in the receiving country. In particular, it establishes the right to obtain social protection, to have access to education and healthcare, the right to own and dispose of property including the right to transfer it to their country of origin. An important element of this international agreement is the protection and support of families in the context of international labour migration. Thus, this Convention defines the capacity of the states to create necessary conditions for reunification of the families of migrant workers, thus enabling a respective type of voluntary migration.

As for migration of the family members of refugees and asylum-seekers, a rather clear and extensive description of this process is provided in the *International Agreement on Family Reunification in the Context of Resettlement and Integration* (2001). This document defines the notion of "family" and puts forward general recommendations for the states with respect to the process of family reunification. The document also lists the advantages, including economic ones, which the receiving country obtains as a consequence of introducing and expanding the

process of family reunification. From an economic standpoint, it is important that the receiving countries are assigned an obligation to cover the specific costs related to providing temporary assistance to refugees and their families and the costs of providing the programs and procedures of family reunification for refugees and asylum seekers.

What concerns student migration, we can refer to the above-mentioned agreements that ensure the right of migrants to obtain education. Nevertheless, separate attention should be paid to student mobility programs, which are introduced by separate universities, organizations or governments and provide an opportunity for foreigners to obtain education abroad. It is worth pointing out that there are several terms that define different groups of international students: “Internationally mobile students” (UNESCO, n.d.), “foreign students” and “credit-mobile students”

(Migration Data Portal, n.d). In this study, we understand “foreign students” as defined in *Migration Data Portal* (2018). An extensive review of student migration and its legal status was made by Beine, Noël and Ragot (2014).

What concerns illegal migration, it is obvious that such migrants cannot be granted the rights to social protection and education, as well as the right to own and dispose of property in view of the illegality of stay on the territory of the receiving country.

Having performed the analysis of international agreements, we singled out six capabilities of migrants (P_i) that determine the ways in which migrants interact with the economy of receiving country. Table 2 shows a list of these capabilities and a description of their relationship with the effects of international migration on the economy of receiving country.

Table 2

Capabilities of migrants and description of their impact on the economy of receiving country

No.	Capabilities of migrants (P_i)	Description of the impact on the economy of receiving country
1	2	3
1	The capability to enter and stay (P_1)	The capability of entry and stay includes the right to enter and stay that arises when a migrant concludes an employment contract, reunites with her family, obtains asylum, or participates in international mobility programs. This leads to an increase in consumption.
2	The capability to be employed (P_2)	The capability of being employed means that migrants support their own consumption. The state benefits from increased inflow of taxes and social contributions into the state budget. Along with that, public expenditures related to social protection of the employed migrants might increase. In addition, economic benefits arise for owners of capital in the process of distributing the value added which was created with the help of migrant labour. The negative effect for the receiving country consists in the outflow of funds through personal remittances of migrants.
3	The capability to obtain social protection (P_3)	The ability to obtain social protection in full arises when the person becomes officially employed and pays her social contributions. Involuntary migrants can obtain public benefits without paying social contributions. For the receiving country, ensuring social protection means that public spending increases, especially in the case of involuntary migrants.
4	The capability to own and dispose of valuable property (P_4)	The ability to own and dispose of cash and non-cash property means that a migrant can own private property on the territory of receiving country, hold current and savings accounts at a bank, and participate in the share capital, which discourages an outflow of money (personal remittances) from the country and correspondingly stimulates its consumption and investment (savings) in the receiving country.
5	The capability to obtain education (P_5)	The ability of a migrant to obtain education leads to an increase in her consumption in the receiving country due to an increase in her education expenditures. Concurrently, living expenses (housing, food, transport, telecommunication services, etc.) increase in case the migrant has not previously resided on the territory of the receiving country. If student migration happens due to family reunification or labour migration, then the volume of personal remittances decreases.
6	The capability to obtain citizenship (P_6)	This capability means that a migrant gradually breaks her ties with the country of origin, which leads to a decrease in remittances and an increase in consumption and savings.

Source: developed by the authors

**The interaction between the migrants
and the economy of receiving country:
Its types and formalization**

Irrespective of the type of migration, the presence of migrants in the receiving country leads to increased consumption within the economy, which is induced by the fact that migrants have to satisfy their basic needs in food, housing, telecommunication services, transport, etc. Therefore, international migration, irrespective of its type, produces a positive impact on the economy of receiving country by increasing basic consumption (C_m), which is related to satisfying the primary needs of migrants.

Before we can proceed with describing the impact of migration on the economy of receiving country, it is important to answer the following question: At whose cost this increase in consumption will be achieved?

Involuntary migrants are entitled to social protection from the government to support their minimum subsistence level of living. That is, an increase in consumption of involuntary migrants who receive public benefits occurs thanks to redistribution of the state budget in favour of such migrants. In other words, the receiving country's gains from an increase in basic consumption (C_m) are offset by an increase in public expenditures (G_e), i.e. the funds are redistributed without any value added being created. The potential benefit of the receiving country in this case can be generated if the multiplication effect from such consumption appears to be larger than in the case if the funds were used to other purpose. An important circumstance here is that any assistance granted to migrants – whether in kind or in cash – will be consumed for the benefit of national producers in the receiving country.

In the case of voluntary migration, migrants have to support their consumption with their own funds, which means that either (a) the migrant's subsistence costs are covered by the third party or (b) the migrant is employed.

If the migrant's subsistence costs are covered by the third party, then, in order to determine the impact on the economy of receiving country, it is important to answer the following question: Is this third party a resident of the receiving country or not? If the third party is the resident of the

receiving country, the economic benefit of the receiving country is negated due to redistribution of funds within the country's economy. For example, a nominal organization specializing in student exchange programs awards a grant for education to a student from a foreign country. Thus, the money received by the migrant student will be spent on consumption inside the receiving country, but the benefit from consumption obtained by the receiving country is negated as such consumption expenditure is incurred by the resident. Therefore, if the migrant's subsistence costs are financed by a third party, the receiving country's economy either obtains a benefit from basic consumption and additional consumption ($C_m + C_a$) if this consumption expenditure is covered by a non-resident, or does not receive any benefits if this consumption expenditure is covered by a resident.

By "additional consumption" (C_a) we mean expenses, which are not related to ensuring the migrant's minimum subsistence level of living, such as expenses on education, textbooks, travel, purchases of electronic appliances, etc.

We would like to note that, irrespective of the fact that family migration is considered as a separate type of migration, such migrants interact with the economy of receiving country as labour migrants or migrant students supported by a third party. The procedure for family reunification is in fact an opportunity for such migrants to enter and reside in the country.

The most complicated and the most ambivalent task is to assess the impact of the employed migrants on the economy of receiving country.

We would like to separately mention that the possibility of employment in different countries is available for both the involuntary migrants and the education migrants. We would like to emphasize that it is not only the labour migrants who can be employed.

The fact of employment means that a migrant is involved in the process of value added creation, which will further be distributed between the owners of capital (benefit of the capital owners), the state (government revenue derived from taxes), and finally, the migrants (income of a migrant worker). However, the influence of the employed migrants on the economy of receiving

country is not limited to this. In our opinion, when determining the impact of such migrants, the most important question is: Where and how the migrant's income will be used? Let us assume that the migrant's income, excluding basic consumption (C_m), is deemed to represent savings of the migrant (S_d) up until the moment when the migrant decides to spend them. This relationship can be formalized as:

$$Y = C_m + S_d \quad (1)$$

where Y is the migrant's income (after tax and social contributions, etc.); S_d is the migrant's savings, which can later be sent to the country of origin or spent in the receiving country.

The aim of the migrant, in our opinion, is to increase her own welfare. From the standpoint of welfare maximization, the available public goods, the opportunities for employment, career development and personal growth, the political order, the level of civil society development, and other factors increase the attractiveness (A) of a country for the migrant. A detailed list of such goods and factors and principles of their choice are described in the *Push and Pull Migration Theory* (Stanojoska, Angelina & Petrevski, Blagojce, 2012).

Thus, the attractiveness of sending (A_o) and receiving (A_H) countries is assessed by migrants in terms of their personal welfare maximization. In result of country attractiveness assessment, the migrant determines where and how her income will be spent.

It is important to note that the receiving country cannot significantly influence upon the majority of mentioned factors in the short-term perspective. However, ensuring favourable legislative environment, which enables migrants to use available goods, can quickly increase the country's short-term attractiveness.

Hence, the receiving country can stimulate migrants to spend their income within its borders under the condition that it expands the existing rights and grants new rights to migrants, i.e. if it expands the migrants' capabilities, thus increasing the attractiveness of the receiving country (A_H).

Given that $A_H > A_o$, the migrant maximizes her welfare in the receiving country, which induces her to concentrate her economic interests within this country. In this case, her deemed savings (S_d) can remain in the receiving country in full or in

part, i.e. be shared between the receiving country and the country of origin.

The deemed savings that were not remitted to the migrant's home country can be spent by the migrant on additional consumption (C_a) in the receiving country or remain unused as savings. Such savings can be recorded in the national accounts of the receiving country in case the migrant is considered a resident in accordance with SNA-2008 (World Bank, 2009). As a result, the migrant's income will be divided into four components, and Formula 1 will be written as:

$$Y = C_m + C_a + S + R \quad (2)$$

where C_a is the migrant's additional consumption if $A_H > A_o$; S is the part of migrant's savings that were not remitted to the country of origin if $A_H > A_o$; R is the part of migrant's savings that were remitted to the country of origin (remittances).

Thence, the following relationships hold:

$$\begin{cases} 0 \leq C_a; S; R \leq S_d \\ C_a + S + R = S_d \end{cases} \quad (3)$$

Having taken into account the Keynesian equality $I=S$ (Keynes, 1936), Formula 2 takes the form:

$$Y = C_m + C_a + I + R \quad (4)$$

where I is investments received by the country if $A_H > A_o$.

Therefore, in addition to government revenue, the benefit of capital owners and basic consumption, the receiving country derives an economic benefit from increased additional consumption and investments ($C_a + I$); whereas the volume of personal remittances (R), which are an expense for the economy, decreases.

As for personal remittances, it is not possible to univocally treat the total amount of factual remittances as expenses of the receiving country. In order to understand at whose expense is it that a migrant earns her income, a part of which is remitted to the country of origin, we have to answer the following question: Who is the consumer of the goods and services that were produced by the migrants in the receiving country? If, for example, the good was produced in the receiving country with the help of migrant labour and later exported to a third country, then the value of the migrant's labour embedded in the value of

this good is actually remunerated by the third country, whereas the receiving country redistributes the incoming funds. If the good was produced and consumed in the receiving country, then the part of the good's value representing the cost of migrant labour can be treated as "imports" of labour into the receiving country, and thence, personal remittances represent an expense for the economy of the receiving country. Nevertheless, it is complicated to determine which of the products that have been produced in the receiving country, were later consumed in the receiving country and which were exported to third countries. That is why personal remittances cannot be fully treated as expenses of the receiving country.

Taking into account the aforementioned dependencies, the economic benefit of the receiving country arising from economic interaction with the employed migrants (Y_{mig}) can be written as a sum of the following elements:

$$Y_{mig} = C_m + C_a + (G_r - G_e) + I - R \quad (5)$$

where G_r is government revenue in the receiving country (taxes, social contributions, etc. paid by migrants); G_e is government expenditure in the receiving country (social protection of migrants, etc.).

This equation can also be used to explain the economic relationship between other types of migration and the receiving countries taking into account the following remarks and constraints:

1. The weight of each element of migrant's expenses (C_m ; C_a ; G_r ; G_e ; I ; R) in relation to total amount of expenses ($\sum(C_m, C_a, G_r, G_e, I, R)$) varies depending on the type of migration and the migrant's capabilities (P_i).

2. The benefit arising from consumption ($C_m + C_a$) for all types of migration is adjusted taking into account the coefficient of propensity to import because some of the consumed goods can be imported.

3. Wages obtained by migrants from participation in production of goods and services that are further exported to third countries are assumed to be obtained from the third countries. Thus, personal remittances cannot be fully treated as expenses of the receiving country.

4. For all involuntary migrants, which are not employed and receive public benefits from the

receiving country, the equation takes the form $Y_{mig} = 0$, since public funds are redistributed from the state budget to migrants without creating any value added.

5. For voluntary migrants, whose subsistence costs are covered by a third party, the equation takes the form $Y_{mig} = 0$ if the migrant's subsistence is funded by a resident of the receiving country, and $Y_{mig} = C_m + C_a$ if the migrant's subsistence is funded by a non-resident of the receiving country.

6. In the case of illegal migration, the government does not collect revenue arising from migrants' taxes ($G_r=0$), but it might incur expenses on measures against illegal migration ($G_e \geq 0$); additional investments are not available ($I_a=0$) since migrants cannot interact with the financial system, cannot own property, etc; the volume of additional consumption (C_a) is defined by the needs and personal decisions of such migrants and does not depend on migrants' capabilities (P_i); the volume of personal remittances (R) converges to maximum.

The total economic benefit of the receiving country (Y_t), except for the benefit arising from interaction with migrants (Y_{mig}), includes also the profits of the owners of capital (Y_c). Thus, Y_t for the receiving country can be described as:

$$Y_t = Y_{mig} + Y_c \quad (6)$$

It is worth to acknowledge that the profits of the owners of capital can arise from: a) the process of distribution of the value added embedded in goods that were produced additionally with the help of additional migrant labour inputs, that is an increase in the volume of production; b) as an effect from reduced level of wages, including that of the local workers (Bosak, Grigoriev, Chernobai & Skibinskyi, 2015). In case the owners of capital obtain their profits due to decreased wages of local workers, such profits cannot be considered an economic benefit for the economy of receiving country, since it is only the redistribution of funds from the local workers to local owners of capital that occurs inside the economy. It is important to note that the profits of the owners of capital arise only if the migrant is employed. In all other cases, $Y_c = 0$.

To sum up the aforementioned, we believe it is feasible to classify international migration by type of its interaction with the economy of

receiving country. The criteria that are used for the purposes of such classification include the combinations of migrant's capabilities P_1, P_2, P_3 which determine the legal status of the international migrant and determine who should be assigned the responsibility to cover the costs of migrant's subsistence.

In our opinion, it is possible to single out the following types of international migration:

1. Involuntary migration with subsistence support provided by the receiving country without a possibility of employment. Capabilities P_1 and P_3 are ensured.

2. Voluntary migration with subsistence support provided by a third party without a possibility of employment. Capability P_1 is ensured, whereas subsistence support is provided by the third party.

3. Voluntary or involuntary migration with possibility of employment. Capabilities P_1 and P_2

are ensured. Capability P_3 arises when the migrant finds employment.

4. Illegal (mixed) migration. None of the capabilities is ensured.

In order to formalize and generalize the aforementioned, we constructed the formulas for calculation of the total economic benefit of the receiving country in accordance with the type of interaction with the economy of receiving country (see Table 3).

In Table 3, Columns 3 and 5 contain indicators that characterize the positive and negative impacts of the respective type of migration. Columns 4 and 6 show the capabilities of migrants that produce an impact on the respective indicators in Columns 3 and 5.

The list of economic development indicators (DI_i), which are used in this study and their description are shown in Table 4.

Table 3

Formalization of the impact of international migration on the economic development of receiving country depending on the type of economic interaction

No.	Type of economic interaction	Positive impact (DI_i)	Migrant's capabilities (P_i)	Negative impact (DI_i)	Migrant's capabilities (P_i)	Calculation of Y_t
1	2	3	4	5	6	7
1	Involuntary migration (excluding employed migrants)	C_m	P_1	G_e	P_3	$Y_t = C_m - G_e$
2	Voluntary migration (excluding employed migrants)	C_m	P_1	-	-	$Y_t = C_m + C_a$
		C_a				
3	Voluntary and involuntary migration (employed migrants)	C_m	P_1	G_e	P_3	$Y_t = C_m + C_a + I + (Gr - G_e) - R + Y_c$
		C_a	P_2, P_3, P_4, P_5, P_6	R	P_2, P_3, P_4, P_5, P_6	
		I	P_2, P_3, P_4, P_5, P_6			
		Gr	P_2			
		Y_c	P_2			
4	Mixed migration	C_m	-	R	-	$Y_t = C_m + C_a - R + Y_c$
		C_a	-			
		Y_c	-			

Source: developed by the authors

Table 4

The list of economic development indicators (DI_i) which describe the impact of migration on the economy of receiving country

No.	Economic development indicator (DI _i)	Definition of an economic development indicator
1	2	3
1	C _m	Basic consumption – the migrant’s consumption related to ensuring minimum subsistence level of living (housing, food, telecommunication services, transport, etc.).
2	G _r	Government revenue – the receiving country’s government revenue derived from collection of taxes, social contributions, etc., which are paid by migrants.
3	G _e	Government expenditure – the receiving country’s budget expenditures that are connected with a) providing assistance grants to involuntary migrants; b) social protection of migrants that are officially employed; c) other expenditures connected with international migration.
4	S _d	Deemed savings – the migrant’s deemed savings calculated as the difference between the migrant’s after-tax income and her basic consumption expenditure. In the future, these savings can be used for additional consumption, investing or remittances to the country of origin.
5	C _a	Additional consumption – additional consumption of the migrant, which is not related to ensuring minimum subsistence level of living.
6	I	Investments – the volume of investments received by the receiving country from a migrant if A _t >A _o .
7	R	Personal remittances – the transfer of funds by a foreign employee to a private individual in the country of origin.
8	Y _c	Benefit of capital owners – the gains that arise from distribution of the value added which is embedded in products that were produced with the help of migrant labour.
9	Y _{mig}	Benefit from economic interaction with migrants – the benefit obtained by the economy of receiving country from economic relationship with a migrant.
10	Y _t	Total economic benefit – an integral indicator of the impact of international migration on the economy of receiving country. It is calculated as the sum of Y _{mig} and Y _c .

Source: developed by the authors

Migrant’s capabilities and the impact of migrants on the economy of receiving country.

In Table 4 each indicator of economic development (DI_i) is juxtaposed with certain capabilities of the migrant (P_i). In our opinion, there is a functional relationship between such indicators and the respective capabilities. For example, the indicator of the volume of personal remittances of the employed migrants directly depends on the capability to be employed (P₂) and inversely depends on the capabilities to obtain social security (P₃), to own and dispose of property (P₄), to obtain education (P₅), and to obtain citizenship (P₆). Such a relationship can be formalized as:

$$R = f(P_2; P_3; P_4; P_5; P_6) \quad (7)$$

The availability of functional relationships and the nature of such relationship between the

indicators of economic development and the capabilities of the migrant are shown in Table 5.

The “plus” sign in Table 4 means that there is a direct relationship between the indicator of economic development and the migrant’s capability. In other words, the expansion of rights that ensure such a capability leads to an increase in the value of a respective indicator. The “minus” sign indicates an inverse relationship.

We also singled out two groups of capabilities: Basic capabilities (P₁, P₂, P₃) and additional capabilities (P₄, P₅, P₆). Basic capabilities determine how the migrants will interact with the economy of receiving country, i.e. define the type of interaction with the economy of receiving country.

**The matrix of interrelationships
between the indicators of economic development and the migrant’s capabilities**

	C _m	G _r	G _e	C _a	I	R	Y _c
P ₁	+						
P ₂		+		+	+	+	+
P ₃			+	+	+	-	
P ₄				+	+	-	
P ₅				+	+	-	
P ₆				+	+	-	

Source: developed by the authors

Expansion of the rights of migrants that ensure basic capabilities leads to an increase in the values of economic development indicators (DI_i). Obviously, the sum of the values of economic development indicators will increase as well. This relationship can be formalized as:

$$\sum_{i=1}^i (DI_i^{LPR}) < \sum_{i=1}^i (DI_i^{EPR}) \quad (8)$$

where DI_i^{LPR} is the indicator of economic development if basic rights are limited, and DI_i^{EPR} is the indicator of economic development if basic rights are expanded.

For example, the easing of legislative requirements of the receiving country with respect to employment of migrants, i.e. an expansion of capability P₂ leads to an increase in the number of employed migrants. In other words, an increase in economic development indicators (DI_i) is caused by an increase in the number of migrants who interact with the economy of receiving country in one or another way, and vice versa.

A change in the rights defining additional capabilities leads to a change in the value of economic development indicators (DI_i), but the sum of the values of economic indicators does not change, however. Thus, an increase in the value of one of the economic development indicators occurs due to a decrease in the value of other indicator(s) (see Formula 3). For example, an increase in the volume of additional consumption (C_a) is accompanied by a decrease in the volume of investments (I) or personal remittances (R), or both indicators at the same time.

The aforementioned relationship can be formally written as:

$$DI_i^{LSR} \neq DI_i^{ESR} \quad (9)$$

where DI_i^{LSR} is the indicators of economic development given that additional rights are limited; and DI_i^{ESR} is the indicators of economic development given that additional rights are expanded.

At that, the following equation holds true:

$$\sum_{i=1}^i (DI_i^{LPR}) = \sum_{i=1}^i (DI_i^{EPR}) \quad (10)$$

In other words, a change in the scope of rights that define additional capabilities allows to influence upon the values of economic development indicators with the aim of maximizing the positive outputs of migration and minimizing the negative outputs of migration (see Table 3), keeping the factual number of migrants unchanged.

A conceptual model of the impact of international migration on the economy of receiving country

Proceeding from the assumption that there exist functional relationships between the migrant’s capabilities (P_i) in the receiving country and the indicators of economic development (DI_i), as well as taking into account the legislative peculiarities of regulating different types of international migration and taking into consideration the classification of international migration by type of interaction with the economy of receiving country, we developed a conceptual model (hereinafter referred to as Model) of the impact of international migration on the economy of receiving country (see Fig. 1).

The Model consists of five combinations of the migrant’s capabilities (P_i), which are juxtaposed

with five alternative impacts of international migration on the economy of receiving country characterized by total economic benefit (Y_t).

In order to explain the Model in Figure 1, we use a set of arbitrary notations. The result produced by each combination is shown in a block titled "Total economic benefit", where indicators shown in columns with the "+" sign indicate positive impact, whereas indicators in columns with the "-" sign indicate negative impact. The numerical value of total economic benefit for a respective combination is calculated as the difference between the indicators in the columns marked with "+" sign and indicators in columns marked with "-" sign.

Such symbols as " $DI_i \rightarrow \max/\min$ " indicate whether the respective indicator approaches its maximum ($DI_i \rightarrow \max$) or minimum ($DI_i \rightarrow \min$) if a respective condition is fulfilled. For example, notation " $C_a \rightarrow \max$ " in block "Total economic benefit (2)" indicates that the volume of additional consumption of the migrant converges to maximum if the migrant is granted expanded rights that ensure additional capabilities (P_4, P_5, P_6).

Let us consider the suggested combinations in detail:

Combination 1 (red line) describes the impact of mixed migration. Capability P_1 is constrained. The migrant has no possibility to legally enter the receiving country, but nevertheless she makes a decision to cross the border illegally. The migrant financially supports herself, which requires that she is illegally employed. As a result, the total economic benefit (1) of the receiving country consists of the basic and additional consumption and the benefit of the owners of capital. The losses include personal remittances. The volume of additional consumption is minimal, since the ability of the migrant to interact with the economy is limited, that is why the majority of earnings are transferred by the migrant to the country of origin.

Combination 2 (orange line) describes the impact of mixed migration. Capability P_1 is realized, but Capability P_2 is constrained. The migrant enters the receiving country as a tourist, for example, but later finds illegal employment. The economic relationship of such a migrant with the economy of receiving country and the total

economic benefit (1) is similar to that in Combination 1.

Combination 3 (blue line) characterizes the impact of involuntary unemployed migrants. Capabilities P_1 and P_3 are realized. Capability P_2 is constrained. According to international agreements, the receiving country commits to ensure the minimum subsistence level of living for the migrants and may grant the capability of employment. At that, the illegal crossing of the border does not deprive such migrants of the right to stay in the receiving country and other rights in the future. Therefore, the economy of the receiving country obtains a benefit from increased consumption (C_m), which is negated due to respective increase in public spending (G_e), i.e. the redistribution of funds.

Combination 4 (yellow line) describes the influence of voluntary unemployed migrants. The capability P_1 is realised. Capability P_2 is constrained. Such migrants can be students or members of migrants' families who migrate in order to reunite with their family. The interaction of such migrants with the economy of receiving countries occurs through basic (C_m) and additional (C_a) consumption. If the third party is a resident of the receiving country, then the total economic benefit (4) equals 0 because the funds are redistributed within the economy of receiving country. If the third part is not a resident of the receiving country, then the total economic benefit (4) is a sum of basis consumption C_m and additional consumption C_a , which can be tentatively considered as exports from the receiving country to the country of third party's origin.

Combination 5 (green line) characterizes the impact of voluntary and involuntary employed migrants. The capabilities P_1 and P_2 are realised. The relationship of such migrants with the economy of receiving country is described by Formula 5. At that, the expansion of migrants' rights that ensure additional capabilities (P_4, P_5, P_6) leads to increasing volumes of additional consumption (C_a) and investments (I) and decreasing volumes of personal remittances (R) (see total economic benefit (2) in Figure 1), and vice versa if the rights are reduced (total economic benefit (3)).

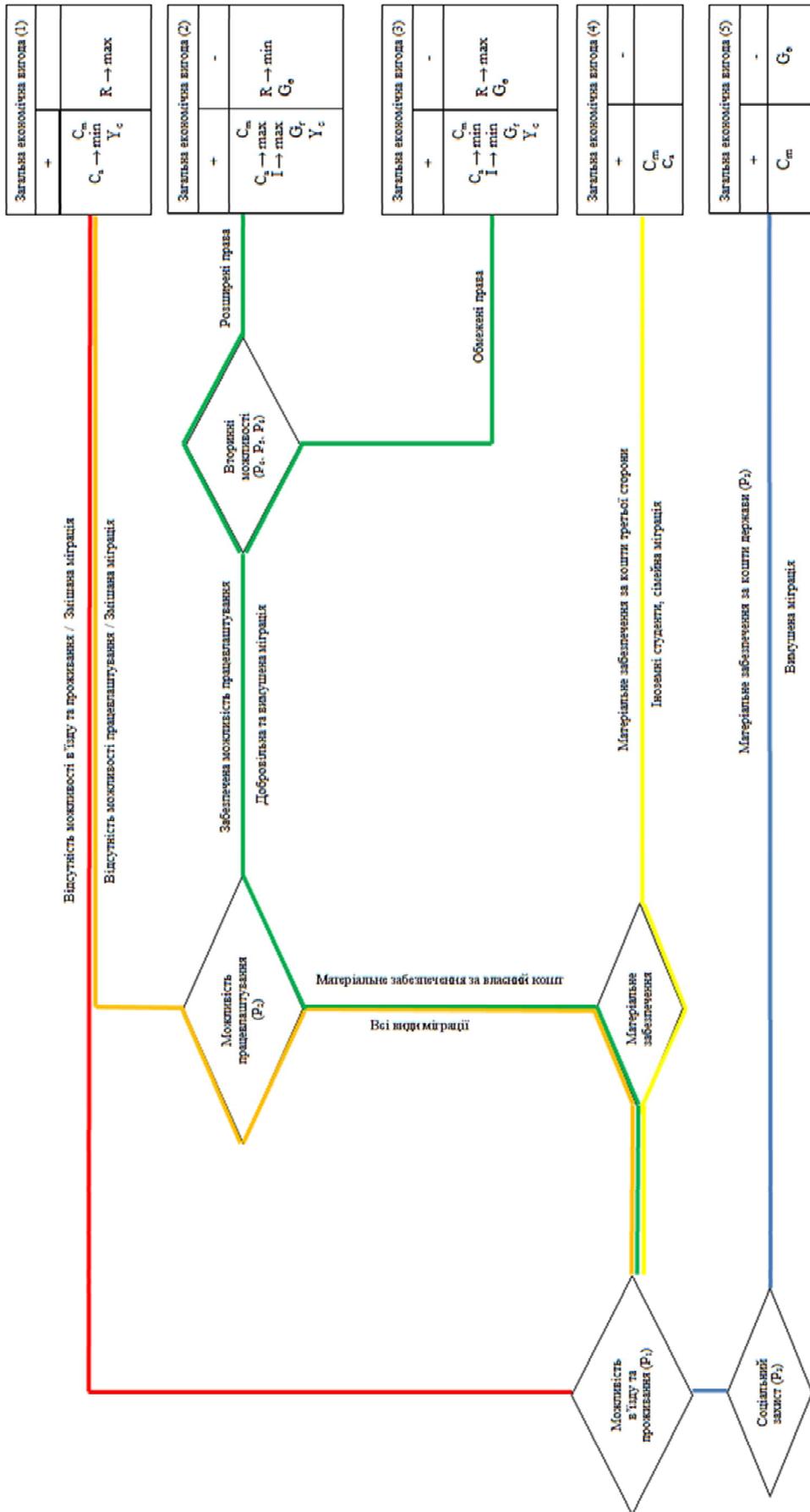


Fig. 1. A conceptual model of the impact of interntonal migration on the economy of receiving country

Source: developed by the authors

The results of applying the conceptual model of the impact of international migration on the economy of receiving country (the case of Germany)

For the purposes of this study, Germany was selected as a country whose data could be used to perform calculations specified in our models. This choice was predetermined by the following factors: a) Germany hosts quite a large number of migrants, who reached 10.624 million persons in 2017 accounting for nearly 12.83 % of total population in 2017 according to estimates of the Statistisches Bundesamt (2018, April 12); also, Germany is the second largest country in terms of the number of received migrants since 2005, according to data of UN DESA (IOM, 2017); b) Germany hosts different types of migrants, which allows to perform calculations with respect to all suggested types of interaction with the economy of receiving country; c) sufficient amount of verified statistical data sources are available for carrying out the required calculations.

Within the frames of the developed model, our calculations are performed in several stages:

Stage I. Determining the factual number of international migrants in Germany as of December 2017 depending on their legal status (capabilities) and classifying them by type of their interaction with the economy according to specified criteria.

Stage II. Forming the data set of economic development indicators that characterize the types of interaction between the international migrants and the economy.

Stage III. Calculating the factual indicator of total economic benefit (Y_1) for Germany in 2017.

Stage IV. Characterizing the factual impact of international migration on the economy of Germany in 2017.

During Stage I, we determined the number of migrants in Germany in 2017 by type of their interaction with the economy. The results are shown in Table 6.

Table 6

The number of international migrants in Germany by type of interaction with the economy in 2017

No.	Type of international migration	Number of migrants, thousands			
		Type I	Type II	Type III	Type IV
1	2	3	4	5	6
2	Involuntary migrants	468		1 129.57	
3	Voluntary migration				
4	Labour migrants			3 470	
5	Family migrants			273.578	
6	International students		297.37		
7	Mixed migration				
8	Illegal migrants	166.068			62.79
9	Total	634.068	297.37	4873.148	62.79

Source: constructed and calculated by the authors

According to data of Statistisches Bundesamt (2018), the number of persons who were seeking asylum, that is were involuntary migrants, was 1 597 570 persons as of December 2017.

As noted by AIDA (n.d.), “the available statistical data of the German Bundesagentur für Arbeit include the number of unemployed [asylum seekers] by nationality, but without any division based on legal status”. It is necessary to note that when entering the receiving country, all involuntary migrants are granted the legal status of

an asylum seeker, which is later reviewed. As a result, the migrant can retain her asylum seeker status or be granted the refugee status or subsidiary protection or be deported.

In this context, the data on the number of involuntary migrants in Table 6 are shown without division into Types shown in Table 1, since the status of the asylum seeker means that the migrant has the right to work under §5 of the Asylum Seekers’ Benefits Act (Bundesamt für Justiz, 2017).

Therefore, all involuntary migrants in Germany are ensured all basic capabilities (entry and stay, employment and social protection) given that they comply with the requirements of the Asylum Act, and thus they can be classified as a Type III interaction. If such a migrant does not find employment, she continues to obtain social protection as stipulated by the Asylum Seekers' Benefits Act and is classified as an interaction of Type I.

According to data of the Federal Statistical Bureau of Germany (Statistisches Bundesamt, 2018, August 23), the number of involuntary migrants who received benefits, i.e. interaction of Type I, was 468 000 persons in 2017. Thus, the number of involuntary migrants included under Type III was respectively 1 129 570 persons.

According to data of the Federal Ministry of Education and Research of Germany (2017), the number of foreign citizens employed in Germany as of 2017 was 3.470 million persons. It is noted that all of the employed migrants are granted the right to social protection. Thus, the number of labour migrants included under Type III interaction was 3.470 million persons in 2017.

The reports on family migration were published annually up to and including 2015. As a result of "technical changes in compilation of official statistics", the data for 2016 and afterwards are absent (BAMF, 2019). In view of this, we calculated the approximate number of new family migrants to equal 70.335 thousand persons in 2016 and 63.417 thousand persons in 2017. The calculations were carried out as follows: 1) we calculated the value of the coefficient of correlation (0.953) between the data on the number of new family migrants for the 10 years from 2006 to 2015 (BAMF, 2016) and the data on the number of new international migrants in total (OECD, 2019) for the same time period; 2) the number of new family migrants for 2016 was calculated as a product of the number of new family migrants in 2015 by the rate of growth in total new international migrants in 2016; 3) the number of new family migrants in 2017 was calculated in a similar way in relation to previous year.

Before we can proceed with calculating the number of family migrants in Germany in 2017, it

is necessary to note that, in order to obtain citizenship, migrants have to officially reside on the territory of Germany for at least 8 years (Grote, 2017). Thus, the number of family migrants in Germany in 2017 is calculated as the number of all new family migrants in 2010 inclusive, which equalled 498 262 persons, of which 132 026 persons were children, which obviously are included under Type II interaction. However, it is necessary to note that since it is parents who carry the costs of their children's living and with whom the family reunification is performed, the economy of receiving country does not receive any economic benefits due to the fact that the funds are redistributed inside the economy. The specific data on those employed among adult migrants are not available. According to BAMF (2019), the share of employed persons among all international migrants in Germany in 2017 was 74.7%. Therefore, out of all family migrants, 224 684 persons can be included under Type II interaction and 273 578 persons can be included under Type III interaction.

The number of foreign students in 2016/2017 study year was 358 901 persons (Germany, Federal Ministry of Education and Research, 2017). However, it should be taken into account that 61 528 students were granted education allowances by Germany (DAAD, n.d.), i.e. the funds were redistributed inside the economy, and such foreign students are deducted from the total number of migrants of this type. Thus, the number of foreign students, which were classed as Type II relationship, was 297 367 persons.

The annual data on the number of illegal migrants in Germany is unfortunately not available. Obviously, this is connected with the complexity of tracing and accounting for such migrants. The estimates of the number of illegal migrants range approximately from 180 000 to 520 000 persons as of 2014 (Vogel, 2015). The German Federal Department on Migration and Refugees reported 228 859 illegal migrants in 2017 (Grote, Hoffmeyer-Zlotnik, Kuntscher and Tangermann, 2018), of which 166 068 persons were asylum seekers who remained in Germany illegally after they had been rejected the refugee status. It is worth to note that these migrants were not deported; however, they lost their capability to be employed, but instead obtained minimum social protection. Therefore,

166 068 illegal migrants in 2017 were included under Type I, whereas 62 791 migrants were included under Type IV interaction.

The total number of international migrants equalled 5.867 million persons. This number was obtained from the data on international migrants

which could be verified in official sources with respect to specific types of migration.

At Stage II, we formed a data base (see Table 7) of the economic development indicators and the respective factual numbers of migrants within their respective types of interaction with the economy.

Table 7

The indicators of economic development, which characterize the types of interaction between international migrants and the economy of Germany in 2017

No	Type of international migration	Indicator values, €/person						Total economic benefit, €/person
		Basic consumption	Additional consumption	Investments	Government revenue	Government expenditure	Personal remittances	
1	2	3	4	5	6	7	8	9
1	Involuntary migrants (Type I)	15300	–	–	–	15300	–	0
2	Involuntary migrants (Type III)	4248	10 928		10 024	8288	0	16912
4	Labour migrants (Type III)	4248	5 294		10024	8288	5633	5644
5	Family migrants (Type III)	4248	10 928		10024	8288	0	16912
6	Foreign students (Type II)	5796	22349	–	–	–	–	28145
7	Illegal migrants (Type I)	10000	–	–	–	10000	–	0
8	Illegal migrants (Type IV)	4248	3278	–	–	–	12662	-5135.2

Source: constructed and calculated by the authors

The detailed data on government expenditures related to protection of asylum seekers in Germany are not publicized (EMN, 2017, December 29). However, the data of Migration Policy Database (OECD, 2017, January) indicate the expenditures of at least €10 000 per year to support at least one asylum seeker, which matches the level of expenditures in the neighbouring countries (EMN, 2017, December 29). A study of Cologne Institute for Economic Research indicates the expenditures of €15 300, which include the expenses in value of €3 300 for language

courses and refugee integration programs. Thus, public expenditures related to financial assistance provided to migrants of Type I are €15 300 per year (Becker, 2016). It should be noted that these expenditures are related to maintenance of facilities that are necessary for the process of registration, keeping records and providing support to refugees, etc. Basic consumption equals government expenditure and does not decrease by the coefficient of propensity to import, since the majority of goods and services is provided in kind, mainly with the help of attracting labour of the

asylum seekers themselves, whereas more than a half of the amount of financial benefits are allotted to cover the housing rents.

According to data of German Academic Exchange Service (2017), average monthly student expenditures related to satisfaction of basic needs were €644. The sum of other monthly expenditures was approximately €261. Also, the organization notes that average monthly cost of studying in Germany varied around €10 000 per semester. Thus, basic consumption of foreign students in Germany was €5 796 per year, additional consumption equalled €22 349, total consumption was €28 145. The amount of consumption per year is calculated taking into account the fact that the duration of study is 9 months.

The minimum wage in Germany in 2017 was €1 498 per month (EXPATICA, 2019, January 30). The monthly wage of low-skilled workers was €2 100 or €25 200 per year (Trading Economics, n.d.). Taking into account that international migrants usually work at low-skilled occupations (IOM, 2000), we consider it feasible to assume this particular size of wages for further calculations. The tax rate on wages in Germany is 19 % (Trading Economics, 2019), whereas the size of social contributions for employees was 20.78 % (Trading Economics, 2018). Thus, the amount of public revenue derived from migrants of Type III was €10 024 in 2017. According to data of the World Bank (2018), the volume of personal remittances from Germany in 2017 was €19.579 billions. This is €4 011 per migrant per year. However, we consider that it is feasible to deduct the employed involuntary migrants from the total number of migrants included under Type III since we assume that such migrants do not make personal remittances for those very reasons that preconditioned their search for asylum. We also assume that the volume of personal remittances of family migrants is also equal to 0, since the households of such migrants are located in the receiving country. Therefore, the volume of personal remittances is €5 633 per person per year and €0 for employed voluntary and family migrants. Basic consumption is assumed to be at the level of €354 per month or €4 248 per year,

which corresponds to maximum amount of benefits for an asylum seeker (AIDA, 2018). The amounts of additional consumption and investments for migrants of Type III are calculated together, which is connected with a) the complexity of searching for data on values of these indicators in open access sources; b) construction of the function for calculation of total economic benefit for the migrants included under this type of relationship. Thus, the amount of additional consumption for involuntary migrants and family migrants included under Type III equals €10 928 and €5 294 for labour migrants included under Type III. The costs of social protection in Germany were €8 288 per person in 2015 (OECD, 2018). Unfortunately, the data for 2017 are not available. Therefore, the amount of government expenditures on social protection of the Type III interaction was €8 288 per person.

The size of wages for illegal migrants is assumed to be at the level of wages for migrants of the Type III interaction. The amount of basic consumption is also assumed to be at the level of basic consumption for migrants of the Type III interaction. The amounts of taxes and social contributions are equally divided between the employer and the migrant. Taking into account the fact that illegal migrants are not able to perform investments and assuming that their propensity for additional consumption is lower compared with the migrants of Type III, the amount of additional consumption for illegal migrants of Type IV relationship is assumed to be at the level of 30 % of the size of additional consumption and investments of labour migrants of Type III, amounting to €3 278. The amount of personal remittances was €12 662, which was calculated as the difference between the migrant's wage and the sum of basic and additional consumption.

The data on benefit of the capital owners is not available due to complexity of calculating such an indicator with the help of open-access data.

During Stage III, the total economic benefit was calculated for Germany in 2017 (see Table 7). The results of intermediate calculations and total economic benefit for each type of interaction are shown in Table 8.

In Table 8 we see that the overall sum of economic benefits that Germany obtained from its interaction with migrants equalled €51 363 million in 2017, which accounts for nearly 0.62 % of GDP in 2017 (World Bank, n.d.). Worthy of note is the fact that the aforementioned result of calculations concerns only those 5.867 million migrants (55.2 % of total number), who could be

clearly put under some type of economic interaction.

During Stage IV, we characterized the factual influence of international migration on the economy of Germany in 2017. Based on the results of our analysis, we described the impact of each type of international migration on the economy of Germany (see Table 9).

Table 8

Total economic benefit of Germany from economic interaction with migrants in 2017

No.	Type of interaction	Type of international migration	Values of indicators, €mn						Total economic benefits, €mn
			Basic consumption	Additional Consumption	Investments	Government Revenue	Government expenditure	Personal Remittances	
1	2	3	4	5	6	7	8	9	10
1	Type I	Involuntary migrants (Type I)	7160	-	-	-	7160	-	0
		Illegal migrants (Type I)	1661	-	-	-	1661	-	0
2	Type II	Foreign students (Type II)	1724	6646	-	-	-	-	8 369
3	Type III	Involuntary migrants (Type III)	4798	12 344	11323	9362	-	19 103	
		Labour migrants (Type III)	14741	18 371	34783	28759	19550	19 586	
		Family migration (Type III)	1162	2 990	2742	2267	-	4 627	
4	Type IV	Illegal migrants (Type IV)	267	206	-	-	-	795	-322
5	Total		31512	40 556	48848	49 210	20 345	51 363	

Source: constructed and calculated by the authors

Table 9

Description of the impact of the types of international migration on the economy of Germany in 2017

No.	Type of migration	Description of the impact
1	2	3
1	Involuntary migrants (Type I)	This type of migrants did not produce a negative impact (zero total economic benefit) since government expenditures on migrants' social security were used on consumption, which activated demand that was satisfied by local producers. The IMF report (IMF, 2016, May 9) states that such a redistribution of funds in the end produces a positive result thanks to incentives given to local producers
2	Involuntary migrants (Type III)	The employment of involuntary migrants produced a positive impact on the economy of Germany (total economic benefit equal to €19 103 mn). This occurred thanks to a) decreased number of persons that receive public benefits; b) decreased social protection expenditures from €15 300 per person for unemployed involuntary migrants to €8288 per person for employed migrants; c) increased tax receipts in value of €10 024 per person. The economy of Germany as a whole received additional consumption and investments in value of €5 634 per person, since such migrants do not make personal remittances

Table 9 continuation

1	2	3
3	Labour migrants (Type III)	The total economic benefit from such migrants was €5 644 per person in 2017. This result is the lowest among other types of migration within the Type III interaction. This is primarily connected with personal remittances
4	Family migrants (Type III)	The total economic benefit from employed family migrants is high, equalling to €16 912 per person. This is connected with the fact that such migrants do not carry out personal money transfers
5	Foreign students (Type II)	Foreign students who arrive to study and support themselves on their own generate the highest total economic benefit among other types of migration, equalling €28 145 per person in 2017. Such a migration does not induce government expenditure or other costs to the economy of the country as a whole
6	Illegal migrants (Type I)	The illegal migrants that receive state-funded assistance include asylum seekers that have not been granted official refugee status, but remained on the territory of Germany. In accordance with active laws, the country cannot deport them. The impact of such migrants on the economy of Germany is similar to that of the involuntary migrants of the Type I interaction (total economic benefit is equal to zero)
7	Illegal migrants (Type IV)	Such migrants produced a negative impact on the economy of Germany, which is connected with a) lack of government revenue in the form of tax receipts and social contributions in value of €10 024 per person; b) lower additional consumption and investments, which amounted to €3 278 per person compared with €5 294 per person for ordinary labour migrants; c) significant personal remittances in value of €12 662 per person compared with €5 634 per person for regular labour migrants. As a result, the indicator of total economic benefit equalled -€5 135 per person

Source: developed by the authors

Conclusions

Based on the results of this research, we introduced the concept of “migrant’s capabilities”, which laid the basis for our model of the impact of international migration on the economy of receiving country. The concept of “migrant’s capabilities” allowed us to establish a functional relationship between the migrant’s legal status as defined by legislation of the receiving country and the indicators of economic development that characterize the impact of migrants on the economy of such a country. Such capabilities include: the ability to enter and stay, to work, to obtain social protection, to own and dispose of property, to obtain education, to obtain citizenship. It should be noted that different types of migration (labour migrants, refugees, etc.) have different legal statuses which define their capabilities and, respectively, their impact on the economy of receiving country. In the process of research, the capabilities were divided into basic capabilities and additional capabilities.

We also proposed to classify international migration by type of interaction with the economy

of receiving country. The type of interaction is determined by a factual set of basic capabilities of the migrant. A change in the rights that define basic capabilities of the migrant enables a change in the type of her interaction with the economy and respectively the outcomes of her influence on the economy. A change in the rights that define the migrant’s additional capabilities allows maximizing/minimizing the positive/negative outcomes of the impact of migration.

Therefore, the developed model describes the relationship between the migrant’s capabilities and the impact of international migration on the economy of receiving country. The model comprises five combinations of migrants’ capabilities, which are matched with four types of international migrants’ interaction with the economy of receiving country, and five blocks of outcomes which characterize the results of the impact of international migration on the economy of receiving country.

In the applied part of our study, we calculated the total economic benefit of Germany from its relationship with migrants in 2017. The

results of our calculations show that it was only illegal migration that produced a negative impact on the economy of Germany in value of €322 millions. At that, the total economic benefit amounted to €51 363 millions. The largest total economic benefit per person was generated by foreign students (€28 145). The employed involuntary and family migrants generated €16 912 per person. The involuntary and illegal migrants that were granted public benefits by Germany produced neither positive nor negative impact.

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MARKETING COMMUNICATIONS AS A NECESSARY PREREQUISITE FOR EFFICIENT WORK OF A PHILHARMONY

Abstract. The purpose of the article is to summarize the peculiarities of marketing communications in the field of culture and arts and philharmonic in particular, to consider the financial component of the activities of the philharmonic and to propose measures for its improvement. Analyze modern creative means and tools of communication marketing and adapt them for activities of philharmonic. The article investigates that organizations of the sphere of culture and arts and philharmonic society, in particular, operate in conditions of instability, great competition and uncertainty. Their success depends directly on the number of visitors. Therefore, marketing communications play an extremely important role in the life of cultural and arts organizations and the philharmonic. In general, the marketing of organizations of the socio-cultural sphere and the philharmonic, in particular, consists of the same components – good, price, place and promotion, but in the philharmonic they have their own specific, which is that the product can be divided into the main and the additional. It is also noted that the implementation of philharmonic events non-commercial and commercial marketing leads to the same effects – a high commercial outcome. The difficulty in promoting of philharmonic arts services is due to lack of funds for such events. In order to realize marketing measures of a flexible strategy of cultural and arts organization, it is proposed to implement the latest financial technologies – fundraising and crowdfunding. Elements of scientific novelty can see in construction of an algorithm of action in the application of fundraising, as well as in generalization of modern types of marketing

communications tools for the philharmonic. The practical value of this study is to elaborate on the application of four possible to promote the future of the Philharmonic's concert, namely Event-Marketing, Art-Marketing, Entertainment Marketing and Guerrilla Marketing. The advantages, disadvantages and costs of each of these promotion methods are outlined. The research found that Guerrilla marketing or Art-marketing is inappropriate due to its "aggressive" way of promoting and possible problems with obtaining permission, while Entertainment-marketing and Event marketing are recommended for use in the Philharmonic. Also the main stages of the use of Event-marketing are described in detail. It is recommended to borrow foreign experience. For the Philharmonic, it is suggested to use the experience of the world class chamber orchestra of Manchester Kamerata. This orchestra promotes its cultural product very flexible and attract the maximum number of viewers. Further research will address the more detailed study of the effectiveness of marketing activities of the cultural and arts organizations.

Key words: marketing communications, fundraising, crowdfunding, marketing tools, philharmonics.

Problem statement in general form

At the present stage of development of society, marketing is effectively used not only in business, but also in the field of non-profit organizations, including cultural and artistic institutions. Marketing technologies play an

increasingly important role in the development of modern socio-cultural processes. Theatres, concert halls, philharmonics, museums, galleries and other socio-cultural institutions actively vie for the consumer, competing by using cable and satellite television, sports broadcasts, a huge range of entertainment industries (from shows to gaming machines), the Internet, social networks, alternative educational and entertaining practices etc. Modern cultural and artistic organizations also face the problem of limited budget financing, so they should learn how to attract additional financial resources and use them with maximum benefit.

Analysis of recent sources and publications

Marketing research in Ukraine started in the 90s of the last century, and since then has been actively developed by domestic scientists. However, there are not very many research works devoted to the peculiarities of marketing in the field of culture and arts.

In 1967, for the first time in history, F. Kotler raised the idea of using marketing in the field of culture and arts. In his famous book, he pointed out that all cultural organizations, whether they being museums, libraries or concert halls, produce cultural goods. In other writings he emphasized the peculiarities of the promotion of this kind of goods and the ways to compete for the consumer in this field [1]. The well-known works of Mokv, Reis, Diggles, Colber are dedicated to the study of marketing in the field of culture and arts [2].

In her works Borisova T. M. researched features of marketing in the social sphere [3]. Her works are devoted to specifying the economic and social prerequisites of implementing marketing in domestic social sphere, to determining the areas of marketing activities of non-commercial entities, in particular, in the sphere of culture and arts.

Domestic scholars also explore some aspects of the marketing activities of organizations in the field of culture and arts. For example, Larina A. V. examines peculiarities of the cultural product promotion of [5.]. In other works [8], more attention is paid to tools for promoting the cultural product in the Internet. Some scholars suggest applying some marketing categories taking into

account the specifics of the field of culture and arts [4, 8]. Kuchyna N. I. investigates the role of marketing in the activities of organizations of the socio-cultural sphere through the prism of main marketing categories: consumer, product, price and communication [4]. The recommendations for improving the marketing activities of cultural organizations in Ukraine, following the experience of foreign countries and the modern trends in the development of communication tools, are presented in [8] and deserve attention. The features of informational, non-commercial marketing and marketing communications, the possibility of increasing sales of cultural products through their advertising and promotion in the information space are presented in the work of Stepanov V. Y. [9].

However, marketing issues in the field of culture and arts remain poorly developed and require more detailed research.

The purpose of the article is to summarize peculiarities of marketing communications in the field of culture and arts (the case of philharmonics); to consider the financial component of the activities of the philharmonic and to propose measures for its improvement; to analyse modern creative tools and instruments of marketing communications and adapt them to philharmonic activities.

The main material

The modern sphere of culture and arts in Ukraine functions in conditions of considerable instability, connected with financial and political crises, military actions in Donbass and the annexation of the Crimea. But despite this, the number of cultural and artistic institutions has not decreased in recent years (Table 1). The same cannot be said about the number of people who attended the events at these institutions. So, starting from 2014, the number of viewers of theatre performances decreased, in average, by 18 %, listeners at concerts – by 45 %, and visitors of museums – by 32 %.

Let us start with considering the main features of marketing of organizations in the field of culture and arts, which are summarized in Table 2.

Table 1

Provision of population with cultural and arts institutions in Ukraine in 2010–2016

	2010	2011	2012	2013	2014**	2015**	2016**
Population, thousand people	45962.9	45778.5	45633.6	45553.0	45426.2	42760.5	42584.5
Number of theatres, units	140	133	132	133	113	113	112
Number of theatres units per 1 million people)	3.05	2.91	2.89	2.92	2.49	2.64	2.63
Number of viewers at performances, million people	6.6	6.7	6.7	6.9	5.4	5.6	5.8
Number of concert organizations, units	83	82	88	85	73	73	76
Number of concert organizations (units per 1 million people)	1.81	1.79	1.93	1.87	1.61	1.71	1.78
Number of listeners at concerts (millions of people)	4.2	4.1	4.6	4.6	2.4	2.5	2.6
Number of museums, units	546	570	592	608	543	564	576
Number of museums (units per 1 million people)	11.88	12.45	12.97	13.35	11.95	13.19	13.53
Number of visitors to museums, (millions of people)	21.7	21.8	22.4	22.3	14.2	15.1	15.8

Source: based on [11].

** Without consideration of the temporarily occupied territory of the Autonomous Republic of Crimea, the city of Sevastopol and the parts of Donetsk and Luhansk regions

Table 2

The main features of marketing of organizations in the field of culture and arts

№	Feature	Description	Implementation problems
1	2	3	4
1	Specificity of the cultural good (service) of cultural and artistic organizations	The peculiarity lies in the fact that there is sold the product of collective creativity of specialists and at the same time, the aesthetic and spiritual development of the personality is provided	The industrial products produced and used by cultural organizations (technical equipment, musical instruments, transport) are qualified in this case as tools. This frees organizations of culture from the burden of developing such products and allows them to concentrate on the production of their “specific goods”: performances, concerts, exhibitions, films and other cultural products.
2	The predominance of non-profit marketing that does not pursue the purpose to make profit	The main thing is satisfaction of cultural needs of different layers and groups of consumers, and not profit making by any methods	The management of such organisations think about the artistic and educational aspects of professional activities, and usually has no experience in attracting financial resources thus having problems with the implementation of artistic projects, opportunities to tour etc.
3	The dominant advantage is talented and skilled staff	The success of such organizations depends first of all on the talent and professionalism of the masters of culture and arts. In this regard, particular attention should be paid to the marketing of a personality	The manager is responsible for correct selection, training, professional and personal development as well as motivation of creative employees. There is a threat of the outflow of gifted youth abroad

Table 2 continuation

1	2	3	4
4.	The social mission is to form the stratum of intelligentsia, to develop tastes in culture and arts, and to engage the new generation of young people	The social mission of cultural and artistic organizations obliges them not only to follow the today's needs of the public, but also to purposefully form them, to engage in enlightenment, upbringing and development of the individual	The impact of modern information and communication technologies requires changes in the activities of cultural and artistic organizations, makes them go beyond the traditional concert performances, adapt to the virtual sound and visual space created by electronic media and the Internet etc
	The importance of establishing links with the internal and external marketing environment	A necessary condition for the productive work of organizations of the socio-cultural sphere is their broad and diverse ties with political, scientific, pedagogical, law enforcement, economic, and business spheres	The wider and more stable these contacts are, the more diverse is the activity of the organization of culture, the stronger is its position in society, the more successfully it performs its functions and realizes its social mission. Though it is not always easy

Source: composed on the basis of [1]

The information in Table 2 allows to highlight the important role of marketing for organizations in the field of culture and arts and to trace its main differences from the classical marketing of services for commercial organisations.

First of all, this is the difference in purpose: the commercial firm is looking for a market where it is possible to achieve the optimum profit, otherwise it will abandon the market due to lack of consumer interest while the cultural and artistic organization is primarily focused on art, rather than profit. However, the recognition of art (of an artist, singer, actor etc.) leads to increased attendance of artistic events and, consequently, to financial success as well. Thus, implementation of successful measures of both non-commercial and commercial marketing leads to the same effect – a high financial outcome. Abroad, commercial marketing is an important component of the artistic events management, and the art in its vast majority is considered as business, mainly show business.

In general, the marketing of organizations of the socio-cultural sphere and the philharmonic, in particular, consists of the same components – product, price, place and promotion, but in the philharmonic they have their own specifics. The product itself can be divided into primary and secondary. The main “cultural product” of the philharmonic is holding concerts, festivals, performances and the like. In addition, the

philharmonic can offer secondary products and services. These may include, for example:

- a) conducting concerts of artistic groups and soloists both in the premises of the artistic organization and in the organization that orders the event. It is possible to order both a joint concert and a concert of a separate artistic group or soloist;
- b) organising workshops, studios, including children's, master classes etc.;
- c) ordering concerts of Ukrainian pop stars at customer's request;
- d) providing services, the assortment of which is determined by the capabilities of the organisation's staff and infrastructure;
- e) writing the event's script, texts, music, phonograms and arrangement of works for the above-mentioned events;
- f) arranging professional sounding and lighting, projection systems, fireworks, festive design of the event;
- g) providing high-quality and particular souvenirs, for example, with the brand name of the artistic organization;
- h) providing books, catalogues, booklets and other printing products either directly dealing with the theme of the repertoire of the cultural and artistic organization or on similar subjects, as well as video films, slides, CD-ROMs and other products that use modern information technologies;
- i) leasing the premises of the cultural and artistic organization.

In addition, the main products and services as well as most of the additional products and services provided by an artistic organization are of great importance for and have influence on the formation of the corresponding culture and consciousness of potential visitors who would learn to understand a certain type of art, would receive aesthetic pleasure and positive emotions. Unfortunately, the lack of free time and low purchasing power of most potential spectators, of course, have a negative impact on the consumption of cultural and artistic services.

The promotion of cultural and art products has the following objectives:

1) to provide information (to help the consumer learn about the existence of the product (service), to inform about the time and place of the performance or concert, the way of purchasing tickets);

2) to persuade (“to convince consumers to buy a product by offering additional motivations, namely: the quality of performance, the participation of famous star performers, the uniqueness of the program, accessibility, social prestige or public recognition, enrichment of experience”);

3) to educate (“to provide consumers with means and a system of criteria and values necessary for the evaluation of product features” [5]).

Obviously, these three specified objectives correspond to three key functions and goals of promotion: informational, axiological and interpretative, respectively.

Therefore, it is necessary to deliberately and carefully form a repertoire of a philharmonic and to systematically and comprehensively build a strategy of interaction with existing and potential consumers, partners, sponsors, local government and state authorities.

The difficulty in promoting the philharmonic art services occurs due to lack of financing for such events. Most organizations of culture and arts belong to communal property and are financed from regional or city budgets. However, this financing covers only part of the protected expenditures – wages and utilities. The rest should be covered by the organizations' own funds.

The main purpose of cultural and artistic organizations, as has already been mentioned above, is not to get profit, but to provide spiritual satisfaction to visitors, to increase the prestige of the institution of culture and arts. Taking into account the fact that in

the national cultural and art institutions managerial positions are occupied mainly by people with art education who have neither knowledge nor experience of doing business, self-financing of such organizations seems to be rather problematic. The optimization of forms of cooperation of the cultural and artistic organization with its creative and business partners, sponsors, foundations, local self-government bodies and state authorities can help realize their creative plans.

As a rule, it cannot be foreseen in advance how much funding can be attracted through such cooperation with sponsors and partners, therefore, it is suggested for such organizations to plan a flexible budget. Flexible strategy is based on the fact that the amount of additional sponsorship and the amount of revenue from the sale of services are the forecast values, rather than the fixed ones. Consequently, the organization creates a flexible budget, which is based on the principle of priority of socially and culturally important tasks. This means that the available funds are spent in the order of task priority: less important tasks are financed only *after* sufficient financing of more important tasks (Table 3).

To implement philharmonic marketing activities, we also propose to use the latest financial technologies of fundraising and crowdfunding.

In a broad sense, under fundraising one can understand the process of finding and attracting resources for different purposes that are relevant in the modern domestic economic environment. Fundraising in culture is aimed at providing financial support in the field of painting and music, literature, theatres, cinema, museums, libraries.

The main motivations for business representatives to direct funds for cultural development are:

– advertising opportunities (promotion of a brand or company's products) within the framework of a cultural project;

– creation of a positive image of the company, demonstration of the policy of social responsibility;

– access to the target audience within the framework of an art event to promote their own products / services [13].

At the heart of the proper construction of fundraising is the approach, which involves the following algorithm of actions (Fig. 1).

Table 3

Ranking philharmonic activities depending on the sources of funding

Group	The nature of the activity	Content	Sources of funding
A	Activity is mandatory in the reporting period	Staging the main repertoire, salary of workers, utility payments	Mandatory receipts (from state or local governments)
B	Projects, the realization of which is possible with the appearance of targeted financing and (or) free funds attracted by the organization, while their implementation is highly desirable	New productions, special events (concerts of world stars, international festivals), restoration of premises and modernization of equipment, renovation of old productions	Income from own activity; additional government funding; funds from big sponsors
C	Large-scale projects, the realization of which is possible only with the involvement of significant extrabudgetary funds	International tours of the collective, festivals, master classes of foreign stars	Provided with support from major sponsors
D	Small projects, the realization of which can be fully funded by sponsors	Purchase of instruments for orchestra, modernization of separate sectors, production of printed materials, implementation of educational and children's programs.	Provided by means of small charitable contributions

Source: compiled on the basis of [14]

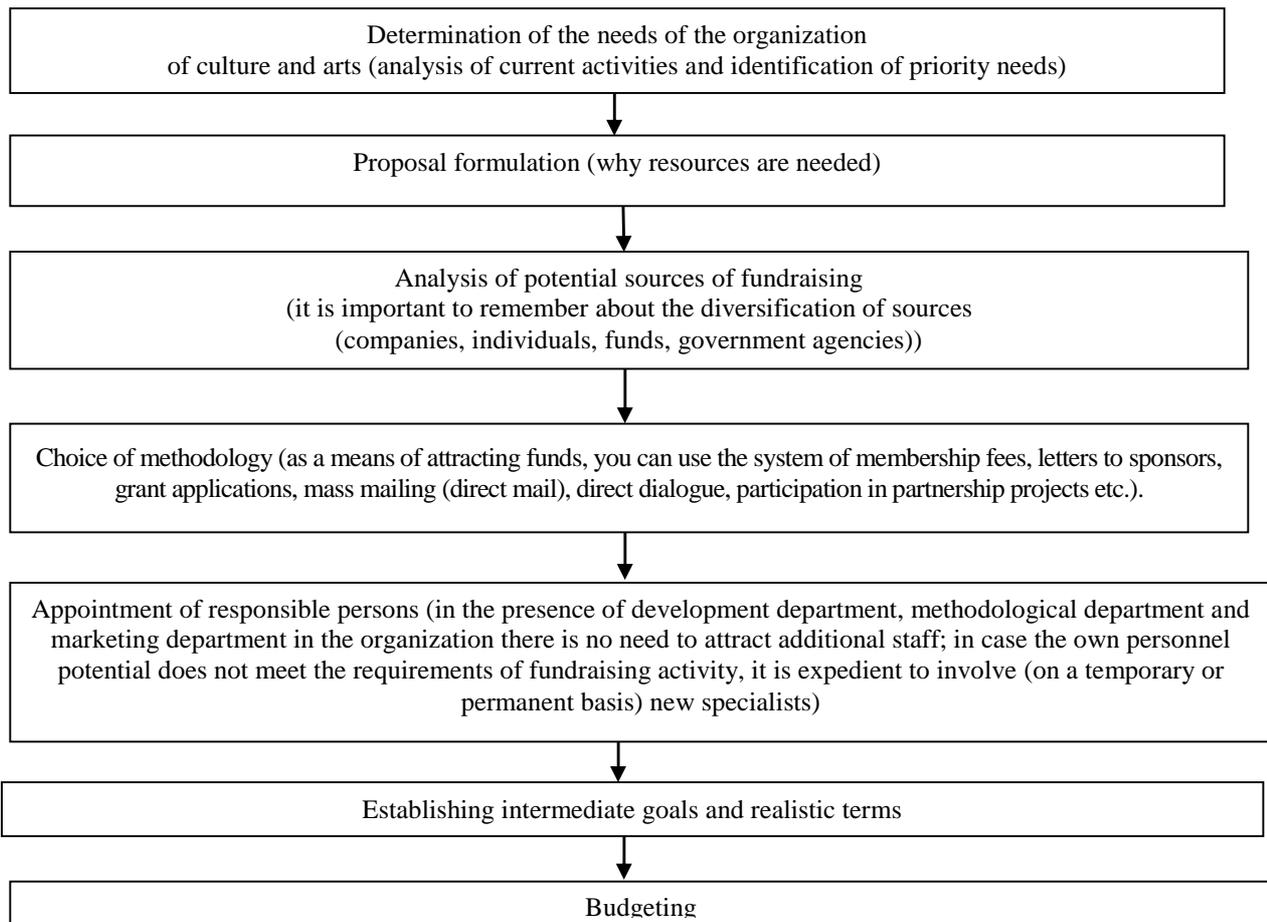


Fig. 1. Application of fundraising by cultural and artistic organizations in order to attract additional funds

Source: compiled on the basis of [13]

As to attracting financial resources through the Internet, the method of crowdfunding has proven to be successful. Crowdfunding refers to the cooperation of people who voluntarily invest money or other resources through the Internet to support a specific project.

Funding under this scheme can be used for organising children's competitions and providing support for gifted young people, organizing charity concerts for raising funds for the sick, war-wounded, the army.

This financing is carried out in three models [3]:

- a donation model (the funds are contributed without expectation of any financial returns from the given contribution, but a small reward is possible: e.g. branded gifts and souvenirs);
- a model of crediting (typical lending, from which the return of the invested money or receipt of the finished product / service) is expected;
- an investment model (investment of funds that involves participating in project management through securities or receiving a share of profit from a project).

The first model, the donation model, is the most widespread and most suitable for implementing public and arts projects of a philharmonic. Upon completion of the project, all potential investors should be happy with the feeling of helping a good deed and see material or other evidence of the effectiveness of the invested funds.

Crowdfunding projects develop like viruses: without the presence of a proper marketing strategy their future is unpredictable. There is a large number of sites that allow you to tell the public

about your project and collect the necessary amount of money. One of the most successful among the Ukrainian crowdfunding platforms is “Big idea”, which has been successfully operating since 2012.

It is believed that the principle of “every little bit helps”, which is embodied in crowdfunding, helps to find alternative financing for projects in both non-profit and commercial sectors. It is quite popular in times of crisis and can be successfully implemented by cultural and artistic organizations [12, p. 30].

The success of cultural and artistic organizations depends to a large extent on the number of visitors. For many potential visitors to learn about a particular artistic event and to express a desire to visit it, effective advertising is needed. That is why with each passing year interest in new approaches of creative advertising grows. This tendency is caused by the fact that the price of standard (ordinary) advertising (television, radio, printed products etc.) increases every year, and its effectiveness, on the contrary, decreases (potential consumers are irritated when they are handed in promotional products, they switch channels when advertising is shown etc). F. Kotler noted that innovation is the key and foundation of modern competitive strategies [1]. The only way to attract attention of consumers is novelty, that is, the use of creative means and tools of marketing communications. Examples of such modern types of marketing communications tools are shown in Fig. 2.

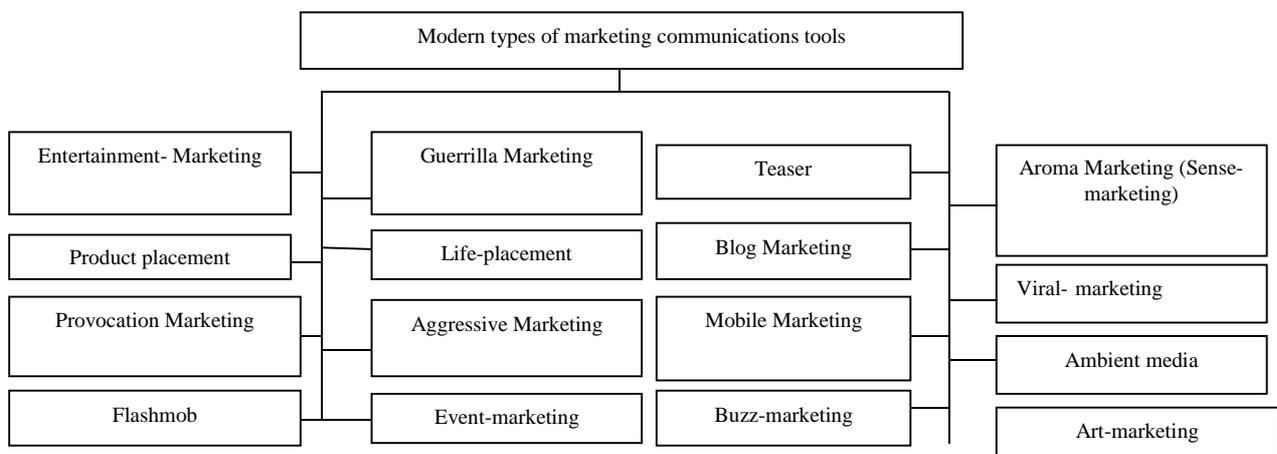


Fig. 2. Modern types of marketing communications tools

Source: based on [15, 16]

Marketing communications as a necessary prerequisite for efficient work of a philharmonic

From the above list, let us look at some of the types of innovative marketing communications that can be applied to cultural and artistic organizations illustrated by the philharmonic. Table 4 presents some of the contemporary creative types of marketing communications, their positive and negative aspects, as well as specific examples of applications for the philharmonic.

Having considered four possible ways of creative promotion of the future concert, we clarified that Event-marketing, Art-marketing, and

Entertainment-marketing will be the most accessible and affordable.

Guerrilla marketing and Art-marketing are not suitable because of their “aggressive” way of promotion and possible problems with obtaining permission, while Entertainment-marketing and Event-marketing are recommended for use by the philharmonic.

Let us consider in more detail how to organize Event-marketing – promotion of goods (services, brands) by creating and holding special events (Table 5).

Table 4

Application of modern creative types of marketing communications as illustrated by the philharmonic

Type of marketing communications	An example of application	Advantages	Disadvantages	Costs
1	2	3	4	5
Art – marketing	Before the scheduled arrival of the stars, place in the Internet (e.g. Facebook), information about competition for the best performance of the cover version (author's composition), which should be posted on YouTube, with the subsequent voting of the pages' participants. By the results of the month, the video composition, which gained the largest number of likes, receives prize tickets for the concert of the singer, a singer's autograph and the right to get two more tickets at half price	1) Reaching large audience of students and young people; 2) “The word of mouth” advertising; 3) minimum costs	1) Not interesting for all young people; 2) Only those persons who can play the musical instrument will be able to participate	Purchase of two tickets, compensation of the discount; the work of the orchestra administrator with the Internet resources
Guerrilla marketing	Paint piano keys of white and black colour on the steps of large shopping complexes. At the end, put an inscription “jazz” and the official site of the touring orchestra.	1) Reaching large audience of all ages; 2) May be remembered due to an emotional burst	1) Possibility of being fined; 2) Due to such aggressive advertising may not be accepted by the local orchestra, individual local residents	Aerosol ink cartridge, work of the artist
Entertainment-marketing	Taking advantage of the opportunity of a planned city event (e.g. City Day) to play a free concert in the open public space. This event is announced for a month in the Internet and printed media (at the expense of the Ministry of Culture).	1) Has a long-lasting effect – (begins long before the event in the announcements and posters);	Practically no disadvantages	Making and printing invitations; several volunteers for the distribution

Table 4 continuation

1	2	3	4	5
	During the concert, invitations for the next concert are being distributed with the possibility of winning the main prize – two tickets to the concert with the participation of a world-class star. All the participants who received the invitation must register in the official group and follow the results of the lottery.	2) Large audience coverage; 3) Minimum costs		of invitations; the cost of two tickets
Event-marketing	In the hall of the regional philharmonic to hold an evening devoted to fans of jazz music for regular visitors. Along the hall to set tables with treatments: fruit, cookies, tea, coffee, desserts. The “live music” is playing during the whole evening with short breaks. During the concert, the listeners can enjoy music, make new acquaintances and dance. All attendees will be given an invitation to a future concert and an opportunity to purchase a subscription at an affordable price.	1) Acquaintance, communication and further “word of mouth” advertising; 2) the reach of the able-to-pay audience 3) small expenses	1) Paid participation (visitors are likely to cover food and drink costs); 2) small coverage of new audience	minimal

Source: compiled by the authors

Table 5

Organization of Event-marketing and description of its main stages

The main stages	Components of the stages	Characteristic
Event planning	Determining the tasks of the event – developing the event concept – choosing a location – selecting contractors and signing contracts with them – creating a budget for the event – developing the event scenario – announcing and promoting the event	At this stage, it is necessary to understand clearly, why this event is necessary, what tasks need to be solved, what results are to be achieved. The structure of the event, its content and effectiveness depend on this understanding
Organizing the event	Having a general rehearsal – Methods of coordinating activities (work with scenario)	The development of the event is the work on creating a consistent algorithm of action capable of effectively solving the task. The products of the event development are a directing script and a complete package of documents necessary for the event.
Evaluating the event effectiveness	Investigating: – whether the number of visitors increased; – what reviews were given; – whether the event was justified in terms of invested expenses	At this stage, it is necessary to examine clearly whether the goals were achieved, what the difficulties were and what main conclusions could be made.

Source: compiled by the authors

So, in order to correctly formulate the task of creating an event, you should follow the same rules, which are applied in the creation of all other promotional products:

1. Identify (develop, invent) the main message of the event.
2. Clearly describe the target audience of the event. It is necessary to learn everything

possible about it, up to musical and culinary preferences.

3. Identify and describe what kind of the audience response and other outcomes of the event are expected. (If the expected event outcomes can be described only as “good spirits” and “positive emotions”, then the event does not make sense from the point of view of the marketing and PR strategy of the organization. Even the philharmonic marketing service is aimed, first of all, to increase the number of visitors and the sales volume.)

4. The event should be an integral part of the overall marketing strategy of the organization of culture and arts.

Today, standard use of marketing means and tools is ineffective. The greatest success is achieved by those organizations whose marketing is non-standard, creative, causing positive emotions, being surprising for the organisation’s potential customers. The same applies to the philharmonic. The audience is not interested in hanged posters and stacks of flyers at the box office of an artistic organization; it awaits new creative solutions and innovative presentations of cultural products. In domestic cultural and artistic organizations, such modern tools of marketing communications are seldom. Therefore, we recommend borrowing foreign experience. For example, The Guardian has a network for professionals in the field of culture, one of the sections of which is devoted to communications [17]. Creative people and artists in the field of culture and arts share their own experiences, describe experiments and express non-standard ideas. In this regard, the experience of the world-class chamber orchestra Manchester Camerata is very interesting for a philharmonic. This orchestra “redefined what an orchestra can do” and changed the strategy and vision of what an orchestra exists for, which audience it can address and what values it is guided by. As a result, it can perform in different formats: as a small orchestra (for small events it can offer something like solo serenades), as a classic orchestra (quintets for a large number of listeners) or as string quartets, which are perfect for more intimate occasions and create a more stylish atmosphere. And for large-scale shows, they can offer a full orchestra with a very wide range of repertoire – from standard classical musical

compositions to cinema music, like the James Bond themed evening [18]. Thus, this orchestra is very flexible in promoting its cultural products and attracting the maximum number of viewers.

Conclusions

In the present difficult period, when military actions and constant conflicts are taking place in our country, culture is what can create the foundation for the formation of a healthy society.

Cultural and artistic organizations and philharmonic in particular, operate in conditions of instability, great competition and uncertainty. Their success depends directly on the number of visitors. Thus marketing communications play an extremely important role in attracting potential consumers of cultural products and services, enhancing profitability of cultural and artistic organizations, the philharmonic in particular.

The difficulty in promoting arts services of a philharmonic is due to lack of funds for marketing. Therefore, to obtain funds for implementing marketing ideas we propose to use new financial technologies – fundraising and crowdfunding.

Every year the interest in modern marketing communications tools grows. The study found that Guerrilla marketing and Art-marketing are not suitable in case of a philharmonic because of their “aggressive” way of promotion and possible problems with obtaining permission, while Entertainment-marketing and Event-marketing are recommended for use in the philharmonic.

Prospects for further research

Further research will deal with more detailed study of the effectiveness of marketing activities for promoting goods and services of cultural and artistic organizations.

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RETROSPECTIVE AND MODERN TRENDS OF DEVELOPMENT OF UKRAINIAN CUSTOMS SYSTEM

Abstract. At the present moment, Ukraine's customs system is at the stage of becoming an independent executive body in the system of state authorities. This phase launches a fundamentally new vector for the development of the national customs system, which should ensure the progressive improvement of the work of customs authorities in accordance with European principles, norms and standards. The reform of Ukraine's customs system should be based on the identification of key problems in the customs sphere and the development of effective measures for their solution. In this context, the necessity of researching the retrospective and current trends of the development of the national customs system of Ukraine is being updated, which will enable to form a substantiated information base.

On the basis of studying and analyzing the history of the development of the customs system in the terms of independent Ukraine, four key stages were identified according to the organizational and structural principles. In particular, the first stage of development of the national customs system in the conditions of a sovereign state is connected with the creation and operation of the State Customs Committee of Ukraine (1991–1996); the second stage can be identified with the activity of the State Customs Service of Ukraine (1996–

2012); the third stage in the history of the development of the national customs system concerns the functioning of the customs authorities within the structure of the Ministry of Revenues and Collections of Ukraine (2012–2014); the fourth stage is connected, first of all, with the reorganization of the Ministry of Revenues and Collections into the State Fiscal Service of Ukraine, which includes customs authorities (from 2014 to the present). It was established that the first stage in the history of the development of the customs of independent Ukraine was characterized by significant problems related to the withdrawal of Ukraine from the USSR, the formation of an independent state and the transition of the domestic economy from the administrative-command type to the market model. Despite difficult circumstances, this period reflected the first positive changes in the development of the national customs system on the basis of strengthening its key functions. At the second stage, the qualitative improvement of the organizational structure of the customs authorities and the active development of international customs cooperation took place. It was determined that the third stage became a critical turning point, which led to the gradual destruction of the national customs system in the context of tax and customs union. The fourth stage was a continuation of

the previous stage and only deepened the unjustified priority of the fiscal function, the abandonment of security-protective, service, control-regulating functions, as well as international customs cooperation. It is proved that such tendencies are ungrounded in the conditions of European integration and necessitate the launch of a new fifth stage of the development of Ukraine's customs system, which will represent a large-scale structured and systematic reform of the customs sphere and bring it out of a state of prolonged stagnation to a qualitatively new stage of development.

On the basis of the comparative analysis of key time and cost indicators of customs servicing of international trade in Ukraine, countries of Europe and Central Asia, as well as countries of the Organization for Economic Cooperation and Development with high income, according to the International rating "Doing Business", it was established that today Ukraine still has rather low places, but at the same time demonstrates the gradual improvement of most customs parameters. This confirms the fact that the domestic customs system is still characterized by the existence of a number of significant problems of an objective and subjective nature, related to the low level of efficiency of measures to simplify customs procedures and promote legal international trade, high level of bureaucracy of customs formalities, the presence of corruption component, low level of development of customs infrastructure and logistics of customs bodies, inconsistency and non-harmonization of customs legislation with European standards, lack of efficient management of customs authorities, etc. In the context of intensification of European integration of Ukraine, such problems should be properly resolved on the basis of large-scale and substantiated reform of the national customs system, which will enable to intensify the international economic relations of the state, foreign economic activity of domestic enterprises, increase the level of national security and ensure the progressive development of the national economy.

Key words: customs system, customs authorities, international trade, trends, problems.

Formulation of the problem

In developed European countries (for a example, Germany, France, Netherlands), customs is one of the key authorities that ensure the fulfillment of important public tasks related to ensuring the national and international security by forming safe international supply chains, protection the state and its citizens from prohibited dangerous and poor-quality goods, intensification of legal international trade and thus development of national and international economies. Unfortunately, a radically different situation is still observed in the

work of national customs authorities. Despite the all attempts of public authorities to reform and improve the national customs system, at the present stage it is still characterized by different problems that impede the effective execution of key customs functions and harmonization with international standards. Thus, it is necessary to study the retrospective and current trends of the development of the customs system of Ukraine in order to identify the key problems of its functioning and their further solution.

Relevance of the chosen topic

At the present stage, Ukraine is in an extremely controversial state, which, on the one hand, reflects the perspective opportunities of integration into the European Union and the transition to a new stage of development, and, on the other hand, shows a conflict with Russia in the East of the country, the socio-economic crisis, uncertainty and instability in the country. This situation creates an important challenge for Ukraine, which, first of all, is connected with the protection of the state and its society, ensuring territorial integrity and raising the level of national security. At the same time, under the conditions of ratification of the Association Agreement between Ukraine and the European Union, the country has undertaken a number of important commitments regarding the harmonization of various social spheres in accordance with European standards, norms and rules. European integration determines for Ukraine a fundamentally new vector of development, through which, thanks to large-scale transformations and changes, the state will be able to escape from a protracted socio-economic crisis and move to a new Europeanized stage of development. Thus, today Ukraine faces difficult and contradictory challenges and requirements, problems and tasks that require urgent resolution through the implementation of effective reforming measures. In these circumstances, one of the key priority tasks is to build a strong stable and efficiently functioning customs system that will be harmonized with European and international standards, qualitatively fulfill all immanent customs functions, ensure the territorial integrity of Ukraine, national security, protection of society from dangerous and poor-quality goods and progressive economic development of the country.

Analysis of recent researches and publications

During the research, the existing scientific works and practical materials on customs theme were systematized and analyzed, on the basis of which the following key historical stages of the development of the customs system of Ukraine were logically identified.

1. The history of national customs begins from the formation of the State Customs Committee of Ukraine on December 11, 1991, which was the central body of state administration. The Committee was responsible for implementing the customs policy of Ukraine, ensuring compliance with customs legislation, and the effective functioning of the customs service. The first task of the State Customs Committee of Ukraine was to provide within its competence the economic security of Ukraine [1].

2. In the next years there was a logical development of the system of customs bodies. On November 29, 1996, the cardinal reorganization of the structure of the customs system of Ukraine was implemented; the principle of its construction and management from the territorial to the regional one was changed. On the basis of the liquidated State Customs Committee of Ukraine, the State Customs Service of Ukraine was created as a central executive body. The main task of the service was to protect the economic interests of Ukraine, as well as to promote the development of foreign economic relations. The reorganization should help to improve the organizational structure and centralization of the customs system management, strengthen the executive discipline, the mobility of customs departments, strengthen the customs control and counteract smuggling and violations of customs rules [1].

3. On December 24, 2012, the Ministry of Revenues and Collections was formed, which was created through the reorganization of the State Customs Service of Ukraine and the State Tax Service of Ukraine. The main objective (apart from political) of the Ministry was to increase revenues to the state budget, improve taxpayer services, deregulate and simplify customs procedures for foreign economic entities. This led to a deep institutional crisis, the consequences of which today have a devastating impact on the national customs business [1].

4. On May 21, 2014, the State Fiscal Service of Ukraine was created as a central executive body

whose activities are directed and coordinated by the Cabinet of Ministers of Ukraine, by reorganizing the Ministry of Revenues and Collections. Thus, in fact, the structure and scope of the tasks of the Ministry were practically unchanged, but the status of the body was lowered from the Ministry to the Service, thus the head of the State Fiscal Service is not a member of the Cabinet of Ministers, and the activities of the State Fiscal Service are directed and coordinated by the Government [1].

The absence of the autonomy of individual components (tax service, customs, tax police) has led to the impossibility of focusing on the implementation of their own “unique” functions, and hence the lack of personal responsibility for each of them. The current governance structure is non-mobile and non-diversified, which has led to a lack of clear management vertical, clear defined responsibility, the only separate decision-making center on customs issues, the only “source” (including regulatory legal) of the customs development. The liquidation of the Ministry of Revenues and Collections did not fundamentally change the priorities of the State Fiscal Service to fill the state budget, while the customs functions were administered on a residual basis. In general, such a superficial approach to the unification of tax and customs services has actually led to the destruction of the customs direction [2].

Recently, a new stage in the development of the customs system of Ukraine, connected with the division of the State Fiscal Service of Ukraine into the customs and tax services, has been launched. Building the strong stable and efficient customs service as an independent authority requires, first of all, strengthening all its weaknesses and solving existing problems in the direction of harmonization with European and international standards. To accomplish this task a complex information base on the current state of Ukraine's customs system and its key problems as the directions for their further solution is needed. But today there are practically no relevant materials that comprehensively reveal the actual state of the customs system of Ukraine and identify key problems that hinder its progressive development.

Purpose and objectives

Taking into account the results of the analysis of the theoretical and practical materials, the purpose

of the study was determined as a comprehensive analysis of the current state of Ukraine's customs system and indentifying its key problems.

Main material and results of the research

Before considering the problems of the national customs system, we will analyze the positions of Ukraine in the leading international rating “Doing Business” that evaluate the customs sphere.

According to the International rating “Doing Business 2019”, Ukraine ranks 78th place among 190 countries by the “Trading across border” parameter. This parameter is evaluated by such indicators as time to export and import operations for border and documentary compliance, and costs to export and import operations for border and documentary compliance. Comparing Ukraine, the countries of Europe and Central Asia and OECD with high income, the situation is unfavorable regarding the time to export for documentary compliance (66 hours versus 24.3 hours and 2.4 hours respectively), the costs to export for documentary compliance (\$ 192 versus \$ 97.9 and \$ 35.2 respectively), as well as the time to import for border compliance (32 hours versus 21.1 hours and 8.5 hours respectively), the time to import for documentary compliance (96 hours versus 24.7 hours and 3.4 hours respectively), the costs to import for documentary compliance (\$ 162 versus \$ 93.9 and \$ 24.9 respectively) [3]. In fig. 1–2 the comparison of time and costs indicators of trading

across border in Ukraine, countries of Europe and Central Asia and OECD with high income is showed respectively.

This discrepancy gives the grounds for asserting that there are still problems in the work of national customs authorities, primarily related to the low level of effectiveness of measures to simplify customs procedures for entities engaged in foreign economic activity.

In fig. 3 the results of surveys of Ukrainian exporters and importers concerning problems in the work of the Ukrainian customs, which were conducted by the experts of the Institute for Economic Research and Policy Consulting within the project “Trade facilitation dialogue” during 2016–2018, are showed.

During the analyzed period 2016–2018, the priority of almost all problems is reduced, but the importance of the problem regarding the lack of professionalism of customs officers has increased to a small extent (by 1 %). However, the most important problems are: imperfect customs legislation (46 % of those polled in 2018 against 47 % in 2017 and 46 % in 2016), lack of transparency and openness (25 % in 2018 against 26 % in 2017 and 30 %), corruption and bribery (24 % in 2018 and 2017 against 26 % in 2016), outdated technical equipment (23 % in 2018 against 26 % in 2017 and 22 % in 2016), conscious overestimation of the customs value of goods (23 % in 2018 against 26 % in 2017 and 28 % in 2016) [4].

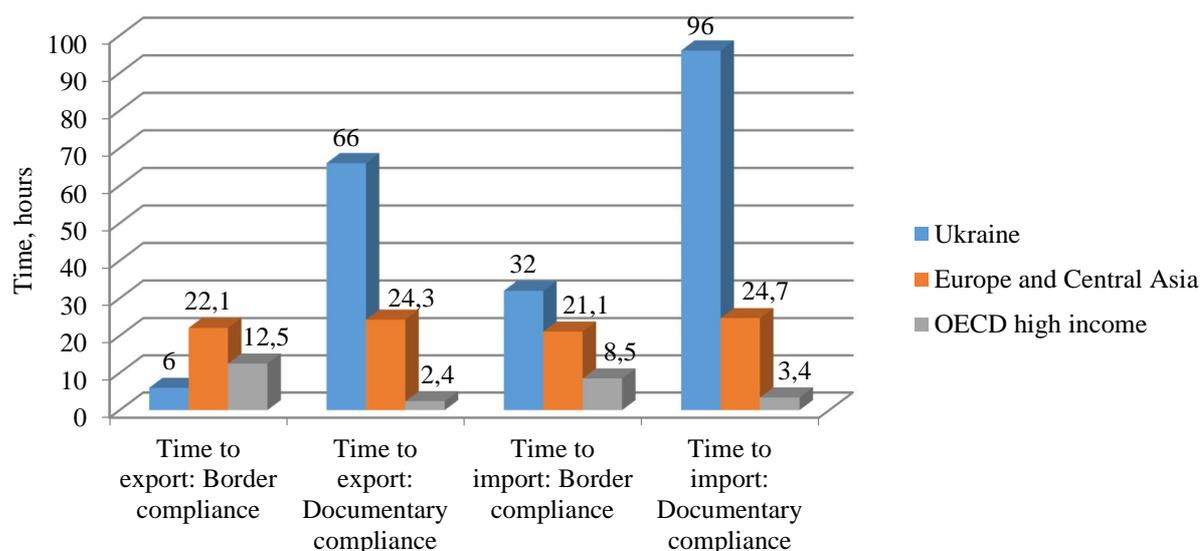


Fig. 1. Comparison of time parameters of trading across border in Ukraine, countries of Europe and Central Asia and OECD with high income

Source: official site of International rating “Doing Business 2019”

Retrospective and modern trends of development of Ukrainian customs system

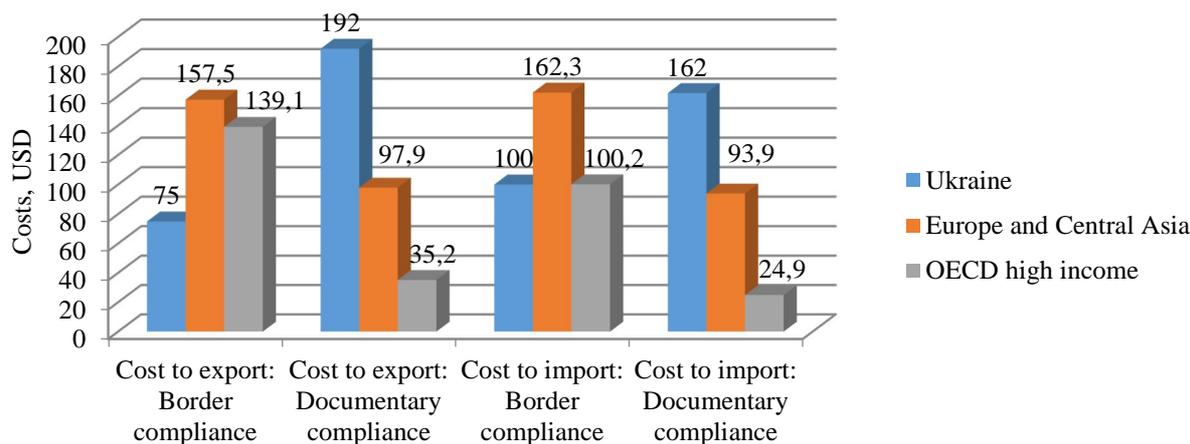


Fig. 2. Comparison of costs parameters of trading across border in Ukraine, countries of Europe and Central Asia and OECD with high income

Source: official site of International rating "Doing Business 2019"

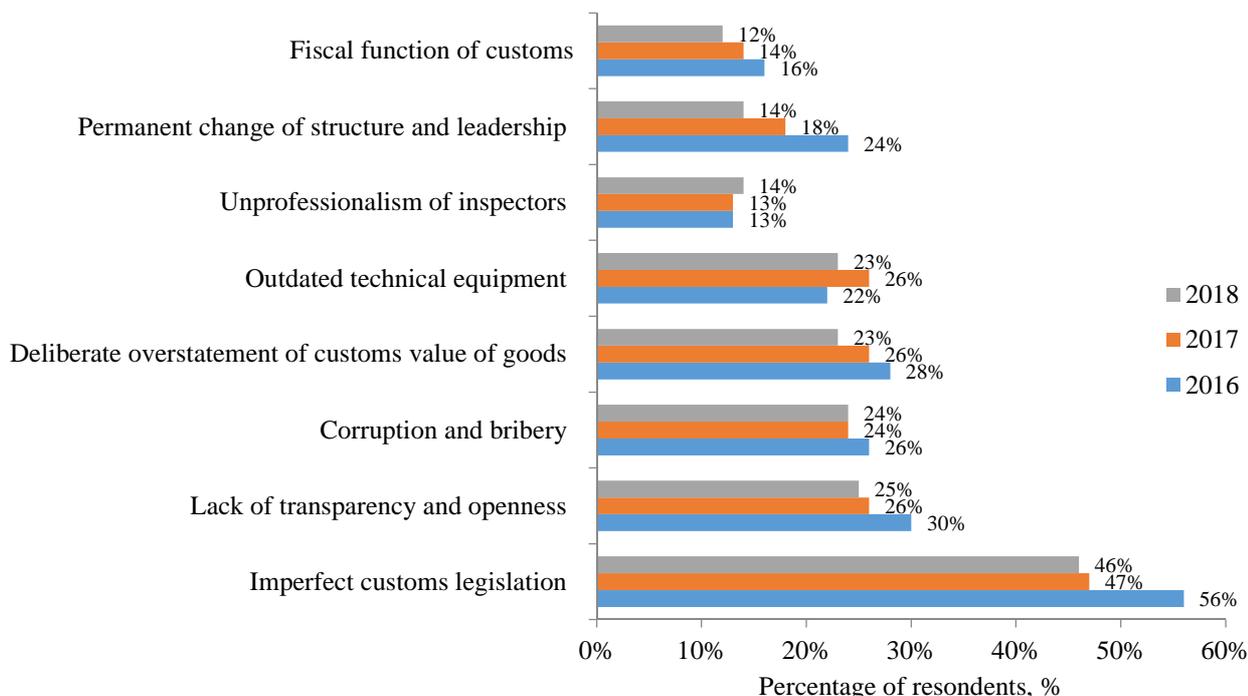


Fig. 3. Results of a survey of Ukrainian exporters and importers concerning problems in the work of the Ukrainian customs

Source: analytical report on the results of the fourth round of a survey of Ukrainian importers and exporters "Trade Facilitation in Ukraine: Business Estimates and Expectations 2018/2019"

Taking into account the abovementioned facts, we can state that there are still significant problems in the work of national customs authorities, which greatly hinder international trade and should be solved through the implementation of effective reform measures.

Below, more specifically, consider the current state of the national customs system, key factors and problems that characterize the Ukrainian customs.

Unfortunately, due to the historical events described above and the current circumstances, it is necessary to state the fact that during the long period of time the national customs system was in a stagnant stage. In the conditions of unification of the customs and taxation spheres into a single authority, the customs system of Ukraine gradually declined, there was a leveling of the customs component and the

priority of the fiscal function; most of the customs decisions were taken on the principles of "political convenience", which led to the suspension of the development of the state customs.

Thus, the first key problem was the absence of a separate authority that would be positioned as an independent body exclusively for the customs profile and ensured an efficient, coordinated, and goal-oriented management of the national customs activity at different levels. It is about a lack of a qualitative organizational structure of customs authorities that reflects clear vertical and horizontal links, determines optimal functional load and clear responsibility at different levels. So, we can talk about the decentralization of customs management and the lack of an institutional level of management in the customs sphere, which prevents making the effective, targeted decisions on customs-specific functions related to the promotion of legitimate international trade and protection of the state and its citizens.

The next major problem was the hypertrophied fiscal function of the customs, which is not essential for any customs administration in Europe. According to Article 3 of Union Customs Code [5] customs authorities shall be primarily responsible for the supervision of the Union's international trade, thereby contributing to fair and open trade, to the implementation of the external aspects of the internal market, of the common trade policy and of the other common Union policies having a bearing on trade, and to overall supply chain security. Customs authorities shall put in place measures aimed, in particular, at the following: protecting the financial interests of the Union and its Member States; protecting the Union from unfair and illegal trade while supporting legitimate business activity; ensuring the security and safety of the Union and its residents, and the protection of the environment, where appropriate in close cooperation with other authorities; and maintaining a proper balance between customs controls and facilitation of legitimate trade. As we can see, the fiscal function in the Union Customs Code is mentioned only indirectly as an element that accompanies and balances the basic security functions of the customs administration.

The termination of the development of international customs cooperation has also extreme negative consequences. In the organizational structure of the previous State Customs Service of Ukraine, there was a separate department dealing with cooperation with international organizations

and foreign customs authorities [2]. Today, within the organizational structure of the State Fiscal Service of Ukraine, there are practically no employees who would deal with such issues, although this area is one of the key areas of the functioning of the customs system in any European country.

It is worth noting that the Customs Code of Ukraine [6] is the key legal document regulating the customs sphere. In general, it can be argued that the Code is a fairly well-prepared document that takes into account European and international customs requirements, but the key problem is the lack of compliance by the authorities with a large part of its provisions, the adoption of other normative legal acts that contradict the provisions of the Customs Code, etc. It is about, for example, the real absence of the Institute of the Authorized economic operator, customs post-audit, etc., which are clearly stated in the Customs Code of Ukraine, the involvement of the National Police in the fight against smuggling at customs posts, which contradicts its provisions, etc.

To the above mentioned problems, we can add a number of other negative factors that determine the current state of the national customs system [7–8]:

– the lack of proper material and technical support of the customs authorities. In fact, this problem is critical, since the material and technical base is outdated, there is no systematic updating of customs control and computer equipment, and the amount of operational transport is reduced. In addition, some types of high-tech and simple technical devices of customs control are limited or absent at customs posts (scanners, license plate readers, portable readers of technical passports, travel documents, camcorders, scales, card readers, etc.). This does not allow to ensure, first of all, high-quality and prompt customs clearance, to identify properly the goods that constitute the objects of risk and to remove them from circulation, thus contributing to the continuity of trade operations, protection of the state and its citizens;

– the low level of development of the customs infrastructure due to the insufficient number of border crossing points, as the length of the borders in 5638 km with 7 neighboring countries should be taken into account (for example, today in the territory of Volyn region on the territory of the Ukrainian-Polish border 244 km there are only 2 border crossing points (1 border crossing point for 122 km, although European

experience provides 1 border crossing point for 10–25 km of border); the inadequate condition of certain border crossing points due to insufficient number of lanes, not optimal differentiation of lanes for different types of transport, low road quality, lack of proper road equipment (barriers, traffic lights, etc.); insufficient number of joint customs posts with the countries of the European Union. All this hinders the prompt and efficient passage of customs procedures by the subjects of foreign economic activity, causes the formation of queues at the borders, promotes the development of the corruption component and does not correspond to European and international customs practice;

– the low level of effectiveness of measures to promote legal international trade (absence of the Institute of the Authorized economic operator, low level of development of the national “single window” when moving goods across the customs border of the country according to European principles, as well as the Institution of the Authorized (Approved) exporter, high level of bureaucracy and absence of absolute automation of customs procedures);

– the low level of effectiveness of the fight against customs offenses (lack of an effective mechanism of bringing to the responsibility for the customs offenses, limited powers of customs officers in the fight against customs offenses, absence of effective mechanism of interaction of customs authorities with other authorities in the context of combating customs offenses, lack of effective measures of customs control and counteraction to corruption, low level of development an automated system of risk management, as well as information and analytical support for customs activities).

Conclusions and prospects for further research

Based on the analysis of retrospective and current trends in the development of the customs system of Ukraine, it has been established that despite the raising of certain indicators, this area is still characterized by certain problems. In particular, existing problems are associated with the low level of efficiency of measures to simplify customs procedures and promote legal international trade, high level of bureaucracy of customs formalities, presence of corruption component, low level of development of customs infrastructure and logistics of customs bodies, inconsistency and non-harmonization of customs legislation with European standards, lack of efficient management of customs authorities, etc.

Taking into account all of above mentioned, we can state that the existing problems in the national customs system are critical, undermine national, and economic security, impede the European integration of Ukraine and must be resolved in order to protect the state and society, preserve its territorial integrity and provide European development.

Prospects for the further research are analyzing the features and trends of the development of modern customs systems in the international environment and on this basis studying the best customs experience.

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CROSS-CORRELATION RELATIONSHIP BETWEEN INTELLECTUAL PROPERTY OBJECTS VALUE AND ITS PRICE-FORMING FACTORS

Abstract. Valuation/appraising of intellectual property rights objects, such as brands and goodwill, using the Costs Approach, is based on different economic indicators of enterprises business activity. These indicators are used as a primary data for market value determination. These indexes are differently related to the cost of brands, and statistical relationship between these parameters researches, indisputably, presents both theoretical and practical interest. Because of the cross-correlation relationship closeness between assets market value and these primary data parameters directly depend estimation results accuracy and reliability. The work is verification of basic hypothesis, in obedience to that at the valuation/appraising procedure performing as primary data may be recommended to use those indicator parameters, which are characterized with the closest statistical relationship and, respectively, the highest cross-correlation coefficient. We assume that these intangible assets are able to change value characteristics in both directions and change the annual depreciation sign during the separate periods of economic life, made it positive or negative. The purpose of the article is to define the quantitative estimations of cross-correlation coefficients, which determinates statistical relationship closeness between primary data economic parameters in

Costs Approach. To analyze the question of selling, general and administrative (SG&A) expenses part choice, which must be attributed to the trademark value; to execute this index optimization. To perform the comparative analysis of cross-correlation relationship between the intellectual property objects value and most widely used price-forming factors. To execute the got results interpretation; to execute the analysis of economic measurements reliability improving possibilities, performed by independent expert appraising/valuation methods, by its accuracy increasing. It means researching and determination the most suitable primary data indexes for the market value and depreciation/obsolescence dynamic time changes indexes of intangible assets special kind, such as trademark and goodwill. The general methodological base of the article is scientific and special for the subject sphere of knowledge methods of scientific cognition. The choice of methodological approaches is conditioned by the specific of the economic measurements which are executed by independent expert appraising/valuation methods. The research is grounded on mathematical simulation and mathematical statistic quantitative methods. Research methodology also envisages generalization of previous publications results from scientifically-research sources and open information

reports about the enterprises economic indicators. Base principles of independent expert appraising/valuation made the general methodological basis of the article, in particular - principles of Utility, Substitution and The Highest and of The Best Use. To the certain methods of research belongs the method of cross-correlation analysis and specialized methodologies of optimization with the use of results error minimization criterion. The time value of money theory implementation, in particular, is well-proved for the past periods cash-flows transforming to the modern valuation date, by compounding operation performing. It is set that the closest is statistical relationship between the appraised trademark value indexes and accumulated costs of advertising expenses, which are the part of selling, general and administrative (SG&A) expenses. At brand appraising/valuation procedure is not recommended to apply any accounting book-keeping amortization indexes, as they are not the reliable indicator of Depreciation/Obsolescence. It is educed that these types of the researched assets depreciation sign depends on their information support and development expenses cash flows, invested by owner. It is set that during the period of trademark existence a multiple change of depreciation sign on the separate time periods is possible. It depends on sufficient informative and advertisement support implementation. Certainly the list of these price-forming factors must be taken into account at market value and Depreciation/Obsolescence determination procedure. It is well-proven that this class intangible assets estimation value in general case of normal profitable enterprise activity must be determined with application of increasing market value model with negative Depreciation/Obsolescence.

Key words: intellectual property rights object; brand name; trademark; goodwill; independent valuation/appraising; accounting; market value; intangible assets; sign-changed Depreciation/Obsolescence; estimation error; estimation accuracy; methodical approaches.

Introduction

Performing economic measurements of intellectual property objects market value is one of the most difficult tasks of an independent expert evaluation, the methodological basis of which has not been adequately addressed so far. This is due, first of all, to the existing contradictions between the actual their value in time changing functions and assumptions, regulated by the standards of financial accounting. In particular, the latter only provide the possibility of objects' that are valued and accounted as intangible assets cost decreasing

over time - while, in fact, brand value of successful companies is growing rapidly during their economic life. This testifies the presence of negative depreciation occurrences in intellectual property objects of this class, along with the traditional generally accepted positive depreciation in certain periods of time. As our previous studies have shown, the particular depreciation sign can be manifested in certain periods of brands' existence, and the depreciation sign may change many times, in strictly accordance with changes in the trend of these assets value increasing or decreasing.

Applying Costs Approach to brand evaluation is based on the use of different economic indicators of enterprises activity, which are the primary data source for market value determination. These indexes are differently related to the brands value, and statistical relationship between these parameters researches, indisputably, presents both theoretical and practical interest. The work is verification of basic hypothesis, in obedience to that at the valuation/appraising procedure performing as primary data parameters may be recommended to use those indicators, which are characterized with the closest statistical relationship to measured intellectual property object value. Because of strength of the cross-correlation relationship between assets market value and these primary data parameters directly depend estimation results accuracy and reliability.

Relevance of the chosen topic.

Identification of previously unsettled parts of the general problem

In determining intellectual property objects value with alternating sign-changeable depreciation by methods of independent expert evaluation various processing methods of primary data selection and transforming are used. A systematic comparative analysis of primary data different types relevance in Costs Approach applying to the intellectual property objects evaluation has not been implemented yet; results' accuracy evaluation dependence on primary data type choice, processing methods, the method of depreciation indicators consideration are not clearly established by evaluation standards. The quantitative appraisal of relationships' strength determination between economic parameters, which are most often used as

primary data source in the Costs Approach, and the estimated objects' value, thus, is an urgent task for the further development of an independent evaluation methodology. The subject of a study in this work is a research of the mentioned above problem aspects, as well as the consideration of the specific part of annually declared selling, general and administrative expenses (SG&A) in companies' financial statements reporting, which should be attributed to the brand value at evaluation procedure performing. The above indicators have a direct impact on the economic measurements results errors size for this class of intellectual property objects. So, their research on a concrete example of similar intangible assets evaluation is an actual nowadays task, in particular - within the framework of the methodology improving for brand value objective quantitative characteristics determination.

Purpose of the article

The purpose of the article is to define the quantitative estimations of cross-correlation relationship strength between economic parameters, which are used as primary data source in Costs Approach, and estimated brand value. To investigate on a concrete example the part of selling, general and administrative (SG&A) expenses, which according to the Costs Approach should be attributed to the brand value, and perform optimization of this indicator. To perform the comparative analysis of cross-correlation relationship strength between intellectual property objects value and most widely used price-forming factors, on an example of brand evaluation. To set the parameter, for which the correlation coefficient is the highest, and which is most expedient to use as primary data source in economic measurements performing. To execute the received results' interpretation; to analyze reliability improving possibilities of evaluation results for intellectual property objects on the example of a trademark; to formulate practical recommendations on the priority directions of further researches.

Literature review

Zlenko S. M., Tymchyk I. S., Tymchyk S. V. state that evaluation of intellectual property objects, which were created by the enterprise, in

foreign practice is mainly based on the Costs Approach, namely, on the use of initial primary cost of these objects, basing on costs of its development and preparing to commercial use, taking into account depreciation level. Main price-forming factors, which determine the value of industrial property objects, are: the costs of intellectual rights object creation; exclusive rights owners' costs to create, develop and patent protection of industrial property object (including duties, fees and other expenses for ensuring the legal protection document power); organization costs for the use of intellectual property object (including costs of its information, advertising support and marketing); costs for intellectual property object risks insurance; validity period of the legal protection document (license, patent, certificate) at evaluation date; exclusive rights owner's costs to resolve legal conflicts regarding intellectual property object, including those consideration in court/trial; expected income cash flows in the form of compensatory fines, receipts in the case of owners exclusive intellectual property rights violation; object's full-term usage period; obsolescence (depreciation) factor; inflation factor; other factors related to the evaluated intangible asset profitability and riskiness indicators. These are main factors in the intellectual property objects evaluation, which are the part of intangible assets [1, p. 74].

The classic evaluation algorithm for expenses accumulation, used in the Costs Approach, is based on the well-known methodology, according to which brand market value can be calculated as an aggregate summation of owner's marketing costs expenses for brand creation and its further support, during the whole brand existence history, taking into account time value of money changes. The advantage of this method is that it enables to calculate reliably all incurred accumulated costs expenses – unlike of the Income Approach methods, based on forecasts, which are not always reliable [2, p. 116]. Also the variant of the Costs Approach methodology using is known, according to which the value of intellectual property object is defined as the sum of annual invested in its support funds components in every year of the calculation period, multiplied by the corresponding coefficients of the various

previous time cash flows, to lead its values to the evaluation date [3, p. 56]. The modern methodological basis for trademarks' independent evaluation also uses the concept of brand equity, which is considered as the capitalized value of all presented before the valuation date cash flows of expenses invested in the creation and information support of this class intellectual property objects [4, p. 5].

Foreign authors also confirm the appropriateness of taking into account all types of costs, associated with intangible assets maintenance: "Sometimes companies develop intangible assets for which they spend their money, and all these costs are associated with the development of these assets" [5, p. 244]. The use of certain intellectual property objects finds its synergistic combination of these intangible assets components value in total enterprise value goodwill, embodied in the brand. Gordon V. Smith and Vladimir Yossifov give examples of synergy, while few different intellectual property objects types are used at the same time. In particular, considering the synergistic combination between protected technology and a registered trademark, they show that due to this, the economic lifetime of these intellectual property rights objects increases. The authors believe that such a strategy may be applicable to other combinations of intellectual property objects of different classes, for example – to a combination of copyrights and trademarks. An important conclusion of this study is the idea that the joint use of intellectual property objects various forms increases the total market value of company's intangible assets, by future economic benefits increasing, as the period, during which it is possible to obtain them, is growing – and the risks are reduced [6, c. 65]. At the same time, they argue the fact of expanding the possibilities of intellectual property rights exploitation, indicating, in particular, the importance of taking into account the measured costs of the souvenir products production and distribution and advertising campaigns conducting. These funds are considered as a part of the costs, invested in the development and support of the company's brand. Gordon V. Smith also points to the significant link between profits of the enterprise and the value of intangible assets that it owns. If the business does not receive

adequate returns on funds invested in its intangible assets, then it is more appropriate to consider the value of these assets by the evaluation liquidation base. If profits of the company grow, the estimation value of its intangible assets will be maximal. The value of an enterprise increase, from this point of view, is an indicator of its newly created intangible assets value and goodwill cost growth. So, it is very important in evaluating to keep in mind this link, and to test constantly the ratio of estimated value of specific intangible assets monitoring data and the total cost of business enterprise. The sum of individual components' values should correspond to the value of the total [7, p. 26].

Aswath Damodaran's article describes the methodology for determining the value of the Coca-Cola trademark, in which, as the primary market information for evaluation by Costs Approach annual Selling, General and Administrative Expenses (SG&A) indexes are used. The author assumes that two thirds of these annual SG&A expenses are represented by sales and advertising costs, and half of those sales and advertising costs were related to the creation and development of the trademark [8, p. 15]. The balance of this indicator with the amount of income generated in the current year is confirmed. In this case, the annual "This year Amortization" indicator is also calculated as the amortization rate of the current year at 4 % of the last indicator, i.e. half of sales and advertising costs that were associated with the creation and development of the trademark. Next, annual "Unamortized Expense" for the current period is calculated, as the product of two factors: the annual "This year Amortization" indicator, multiplied by the previous period number. In the example presented in this paper, the value of that "Unamortized Expense" – non-amortized part of current period annual expenses, accumulated during the entire retrospective period 1984–2008, and estimated in USD 31.9 billion in 2008, is considered by the author as the capitalized value of trademark estimation. It was calculated by Costs Approach through the amount of expenses, which company has invested in the trademark. This indicator is calculated on the basis of annual expenses amount associated with the creation and

development of the trademark, accumulated over the entire retrospective period, without of annual amortization size. The latter is calculated by a straight-line model of 25 years economic life of this intangible asset that is 4 % amortization per year.

Methodological approach

General and special for the subject area scientific knowledge methods formed the methodological basis for the work. The choice of methodological approaches is determined by the specifics of the economic measurements field, carried out by methods of independent expert evaluation. The research is based on methods of mathematical modeling simulation with the wide use of mathematical statistics apparatus which allowed achieving the above purpose of work. The research methodology also foresees the elaboration and synthesis of previous publications' results of research and open sources of information on enterprises economic indexes. The general methodological basis of the article became independent evaluation basic principles, in particular – Utility, Substitution and The Highest and The Best Use. One of three classical valuation approaches based on them, namely the Costs Approach, according to which, under certain prior conditions and restrictions, assets value will be proportional to the accumulated sum of previous expenses on evaluation object creating or reproducing. Specific research methods, which constitute the main methodological tool of scientific work, include the method of cross-correlation analysis and specialized optimization techniques, using the criterion of economic measurements results error minimizing, as a target function. In addition, the paper formulates and justifies recommendations for applying the method of previous cash flows present value determining, using the time value of money theory – in particular, bringing the past periods cash flows to the present valuation date with the help of a compounding operation.

Materials of the article relate to blocks identified by the JEL Code Classification in the field of scientific and economic research: C 13 – Estimation; C 49 – Econometric and Statistical Methods: Special Topics, which are included in the category C 00 – Mathematical and quantitative methods (economics); E 30 – Prices, Business

Fluctuations, and Cycles; E 37 – Forecasting and Simulation, which are included in the category E 00 – Macroeconomics and Monetary Economics; O 34 – Intellectual Property Rights: National and International Issues, O 47 – Measurement of Economic Growth; Aggregate Productivity, which are included in the category O 00 – Economic Development, Technological Change, and Growth.

Conducting research and results

We will analyze the Costs Approach to obtain the brand market value, described in detail by Aswath Damodaran [8, p. 15]. An in-depth study of the link between SG&A costs and intellectual property object appraisal value determining the possibility of this indicator usage in valuation practice is useful. In the considered example the trademark value annual increase is assumed, by the amount of annual expenses on its advertising, what means the negative depreciation, on the one hand. On the other hand, annual amortization is charged on its increased value – and that is the opposite assumption about the positive depreciation of this asset. We believe that the economic life period of intangible assets in the form of a trademark must be considered as conditionally unlimited. There is a number of convincing arguments in favor of this statement truth – in particular, the existence of brands with more than 100 years history. Coca-Cola also in its financial statements annual reports describes trademarks as intangible assets with indefinite economic life. Charts of used indicators change in time are given in Fig. 1.

In general, in the financial statements reports of the company all its intangible assets are classified according to their belonging to one of three categories: (1) intangible assets with a specified economic life, which are subject to amortization charging; (2) intangible assets with indefinite economic life, which are not depreciation/amortization subject; (3) goodwill, with no amortization too. It is noted that for intangible assets with a specified economic life, their appraisal testing must be carried out in cases, when arise conditions, indicating the possibility of investments made non-return. For intangible assets with an indefinite economic life and goodwill, their valuation tests are performed at least annually – or

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more often, if circumstances indicate that these assets may lose their value [9, p. 45].

The calculation showed that the evaluation result of the brand value, determined by this method, was distorted by a rather significant error. Compared to determine by the data [10, p. 1] estimated value of this brand in 2008 – USD 58.210 million, the value obtained in the analyzed evaluation example of USD 31.910.19 million is characterized by an absolute error of USD 26.299.81 million and a relative error of 45 %. It can be assumed that the use in evaluation procedure of two above-mentioned mutually controversial assumptions, concerning depreciation sign, is unreasonably inappropriate. Accordingly, the

use of accounting depreciation/amortization indicators in negative depreciation intangible assets evaluation procedure, the value of which increases annually, seems to be completely unreasonable. A significantly better result would be provided by the refusal of accounting depreciation/amortization indicators, and use as an indicator the accumulated costs of amount of annual expenses for the trademark advertising during the whole retrospective period, without any annual depreciation deducting. In this case, the value in above mentioned example would reach USD 53.760 million, which is characterized by a significantly lower absolute error of USD 4.450 million and a relative error of 7.6 % only.

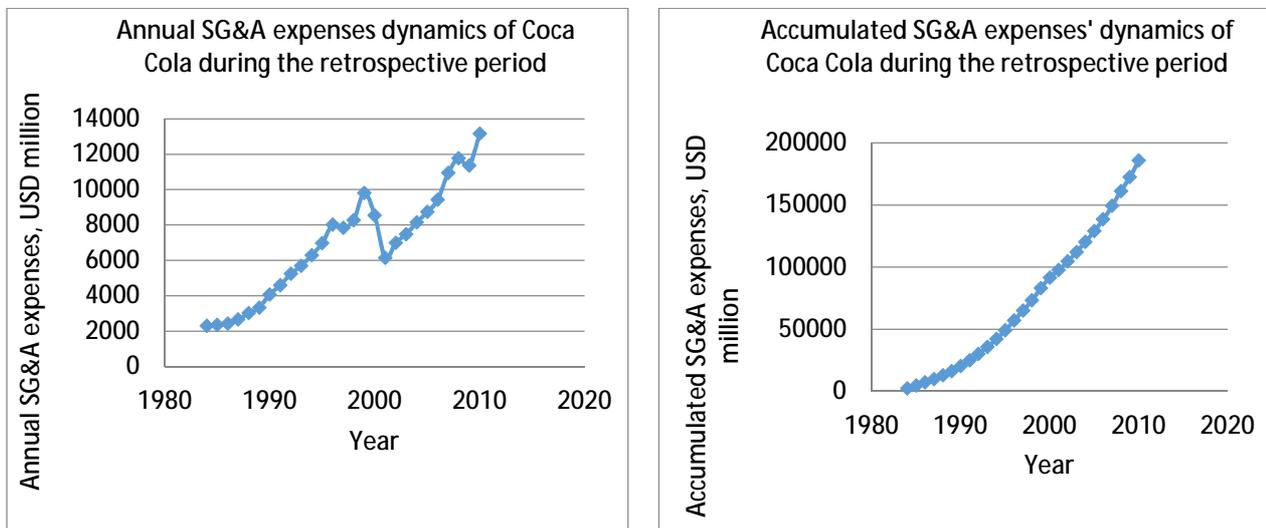


Fig. 1. Dynamics of changes in annual and accumulated SG&A expenses of Coca-Cola

The theoretical substantiation of the refusal to take into account of annual trademark depreciation indicators in the evaluation procedure is as follows. The market value of certain specific types of intangible assets – in particular, such as trademarks and goodwill – during the period of their useful use may vary in both directions, both in the direction of decrease (positive depreciation) and in the direction of increase (negative depreciation). Typically, for successful brands there is a general tendency to increase their value over time, which means that there is a negative depreciation. But the characteristics of the value change in time of assets listed above, used in accounting documents, do not correspond to the actual state – so use the calculation of annual

depreciation/amortization indicators suggests their value reduction over time, and does not take into account the possibility of their value factual increase, that in the negative depreciation presence [11, p. 725].

Accordingly, we can formulate the conclusion about the inexpediency to take into account the accounting data for depreciation/amortization in calculating the trademark value by the Costs Approach methods. These data are only the consequence of the completely conditional rules for assets accounting use, set by the regulatory framework for the financial statements of enterprises. They are not related to factual changes of intellectual property objects market value - what is fully confirmed by [11, p. 725; 12, p. 216] and

the example analyzed above. The enterprise accounting does not have any idea about the real market value of such intellectual property objects and their dynamics, if they were not independently evaluated by relevant specialists. Practice confirms the presence of completely paradoxical situations, when for a long time according to the accounting data, the current value of intellectual property objects is reduced, in accordance with normatively established amount of depreciation/amortization. At the same time, the results of independent valuation of this intangible asset undeniably testify the fact of its value multiple increase. This indicates the inadmissibility of using any accounting data for intellectual property objects depreciation in independent evaluation. Bringing the enterprises' financial statements data to the factual state would require the corresponding changes in documents of the current accounting normative base, in accordance with the international standards requirements to account the assets in enterprises' balances on their fair market value. But for this purpose it is necessary to introduce into the accounting normative base the negative depreciation concept of some special types of intangible assets. Neither developers of instructional documentation nor its users are apparently not ready for such cardinal changes at the moment [12, p. 216]. Instead, for the independent evaluation, when the Costs Approach is applying, we can state, firstly, the inappropriateness of considering the accounting data for intellectual property objects with alternating depreciation sign and, secondly, the critical importance of the correct choice of indicator, which determines the accounted part of owner previous expenses for the creation and information support of evaluation object. This primarily refers to the researched expenses indicator – Selling, General and Administrative Expenses (SG&A), which is used as primary data source for calculations in the analyzed example. The choice of this coefficient directly influenced on the final result of value determining, and it is advisable more detail considering of its relationship with the accuracy of valuation works results.

Our research has shown that brand value evaluation error can be improved by optimizing the part of owner previous expenses determination, which is used as primary data source for

calculations. The annual basic indicator for brand valuation (called as “Brand Name Advertising” in [8, c. 15]) is calculated as a part of company's annual brand advertising costs. In the analyzed valuation example it was estimated at 50% of annual sales and advertising costs (called as “Selling and Advertising” in [8, c. 15]), with the obvious assumption that the other half of these costs was not related to the brand creation and development. Respectively, annual sales and advertising costs are obtained as 66(6) % of general SG&A expenses. The research, using the above sources regarding the estimated brand value, has shown that optimizing the value of coefficient, which sets the part of annual amount of sales and advertising costs, makes possible to reduce the relative error level to less than 1 %. We have performed the calculation of estimated value of the Coca-Cola brand, using the data of the analyzed example, without taking into account false accounting depreciation indicators, which is not reliable indicator of the asset depreciation level, and the adoption of Millward Brown Optimor (MBO) data [10, p. 1] as its true valid value. Subsequently, in mathematical model simulation, a variation of the part of annual sales and advertising cost of Coca-Cola, up to choosing its optimal value, was implemented. The calculation results are given in a Table 1.

According to Table 1, the optimized value of the coefficient, which sets the part of the annual sales and advertising expenses during 2006–2008, is ranged from 0.44 to 0.54. The optimization was performed by the criterion of estimated brand value relative error minimizing, based on the estimated brand value in the relevant period, according to the MBO evaluation data [10, p. 1]. This fully confirms the correctness of the assumptions adopted by Aswath Damodaran [8, p. 15], according to which the accepted value of this coefficient is 0.5.

Significant theoretical and practical interest is the study of the relationship between indicators of annual SG&A expenses accumulated over the entire retrospective period and of estimated brand value. In analyzed example, the part of annual SG&A expenses attributed by Aswath Damodaran [8, p. 15] to costs, associated with the trademark creation and development, is constant and is

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determined by the product of two coefficients, used by the author, namely $-\frac{2}{3}$ and $\frac{1}{2}$, that is 0.33(3). In open sources of market information [13, p. 1] data of the annual evaluation results for the same brand value over the comparable period is available. This opens up the opportunity to determine the optimal part of brand value in the accumulated amount of SG&A expenses by calculation way, which would

ensure the estimated value compliance with factual data. The numerical values of this parameter are critical for this class intangible assets evaluation accuracy, because the evaluation result error depends directly on the choice of this part index. A result of the calculation of the part index, which is the estimated brand value ratio to accumulated SG&A annual expenses, is given in Table 2.

Table 1

The relative error of Coca-Cola brand cost evaluation with optimized part of annual sales and advertising costs

Indicator	Unit of measurement	Year		
		2006	2007	2008
Estimation of brand value (by calculations)	USD million	41568	43855	58061
Valid brand value (by MBO evaluation data)	USD million	41410	44140	58210
The part of the company's annual sales and advertising costs, taken into account in calculations	–	0.45	0.44	0.54
Absolute error	USD million	-158	285	149
Relative error	%	-0.38	0.65	0.26

Table 2

Retrospective analysis of the actual part of Coca-Cola brand value on accumulated annual SG&A expenses

Year	Estimated brand value, USD million	Annual SG&A expenses, USD million	Accumulated SG&A annual expenses, USD million	The brand value ratio to accumulated annual SG&A expenses
2000	72537	8551	91607	0,792
2001	68945	6149	97756	0,705
2002	69637	7001	104757	0,665
2003	70453	7488	112245	0,628
2004	67394	8146	120391	0,560
2005	67525	8739	129130	0,523
2006	67000	9431	138561	0,484
2007	65324	10945	149506	0,437
2008	66667	11774	161280	0,413
2009	68734	11358	172638	0,398
2010	70452	13158	185796	0,379

In Table 2 accumulated SG&A expenses are calculated according to the data presented in the above example, where annual Coca-Cola expenses since 1984 have been used, which is a forced constraint due to the lack of earlier periods data. Although theoretically the whole data set, since registration (or statement on the accounting balance) date of the appraised intellectual property

object should be used. According to the principles of the Costs Approach in its application to brands valuation, in this case, the annual SG&A expenses should be taken into account throughout the full retrospective period, since the date of intangible asset creation up to the hypothetical valuation date. It is clear that taking into account annual expenses of previous unrecorded periods would increase

accumulated SG&A expenses in all subsequent periods. Thus, the shortage of annual SG&A expenses data at earlier periods is a source of methodological error occurrence, which distorted estimated basic indicators of the accumulated costs and, accordingly, the estimated brand value in the direction of their reducing. Fortunately, in valuation practice it is very rare to find cases, when

it is necessary to evaluate so old brands, that they have no any data about their creation and development costs from the earliest periods of existence.

Graphs of Coca-Cola brand value part index change in time, obtained by calculation estimated brand value ratio to accumulated annual SG&A expenses, are given in Fig. 2, left.

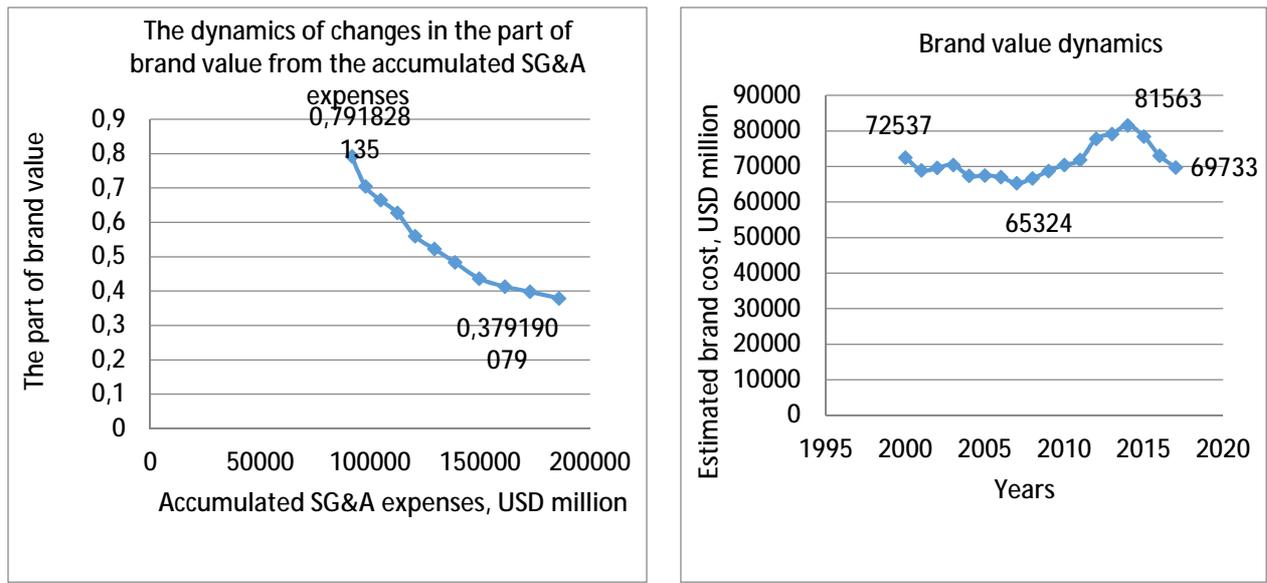


Fig. 2. Dynamics of the change in the brand's value part of the accumulated SG&A expenses (left, own author's development) and the dynamics of Coca-Cola estimated brand value change over time (right, according to [13, p.1])

Let's take a closer look at the dynamics of Coca-Cola's estimated brand value for a long-term gap. As shown at Fig. 2, right, according to estimation results [13, p. 1], during the period of 2000–2010 there were significant fluctuations of the brand value. From the above time period trend graph of estimated brand value changes, it is clear that periods of this intangible asset value decline changed with periods of its growth. The analysis of brand value change dynamics confirms the very special nature of this intangible asset and this class assets unique feature to demonstrate both positive and negative depreciation, in certain periods during their economic life duration. Those depreciation signs depends on brand value reduction or increase over time. In this case, the direction of brand value changes, that is, its reduction or increase in time, determines the sign of annual and accumulated depreciation quantitative indicators. For most successful companies, with the prevalence of their brand value growth trends, rates of their

depreciation indexes are in general negative; in periods of temporary brand value reduction, these depreciation indicators are positive. As shown by dynamics of the most expensive brands value analysis, in general case for enterprises that are characterized by stable rates of economic growth, the presence of a stable tendency to a permanent increase of these intangible assets estimated value is rather typical. This is primarily due to accumulation in brand value high investment funds of brand owners' expenses for their information and advertising support. This gives a reason to investigate more closely the correlation between advertising costs, which are part of SG&A expenses, and brand value.

The widespread is Costs Approach applying practice of using the indicator of accumulated costs for brands advertising support as primary data source. It is based on the fact that for the considered class of intangible assets with sign-changeable annual depreciation

indicators is characterized by high sensitivity of their value to factors of internal and external information influence. This feature provides the possibility of a purposeful influence on their value changes over time and, accordingly, on depreciation indicators, by the use of these price-forming factors. The most important of these factors is the systematic carrying out of advertising and information support activity of the enterprise' trademark and goodwill development, which are mutually related intangible assets. For an economically successful enterprise, a situation when high level cash flows are regularly invested into the brand development, is quite typical. Then the natural consequence of this is a rapid brand value increase, due to owner's activities of information and advertising support. We consider it as internal information influence price-forming factor, which provides negative annual brand depreciation. The opposite case is also possible – a sharp trademark value decrease, as a result of external information factors influence – for example, in the case of discredit campaigns in media. In such case, there may be possible great brand value loss, with its falling to zero and even negative indicators. This is considered as external information influence price-forming factor, which provides positive annual brand depreciation. In the first case there are manifestations of a negative moral, or functional, depreciation/obsolescence, and in the second case – respectively, evidence of positive economic or external depreciation. In the typical case, systematic internal information support impact on the brand's value usually results in its value increase and a negative functional depreciation/obsolescence, in which the owner of property rights is economically interested in this brand use and its further development. In the case of external information influence on these assets value the sign of external depreciation may be either positive or negative. After all, as shown above, these intangible assets value changes in the influence of external price-forming factors can be directed not only towards reducing their value, but also in the direction of its increase. The first case occurs when publishing information that compromises the

brand owner company is. The second case is observed in cases when the enterprise is occupying a high position in various ratings, receiving prestigious awards, disclosing in media facts of financial support for socially-oriented initiatives or charitable activities [11, p. 725].

The above example of the Coca-Cola brand is interesting because of alternating sign-changed annual brand depreciation indicators presence in the considered retrospective period of 2000-2010. It can not be said that this example is typical, but it is more informative in the point of view of brand possibilities to change direction of its value dynamics over time, demonstrating changes both in the direction of its growth, and in the direction of decline. Thus, according to the Interbrand international rating, during the retrospective period of 2012–2018, there is a steady tendency for the annual rapid growth of the world most expensive brands value. At short-term periods (lasting no more than 1 year) manifestations of positive depreciation were observed for 3 of the 5 most valuable global brands in the world in 2018 (Amazon, Apple, Google, Samsung, Facebook in order of decreasing value), namely – for Apple in 2017, Amazon in 2017, Samsung in 2016 [14, p. 1]. Thus, the more general and typical trend was the presence of negative depreciation, due to the monotonous growth of brand value over the long-term gap. Characteristically, the Google and Facebook brands during the investigated retrospective period did not reveal any features of even a short-term costs reduction, demonstrating a stable negative annual and accumulated depreciation.

The analysis of the research results showed that during the 10-year retrospective period of 2000–2010, the part of Coca-Cola brand value in accumulated SG&A expenses monotonously decreased from 0.792 in 2000 to 0.379 in 2010, while fluctuations in brand market value, with periodic growth and decline, were observed (Fig. 2). This indicates a weak correlation between these two indicators. Let's check this assumption by constructing the correlation field of these parameters and determining the characteristics of the regression line. The results are shown in Fig. 3.

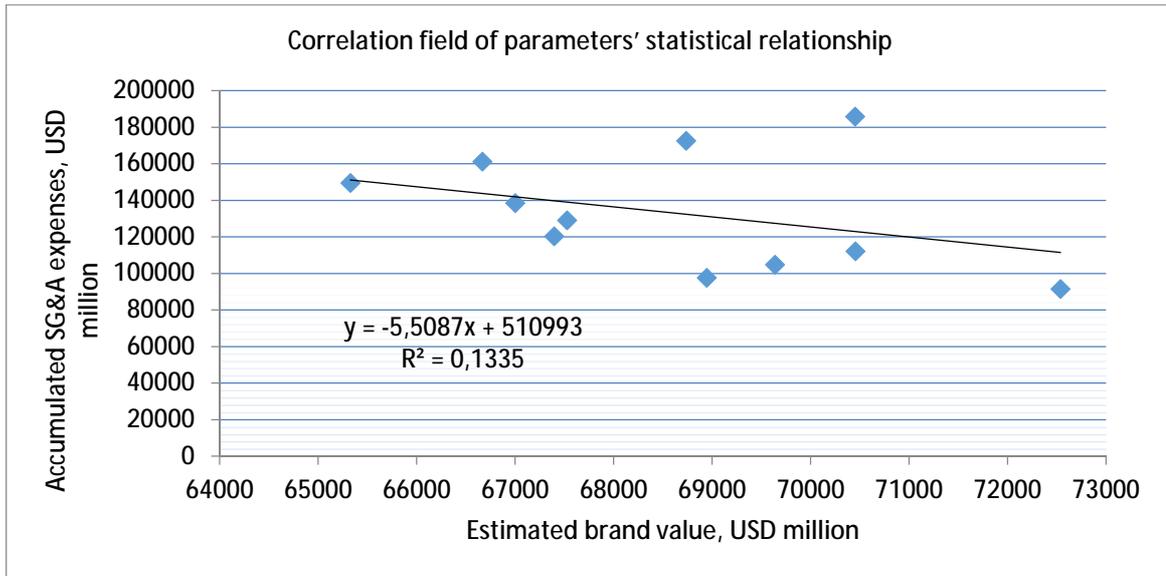


Fig. 3. A correlation field for the estimated brand value and accumulated SG&A expenses of Coca-Cola

The slope of the regression line indicates a negative correlation relationship; the negative value of the correlation coefficient indicates a reverse statistical relationship. The low negative value of the correlation coefficient $R = -0.3365$ and determination factor of investigated parameters $R^2 = 0.133$ confirm that the statistical relationship between accumulated SG&A expenses and the brand value is rather weak. The value of the correlation coefficient for annual SG&A expenses and brand value is even weaker: the correlation coefficient $R = -0.234$ and the determination factor of parameters under study $R^2 = 0.055$.

According to table “Quantitative criteria for estimating the relationship density” [15, p. 103], the values obtained above of the correlation coefficient give grounds to characterize the degree of statistical relationship density in the first variant as “moderate”, since the value of $R = -0.336$ relates to the second interval of this table (0.3–0.5 in absolute value). In the second variant, it can be described as “practically absent, weak”, since the value $R = -0.234$ refers to the first interval of this table (up to 0.3 in absolute value). The latter shows that it is unreasonable to use annual SG&A expenses figures as the primary data source for evaluation. The relevance of these data in the Costs Approach applying is too low, even when compared to accumulated SG&A expenses amount. So, it can not be recommended for the use because of the low accuracy of the results that will be obtained when such an evaluation is performing.

Note that while the brand value part in the accumulated amount of these expenses varies over time according to the function, which is close enough to the linear, despite the changing character of the annual brand depreciation in the retrospective period (see graphs in Figure 2). During 2000–2010, as the graph shows, the brand value changed the sign of annual depreciation several times, showing periods of decline (positive depreciation) and growth (negative depreciation). Nevertheless, the brand value part in accumulated SG&A expenses has monotonously decreased, by a function close to the linear. This opens up the possibility of reliable forecasting of the revealed trend by linear extrapolation of the trend chart for future periods. Thus, the task of calculating forecasted indicators of brand value may be solved, with the known trend of changes of brand value part in the accumulated SG&A expenses. For unknown subsequent annual amounts of these costs, their forecast rates may also be applied. Thus, it has been shown that indicator of accumulated SG&A expenses can be used as a baseline data for brand value calculating by the Costs Approach. This possibility is conditioned by the availability of a statistical information link between the amount of accumulated SG&A expenses and the amount of costs, invested in the trademark creation and development.

Let’s consider possible directions for increasing the reliability of brand value evaluating results, taking into account consequences of the analysis above. Theoretical analysis for choosing

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source data indicates that “Advertising Costs” indicator, which is only one component of SG&A expenses, is more informative. In Table 3 we will identify the significant components of SG&A expenses and consider the proportion of advertising costs in total SG&A expenses.

Materials of the analyzed example were supplemented by data of later periods, obtained

from open sources [16, p. 62; 17, p. 53; 18, p. 54]. As can be seen from Table 3, Selling, General and Administrative Expenses (SG&A) is the sum of the following components: stock-based compensation expenses, advertising expenses, selling and distribution expenses, other operating expenses. Graphic interpretation of the results is presented in Fig. 4.

Table 3

Retrospective analysis of Coca-Cola's annual SG&A expenses components, as for the year end (31 December)

Components of annual SG&A expenses	Year									
	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008
Stock-based compensation expenses, USD million	219	258	236	209	227	259	354	380	241	266
Advertising expenses, USD million	3958	4004	3976	3499	3266	3342	3256	2917	2791	2998
Selling and distribution expenses, USD million	3257	5177	6025	6412	6419	8905	8502	3902	2627	2815
Other operating expenses, USD million	5062	5823	6190	7098	7398	5232	5310	5959	5699	5695
Selling, General and Administrative Expenses (SG&A), USD million	12496	15262	16427	17218	17310	17738	17422	13158	11358	11774
The ratio of advertising costs to total SG&A expenses, %	31.67	26.24	24.20	20.32	18.87	18.84	18.69	22.17	24.57	25.46

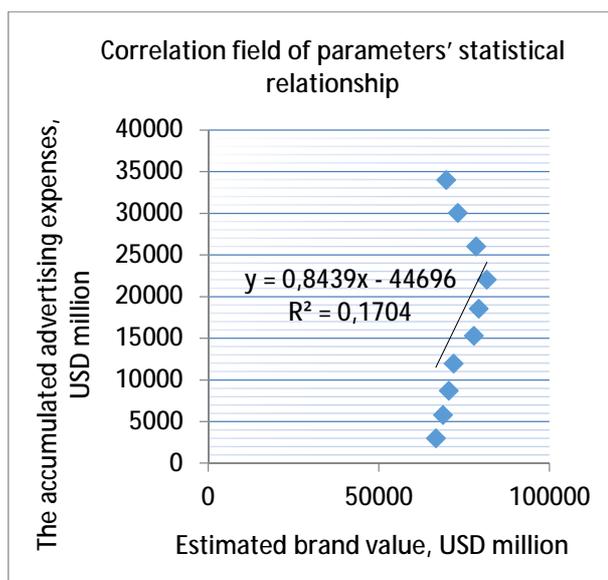
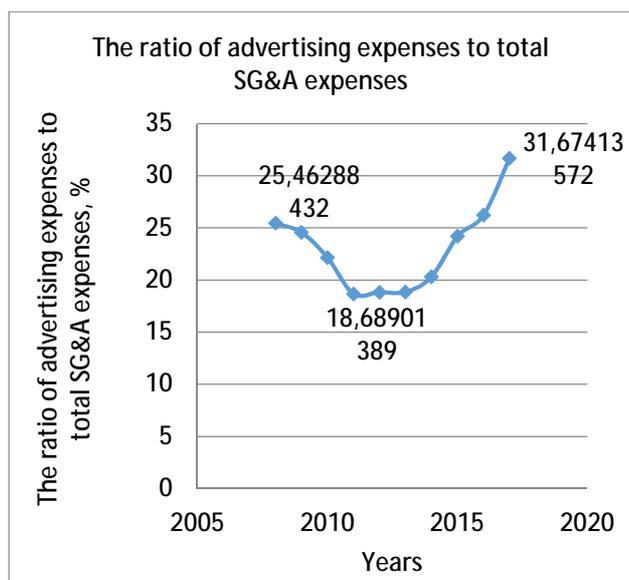


Fig. 4. Dynamics of changes in advertising expenses part in the total SG&A expenses over years of retrospective period (left) and the correlation field of the estimated brand value and accumulated advertising expenses (right) for Coca-Cola

During 2008–2017, as can be seen from Table 3 and Fig. 4, the advertising expenses part in total annual Selling, General and Administrative Expenses (SG&A) on this long-term gap was not constant: it dropped monotonously from 25.46 % in 2008 to 18.69 % in 2011, and then increased monotonously from 18.69 % in 2011 to 31.67 % in 2017. At the same time, for the above-mentioned period, the change in this expenses part amounted to 12.99 percentage points, which corresponds to a relative index of its instability of 56.2 % in relation to the average of 23.10 percentage points. It is unacceptable to neglect the investigated expenses part instability of such an order, if it is possible to use directly obtained data by company's financial statements reports, where available selected indicators of the annual advertising expenses are. If the amount of advertising expenses in a particular period is unknown, it is advisable to use linear interpolation or extrapolation methods, based on known up-to-date data and trend line forecast for future periods. For example, using the calculated above ratio of advertising expenses to the total SG&A expenses given in the last row of the Table 3.

Studies have shown that in the period under review, 2008–2017, the statistical relationship of the “Estimated Brand Value” indicator with the indicator of annual advertising expenses was too weak: the value of the correlation coefficient is $R = 0.368$; the value of the determination factor of parameters under investigation is $R^2 = 0.135$. Instead, the statistical relationship between the estimated brand value and the accumulated advertising expenses is related more closely. The value of the correlation coefficient for this case is positive, and is $R = 0.413$; the value of the determination factor of the parameters under investigation is $R^2 = 0.170$. This indicates their closer statistical relationship than the above analyzed relationship between accumulated total SG&A expenses and brand value. The positive values of the correlation coefficient, obtained for this case, give grounds to characterize the degree of statistical relationship density as also “moderate”. Unlike accumulated total SG&A expenses, the correlation coefficient of selected accumulated advertising expenses has a positive and higher numerical value, manifesting direct and closer correlation relationship with the indicator “Estimated brand value”.

The theoretical substantiation of the using selected part of advertising costs from Selling, General and Administrative Expenses (SG&A) as a primary data source advisability is the lack of logically verified relationships between brand value and other components of SG&A expenses. After all, general and administrative expenses significant components – such as stock-based compensation expenses, selling and distribution expenses, other operating expenses – do not directly affect either the brand value or the goodwill of the company. While the costs of information and advertising activities only obviously increase the degree of customers' brand recognition, form and maintain in the consumers' minds persistent positive stereotypes.

This confirms the priority of using the indicator of accumulated selected advertising costs, which has the above advantages compared with accumulated SG&A expenses for valuation purposes. From the above-mentioned indicators, the indicator of accumulated advertising costs is characterized by the highest and positive value of the correlation coefficient with the indicator “Estimated Brand Value”, which is an unknown value in evaluation problems solving. For this example, use of this parameter was the most appropriate. A rather low absolute value of the correlation coefficient, probably, is due to the brand value in time changing function with alternating first derivative, for the case under consideration, with multiple annual depreciation sign changes. For brands with more stable trends of value changes in time (such as for the most expensive in 2018, the Amazon, Apple, Google, Samsung, Facebook), the correlation coefficient will probably be much higher – but we consciously analyze in this work the most difficult case.

It should be noted that in the domestic appraisal practice, at the moment, there is no accumulated so much experience in brands evaluating, and there are often cases, when the enterprise' trademark is evaluated for the first time. Consequently, the appraiser in this case is not aware of trends in brand value time changing, as there are no any results of previous evaluations. This makes the solving of such valuation tasks even more difficult, as compared to the regular annual monitoring of trademarks value of large

multinational companies. In any case, from results of the studies carried out, we can conclude the presence of the closest statistical relationship of the brand value and the indicator of accumulated advertising costs. This gives grounds to this parameter use as a most reliable primary data source for the trademark value determining by the Costs Approach – even if in each individual case there is an a priori unknown model for brand value changing in time. Depending on the type of this model, the correlation coefficient between the primary data used, and the parameter is measured, will be higher or lower – but in any case, the more reliable parameter for brand evaluating by the Costs Approach does not exist at this time.

By this intangible asset periodic revaluation data use, accumulated over a longer time period, it will be possible to identify and investigate this pattern. There is no other way to validate it in principle. When carrying out valuations of such assets, of course, it is also possible to use also accumulated amount of SG&A expenses as a data source, but only in those cases when it is impossible to distinguish expenses used directly on trademark informational and advertising support and development. Conducted studies of SG&A expenses part optimization opportunities, which should be taken into account in such cases, for the considered example of Coca-Cola has shown its change over 10 years in the range from 0.792 in 2000 to 0.379 in 2010. In our opinion, it seems more expedient to focus on higher values of the coefficient, which determines the size of this part - because it is difficult to imagine any expenses of advertising products or services that are not related to the trademark. In Ukraine it is almost impossible to find published information and promotions that ignore the trademark – in fact, no one advertises anonymous goods or services “in general”, but always refers to the product of a specific manufacturer or service provider, which is identified by the brand. For this reason, in nowadays domestic conditions, almost all expenses of information and advertising activities, with very few exceptions only, can be considered as direct investments in brand and goodwill value growing. These cash-flows are directly aimed at increasing their market value, and are accumulating in it throughout the entire economic life of these intellectual property objects.

Other possible directions for increasing the reliability of the evaluation results are noticed in the work of Aswath Damodaran [8, p. 15]. It is noted that two potential refinements are possible that may improve the reliability of this evaluation. The first is to analyze the longer economic life period of an evaluated intangible asset and extend the retrospective period depth back in time, to get more data on past periods advertising costs. This can undoubtedly be accepted, since according to basic independent valuation principles, which are based on the Costs Approach, the present brand value on valuation date is determined by the sum of all costs for its creation and support, made in past periods. In theory, for the correct valuation, all associated costs during the retrospective period from the date of trademark creation (registration) up to the present appraisal date should be taken into account. In the example we examined, the author limited himself to analyzing the data of the 25 years retrospective period, noting that in reality the retrospective period should be going back a lot longer, to determine the trademark economic life duration, but primary data availability limitations makes it so hampered. This is, after all, quite understandable in the case, when the cost of a trademark with such a long economic life period is investigated: the company Coca-Cola uses its brand since 1886, with minor modifications to the logo. That's when the pharmacist John Pemberton invented the recipe for syrup. The name for a drink was invented by Pembertons accountant - Frank Robinson. He personally brought out on the paper the inscription “Coca-Cola”, which later became the logo of the world-famous company. Along with Coca-Cola brand, the company's portfolio of brands now includes about 20 other brands, including such as Schweppes, Diet Coke, Fanta, Sprite, Coca-Cola Zero, Vitaminwater, Powerade, Minute Maid, Simply, Georgia, Dasani, Fuze Tea, Del Valle etc. [19, p. 1].

The second direction of reliability increasing is to adjust the nominal expense indicators of past periods and determine the current value of these dollar costs on the present evaluation date. Aswath Damodaran suggests performing this valuation procedure using inflation correction, illustrating the following example: the cost of \$ 771 million in 1984 (calculated advertising cost of the Coca-Cola brand in the example) is indeed much larger than

the same dollar amount in 2008. In our view, it is certainly appropriate, but not sufficient. In this case, it is more appropriate, in addition to this, to use also the mathematical apparatus of the time value of money theory - namely, the method of determining the present value of past periods cash flows, with the help of a compounding operation. In determining the compounding rate by the cumulative construction method, taking into account premiums for additional risks to the base risk-free rate, the inflation rate will automatically be taken into account. Since the value of the base risk-free rate, used in calculations, necessarily must be adjusted to the inflation rate, according to the well-known Irving Fisher's method. For such a long economic life period of the intangible asset, which is considered in this paper, the application of the time value of money theory seems to be absolutely necessary – while the effect of past periods cash flows value changes in time, when they are brought to the present moment, will be very noticeable. Neglecting this procedure is only possible for very young-age trademarks, created and registered few years only before the valuation date. For them, taking into account the present value of past periods cash flows, it will not make a large difference with their present value and nominal values on dates of these expenses. Note that both of the above-mentioned potential refinements increase the obtained value of trademark capitalization.

Conclusion

The obtained results are useful for further improving of independent evaluation tools, since they provide a promising direction for further research of economic measurements errors. This, from our point of view, is a very urgent task of further methodological basis of an independent expert evaluation developing, in the direction of its informatization and algorithmization. Proposed approaches and results are the next step in the informational and metrological paradigm elements implementation into the current independent valuation practice, which is a key to improving the valuation work quality [20, p. 44].

1. At brand appraising/valuation procedure is not recommended to apply any accounting book-keeping amortization indexes, as they are not the reliable indicator of real Depreciation/Obsolescence level. The duration of intangible

assets' economic life in the form of a trademark and goodwill should be determined as unlimited. According to accounting standards, such assets are not depreciated.

2. Such very special assets, under conditions of their adequate information and advertising support, demonstrate its value over time increase that is negative accumulated depreciation manifestation. The annual depreciation of this class intellectual property objects is characterized by a changeable sign, made it both positive and negative during the separate periods of economic life. This is grounded on the brand value in time changing function with alternating first derivative, with multiple annual depreciation sign changes.

3. It's recommended to use for evaluation the most relevant indicator for determining brand value, as the primary data source - the amount of trademark annual advertising costs, accumulated over the entire retrospective period from the date of trademark creation/registration, without annual asset depreciation/amortization deducting from these costs.

4. In order to reduce results errors in intellectual property objects in the form of brand and goodwill evaluating, we can recommend a procedure of optimizing the size of advertising costs part, used as initial primary data for calculations. It is shown that in the considered example of the Coca-Cola brand valuation, due to this procedure execution the obtained results estimation relative error can be reduced to less than 1%.

5. Valuation results uncertainty degree, based on most valuable worldwide brands rating lists, shows extremely high level of their absolute and relative errors [12, p. 216; 21, p. 161; 22, p. 192]. We suppose that the above mentioned methods and results of researches are the base for the further independent valuation methodology development in direction of the information and metrological paradigm wider use.

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STUDY OF THE CURRENT CONDITIONS AND PROSPECTS OF DAIRY PRODUCTION DEVELOPMENT IN UKRAINE

Abstract. Analysis of marketing information conforms that the branch of milk production is of great importance in support of human balanced diet. Nowadays, Ukraine is a great producer of milk and takes the tenth position in the world rating of the largest producer countries. The aim of the article is to study peculiarities of development of the branch of dairy production in Ukraine under current conditions and in the future. To achieve the set goal, the authors of the work used the methods of comparison, statistical and system analysis, and forecasting based on trends. Basing on the analysis of secondary information it is argued that considerable reduction of milk production in Ukraine has lately caused reduction of the output of some kinds of dairy products. To estimate impact of the level of milk consumption and consumer price index on milk production in Ukraine, the authors of the research have developed a double-factor econometric model. According to the results of econometric modeling, it is determined that growth of consumption of milk and dairy products per 1 person in Ukraine by 1 % will cause increase of the output of milk by 1.327 %, while increase of the index of consumer prices for food products and soft drinks by 1 % will cause reduction of milk output by 0.255 %. A negative effect on development of the dairy market is done by deficiency of raw material and its low quality. It is determined that, according to expert estimates, Ukraine has great prospects in the field of dairy products export, and it is expected that until 2030, the world demand for dairy products will grow and it

will be hardly satisfied by the principal countries, exporting those products. However, to increase export of their products, milk-processing enterprises of Ukraine should sufficiently improve parameters of dairy products quality. It is studied that growth of export of dairy products can result in deficiency of those products at the domestic market, because a considerable reduction of milk production in Ukraine has recently caused reduction of the output of some kinds of dairy products. Analysis of the market of dairy products also confirms that it experiences a severe competition and producers should actively introduce innovations in their marketing activity to be competitive. According to the research results, milk-processing enterprises can get competitive advantage due to introduction of advanced technologies, supply of new products at the market, production of organic products, opportunity of re-use of packaging, intensification of flexible pricing, expansion of the area of sale and attraction of new intermediaries, formation of consumers' loyalty to the brand, choice of trade agents with the good image.

Key words: tools of investigation of the dairy products market in Ukraine, methodology of determination of the factors influencing production of dairy products, export of dairy products, key factors of success at the market.

Formulation of the problem

Food safety of Ukraine considerably depends on development of its dairy industry, which takes an important position in support of a balanced diet

of its residents and demonstrates great prospects for growth of revenues from export of those products. However, development of milk-processing enterprises is influenced by transformations in the factors of their macro environment (political, demographic, economic, natural, scientific and technical) and micro environment, including variations of consumers' preferences, severing of their requirements to ecological and natural properties of products, lack of the raw material (milk) of good quality.

Timeliness of the topic

Opportunities for the further growth of dairy products export and supply of Ukraine's population with dairy products depend on development of milk-processing enterprises. Hence, it is important to study conditions of the dairy market in Ukraine and the factors fueling or stagnating development of milk-processing enterprises in Ukraine.

Analysis of recent research and publications

Scientists pay much attention to investigation of milk and dairy market in Ukraine. The works [1, 2] study tendencies of development of milk-processing industry, its principal problems and prospects of development with consideration of

the current trends of export and import. The research [3] specifies principal problems in milk branch of Ukraine, which restrict export of the products of milk-processing enterprises. Foreign experience in the field of production of organic and qualitative dairy products is described in [4].

However, the researchers pay poor attention to investigation of the branch of dairy products in total, with consideration of the available competitive environment, and key factors of success.

Aim and tasks of the article

The aim of the article is to study particularities of development of the branch of dairy production in Ukraine under current conditions and in the future.

Main findings of the research

Considerable recession of milk production has recently caused fall of the output of some kinds of dairy products, and in the inter-season period of the market of dairy products, it depends on import of raw material. For the last 25 years, one observes reduction of the number of cattle, particularly it has reduced 6.9 times, cows – 4.2 times. The negative dynamics to reduction of the number of cattle in Ukraine is confirmed by the data in the Table 1.

Table 1

Dynamics of the number of cattle in Ukraine at all categories of farms, million animals* [5]

Year	Cattle		Cows		Year	Cattle		Cows	
	million animals	Indices (comparing to the previous years)	million animals	Indices (comparing to the previous years)		million animals	Indices (comparing to the previous years)	million animals	Indices (comparing to the previous years)
1991	23.73	–	8.26	–	2005	6.51	0.94	3.64	0.93
1992	22.46	0.95	8.06	0.98	2006	6.18	0.95	3.35	0.92
1993	21.61	0.96	8.08	1.00	2007	5.49	0.89	3.1	0.93
1994	19.62	0.91	7.82	0.97	2008	5.08	0.93	2.86	0.92
1995	17.56	0.90	7.53	0.96	2009	4.83	0.95	2.74	0.96
1996	15.31	0.87	6.97	0.93	2010	4.49	0.93	2.63	0.96
1997	12.76	0.83	6.26	0.90	2011	4.43	0.99	2.58	0.98
1998	11.72	0.92	5.84	0.93	2012	4.65	1.05	2.55	0.99
1999	10.63	0.91	5.43	0.93	2013	4.54	0.98	2.51	0.98
2000	9.42	0.89	4.96	0.91	2014	3.88	0.85	2.26	0.90
2001	9.42	1.00	4.92	0.99	2015 ¹	3.75	0.97	2.17	0.96
2002	9.11	0.97	4.72	0.96	2016 ¹	3.68	0.98	2.11	0.97
2003	7.71	0.85	4.28	0.91	2017 ¹	3.53	0.96	2.02	0.96
2004	6.9	0.89	3.93	0.92	2018 ¹	3.38	0.96	1.97	0.98

*Without consideration of temporarily occupied territory of the Crimean Autonomous Republic and the area of Anti-Terrorist Operation

A sufficient reduction of the number of cattle in Ukraine is mainly caused by unprofitability of their maintenance due to increase of the prices for fodder, ability of milk-processing enterprises to increase milk yield in some season determining purchase prices for milk, liquidation of large-scale animal breeding farms and complexes, increase of the number and importance of small private farms in supply of milk-processing enterprises with raw material.

In 2018, the share of milk production by farms of population constituted 72.2 %, and the share of agricultural enterprises – 27.3 %, contrary to 2017, when the share of milk production by farms of population constituted 73.1 %, and the share of agricultural enterprises – 26.9 %. Table 2 presents information concerning milk production in Ukraine in terms of regions.

Table 2

Milk production in Ukraine, thousand tons [6]

Region	All categories of farms		Agricultural enterprises including farms		Farms of population	
	2017	2018	2017	2018	2017	2018
Vinnitsia	851.3	827.1	198.1	206.3	653.2	620.8
Volyn	411.9	390.8	83.5	87.2	328.4	303.6
Dnipropetrovsk	300.7	294.1	70.4	70.9	230.3	223.2
Donetsk	190.2	186.3	77.1	71.2	113.1	115.1
Zhytomyr	547.7	552.4	112.0	115.2	435.7	437.2
Transcarpathian	325.2	345.5	2.9	1.5	322.3	344.0
Zaporizhzhia	260.7	243.9	36.8	37.2	223.9	206.7
Ivano-Frankivsk	463.5	441.1	18.5	17.1	445.0	424.0
Kyiv	435.9	435.6	223.9	224.5	212.0	211.1
Kirovohrad	305.6	307.3	57.7	61.3	247.9	246.0
Luhansk	124.8	127.1	33.3	30.9	91.5	96.2
Lviv	528.3	505.5	28.2	27.7	500.1	477.8
Mykolaiiv	342.2	335.4	41.6	46.3	300.6	289.1
Odesa	348.6	335.2	32.7	32.7	315.9	302.5
Poltava	792.4	765.4	424.6	397.3	367.8	368.1
Rivne	433.3	416.7	78.9	76.1	354.4	340.6
Sumy	416.0	410.1	176.3	173.5	239.7	236.6
Ternopil	451.4	449.6	72.8	79.2	378.6	370.4
Kharkiv	522.5	526.6	240.0	240.1	282.5	286.5
Kherson	293.3	284.5	42.7	45.2	250.6	239.3
Khmelnyskyi	596.7	625.0	161.0	169.4	435.7	455.6
Cherkasy	507.9	484.1	300.6	291.5	207.3	192.6
Chernivtsi	281.6	272.9	14.0	13.2	267.6	259.7
Chernihiv	548.8	536.6	238.1	244.5	310.7	292.1
Ukraine	10280.5	10098.8	2765.7	2760.0	7514.8	7338.8

Analyzing the data of the Table 2, one can conclude that amount of milk production has been increased at the agricultural enterprises in Vinnytsia, Volyn, Dnipropetrovsk, Zhytomyr, Zaporizhzhia, Kyiv, Kirovohrad, Mykolaiiv, Ternopil, Kherson, Khmelnytskyi and Chernihiv regions. Farms of population have increased milk production in Donetsk, Zhytomyr, Transcarpathian, Luhansk, Poltava, Kharkiv and Khmelnytskyi

regions. However, totally in Ukraine, production of milk in 2018 was reduced by 1.8 % comparing to 2017.

Increase of the price for milk, energy sources and fuel, under-developed domestic structure of purchasing centers on rural territory negatively influence development of Ukrainian milk-processing enterprises, causing reduction of the output of milk and dairy products.

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To estimate impact of the level of milk consumption and index of consumer prices on production of milk in Ukraine, there research composes a double-factor econometric model based on the data in the Table 3.

According to the calculations, the following model is created

$$\hat{y} = - 132,89 + 698,13x_1 - 23,18x_2 .$$

Principal results of examination of the model adequacy are described in the Table 4.

Results, presented in the Table 4, enable applying of the obtained model for determination of the coefficients of elasticity for the volume of milk production in Ukraine (Table 5).

Table 3

Data for estimation of dependence of the volume of milk production in Ukraine on consumption of milk and dairy products and consumer price index

Year	Milk production, thousand tons (y)	Consumption of milk and dairy products per 1 person (in milk equivalent) monthly, kg (x ₁)	Index of consumer prices for food products and soft drinks (comparing to the previous year), % (x ₂)
2005	13714.4	21.7	116.2
2006	13286.9	22.3	105.3
2007	12262.1	22.1	109.7
2008	11761.3	22.6	135.7
2009	11609.6	19.8	111.9
2010	11248.5	19.2	110.9
2011	11086.0	19.1	106.4
2012	11377.6	19.6	97.9
2013	11488.2	20.3	97.8
2014	11132.8	20.3	112.2
2015	10615.4	19.8	145.9
2016	10381.5	19.6	109.0
2017	10280.5	19.3	112.9
2018	10098.8	19.2	111.1

Source: completed on the basis [5]

Table 4

Principal results of examination of the developed model

Index	Estimated value	Conclusions
Criterion C^2	0.524	Considering the fact that the criticality of the criterion constitutes 3.8, one can conclude that the phenomenon of multicollinearity between the factors is not present
Multiple correlation coefficient	0.822	There is a close relation between the volume of milk production and consumption of dairy products, as well as the index of consumer prices for food products and soft drinks
Determination factor	0.675	Variation of the output of milk by 67.5 % depends on variation of consumption of dairy products and index of consumer prices for food products and soft drinks
F-test	11.445	Considering the fact that criticality of that criterion constitutes 3.98, one can conclude that the developed model is adequate to the existing relation (a linear form of relation is confirmed)

Source: own working of authors based on the made research

Determination of the coefficients of elasticity for the volume of milk production in Ukraine

Indices	Value	Conclusions
Coefficient of elasticity E_1	1.327	Increase of consumption of milk and dairy products per 1 person in Ukraine by 1 % causes growth of the volume of milk production by 1.327 %
Coefficient of elasticity E_2	-0.255	Increase of the index of consumer prices for food products and soft drinks by 1 % causes reduction of the volume of milk production by 0.255 %

Source: own working of authors based on the made research

Referring to scientifically argued food standards and support of food safety, one person should consume up to 380 kg of milk annually, i.e. Ukraine is almost twice beyond the index. In many countries of the EU, consumption of milk and dairy products exceeds the standard and constitutes 440 kg in France, 430 kg in Germany, 380 kg in Denmark, 370 kg in Austria [7].

Thus, in case of increased milk consumption, Ukraine can face the problem of its deficiency. Hence, nowadays, it is necessary to develop measures either concerning growth of milk output per one cow, or increase of the number of cows.

Recently, producers of dairy products have focused their main efforts on increase of the share of market due to purchasing of advanced equipment and active promoting of the produced commodities. In Ukraine, most milk-processing enterprises have not been interested in investing in appropriate formation of their livestock. Notwithstanding the active steps towards renewal of equipment, almost 80 % of equipment at dairy enterprises of Ukraine are outdated, making negative effect on dairy products quality [1, p. 30].

Substantial concentration of production of dairy products and great opportunities for growth of their export are the other peculiarities of the market. Nevertheless, Ukraine is a great producer of milk and takes the tenth position in the world rating of the largest producer countries. In 2017, milk-processing enterprises of Ukraine increased export of the products by 82.4 % comparing to 2016 [8] – almost 841 thousand tons in milk equivalent. The export was 6.5 times larger than the import in kind. It mainly concerned export of sweet butter, i.e. 2.5 times more, comparing to 2016. Its share in the structure of dairy products export took 46 %. The highest demand for

Ukrainian sweet butter was marked in Turkey, Morocco and post-Soviet countries. In 2016, Ukraine started export of dairy products to China, Egypt, UAE, Bangladesh, and Vietnam. Almost 13 % of the total volume of whey was supplied to China, 16.5 % – to Vietnam. 10 % of the volume of exported sweet butter was supplied to Egypt, almost 11 % of dry milk – to Bangladesh, 8.8 % of the total volume of fermented dairy products was exported to UAE [1, p. 30]. In 2017, import of dairy products in Ukraine increased by 24 % and constituted 130 thousand tons, with a considerable share of cheese in it. Principal countries supplying cheese to the Ukrainian market included Poland, Germany and France.

In 2018, Ukrainian milk-processing enterprises exported milk and dairy products for 263 million USD, including sweet butter – 48.8 % of the total export, dry and condensed milk – 22.4 %, cheese – 11.7 [9]. Those data confirm transformations in the structure of exported commodities comparing to the previous period. In 2016, the main shares of export by milk-processing enterprises of Ukraine were taken by milk (47 % of the total export), heavy cream and milk whey (22 % of the total export), sweet butter (11 % of the total export) uncondensed milk and heavy cream (10% of the total export), cheese (7 % of the total export). In 2016, fermented or acidified milk and heavy cream were also exported, i.e. its share took 3 % [10].

Information about export of Ukrainian dairy products in 2018 is presented in the Table 6.

Ukraine has great prospects in the field of dairy products export. Expert forecast argues that until 2030 the world demand for dairy products will increase by 25 % and it will be not satisfied by

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the principal countries exporting those products, such as New Zealand, Australia, Europa and the USA [11]. However, implementation of export opportunities is connected with the necessity of growth of cows productivity, establishment of cooperatives, supply of appropriate control for security and quality of dairy products. The last factor is caused by the current situation in Ukraine, when almost 30 % of the total volume of sold dairy products are counterfeit. At the world market, competitive capacity of Ukrainian milk is caused

by the price factor, i.e. its price is by 16% lower than the world one. Most Ukrainian dairy products are exported to the post-Soviet countries, while such countries, importing dairy products, as Hong Kong, Algeria and Venezuela are left out of consideration.

In 2018, the shares of sweet butter and fat cheese (42.84 % and 28.93 % respectively) were the largest ones in milk equivalent, while the shares of heavy cream and farmer cheese (0.32 % and 2.2 % respectively) were the smallest ones. (Fig. 1).

Table 6

Information about export of Ukrainian dairy products in 2018.

Naming of products	Principal importer-countries and their share in the total volume
Milk and uncondensed cream	Moldova (36.14 %), Libya (23.64 %), Qatar (16.59 %), Georgia (13.8 %), Poland (6.14 %), Armenia (0.75 %)
Condensed milk	Bangladesh (14.84 %), Georgia (10.8 %), Kazakhstan (10.39 %), Armenia (8.69 %), Turkmenistan (7.07 %), China (6.05 %)
Fermented dairy products	Moldova (47.73 %), Georgia (19.34 %), Kazakhstan (15.47 %), Poland (8.92 %), Armenia (3.03 %), UAE (2.74 %)
Milk whey	China (51.73 %), Philippines (10.1 %), Malaysia (6.18 %), Vietnam (5.17 %), Pakistan (5.09 %), Uzbekistan (3.71 %)
Sweet butter and milk fats	Morocco (22.07 %), Turkey (11.07 %), Holland (10.1 %), Moldova (7.54 %), Saudi Arabia (7.35 %), Azerbaijan (6.76 %)
Cheese	Kazakhstan (35.6 %), Moldova (33.21 %), Egypt (11.3 %), Georgia (2.95 %), Azerbaijan (2.73 %), Turkmenistan (1.8 %)

Source: completed on the basis [6]

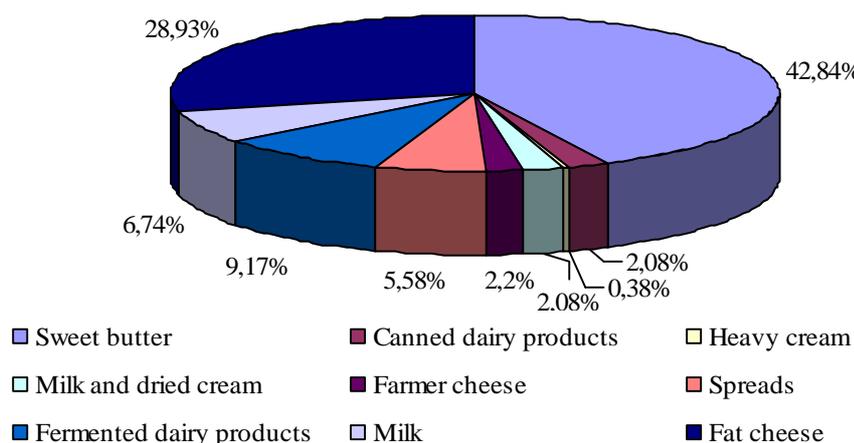


Fig. 1. Structure of dairy production in milk equivalent [6]

Food and agricultural organization of the UNO (FAO) gives forecast of a new crisis at the milk market of Ukraine caused by feeding

stuff price spiral in dairy breeding [12]. Particularly, for the first four months of 2018, prices for milk were reduced by 6.7 %, and

prices for feeding concentrated mix for animals increased by 32.9 %.

However, improvement of milk quality was a positive phenomenon at the milk market of Ukraine in 2018 [9]. For 9 months of 2018, volume of purchase of high quality milk, i.e. extra and high grade, increased by 33.8 % and 7.8 % respectively, while purchase of milk of I grade reduced by 8.9 % and II grade – by 15.1 %.

In Ukraine, severing and support of appropriate control for milk quality can be secured by opening of the laboratory of milk quality testing of the Association of milk producers (AMP), established in 2018 in Uman (Cherkassy region) within the grant

support for the project “Agrosilrozvytok” by USAID. The mentioned laboratory has advanced equipment. It is used to test key physical and chemical properties of milk, presence of additives and inhibitors in milk, to identify agents of mastitis, as well as other bacterial and fungus diseases, their sensitivity to antibiotics [13].

Table 7 describes principal characteristics in the field of dairy production in Ukraine.

Structure of the market of dairy products by the producers is presented by the Fig. 2.

Analysis of operation of the principal producers at the market of dairy products is presented in the Table 8.

Table 7

Principal characteristics in the field of dairy production in Ukraine

Characteristics	Directions of study
1	2
1. Principal economic characteristics of the branch	In 2018, production of milk constituted 10098.8 thousand tons and was reduced, comparing to 2017, by 182 thousand tons. In 2019, the further fall of the index is expected. In 2018-2019, reduction of the volume of export of milk and dairy products along with increase of the volume of import of those products were negative tendencies. Producers of milk and dairy products are spread on the whole territory of Ukraine. Innovations in that field expect application of advanced technologies for processing and packing of milk, as well as supply of new products at the market
2. Analysis of competitive environment	Intensity of competition at the market of dairy products is high. Competitive advantage is first gained by the enterprises, which propose a wide range of commodities, innovative products of improved quality with a considerable number of useful elements and available new tastes, in ecological and convenient packaging, make efforts to establish partnership relations with consumers through the social networks. However, the price factor is very important for consumers with low income. There is a poor chance for new companies to enter the market of dairy products, because consumers give preferences to the known brands. Competitive pressure by producers of substituting products is insufficient, because there are no substituting products, which satisfy the same demand. Milk is the principal raw material for production of dairy products. To secure the required volume of raw milk, it is necessary to crate personal purchasing centers, to control milk quality. The degree of impact of purchasing companies, first retail networks, is rather high. They determine assortment of commodities and set their requirements to prices for commodities
3. Driving forces	Differentiation of needs, severing of the requirements to naturality of the products
4. Competitive position of the main participants (strategic groups)	In 2018, the largest producers of dairy products in Ukraine included: GE Danone, GE Milk Alliance, GE Lactalis-Ukraine, LLC “Loostdorf”, PJSC Wimm-Bill-Dann Ukraine, PJSC “Prydniprovskiy milk factory”, PJSC “Halychyna”, PJSC “Ternopilskiy milk factory”, GE Terra Food, GE “Formula” [14]. However, the highest growth in 2018, comparing to 2017, was demonstrated by such companies as PJSC “Halychyna”, GE Lactalis Ukraine, LLC “Loostdorf”
5. Analysis of competitors	There are some strategic groups, which can be distinguished according to their shelf life, their price level, organic properties of products

Table 7 continuation

1	2
6. Key factors of success	In technologies – it is introduction of advanced capacities; in marketing – introduction of innovative products at the market, intensification of organic properties of products, opportunity of re-use of packaging, strengthening of flexibility in pricing, extension of the geography of sale and attraction of new agents, in the field of communication – formation of consumers’ preference of some brand; in professional training – choice of qualified staff and trading agents with an appropriate image
7. Prospects of the branch and its general attractiveness	Improvement of milk quality and growth of its output will create preconditions for increase of the volume of supply of milk and dairy products at the domestic and foreign markets. Increase of the level of consumers’ earnings and promotion of dairy products will create preconditions for growth of domestic demand for dairy products. Increase of demand at foreign markets will open new opportunities for export of milk and dairy products

Source: own working of authors based on the made research

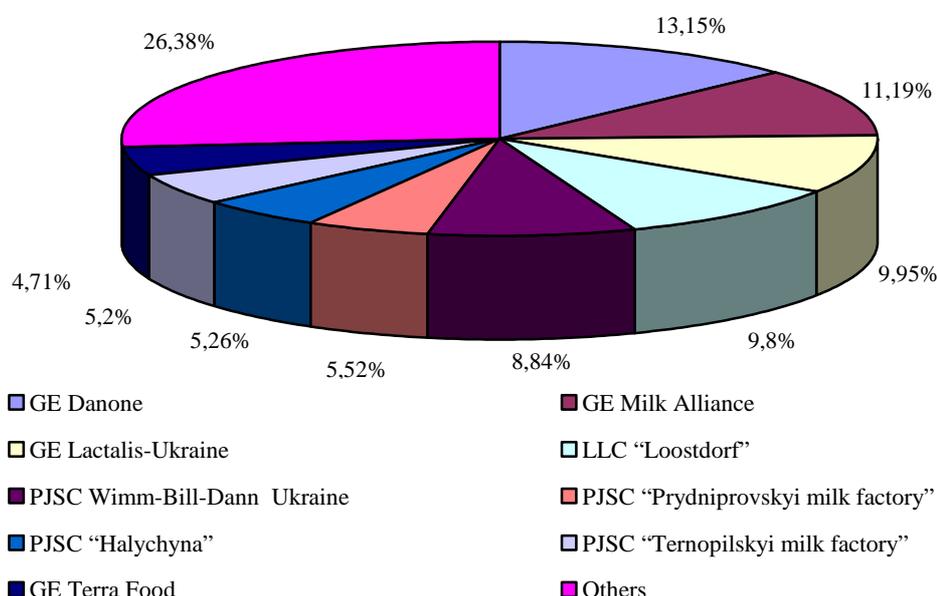


Fig. 2. Structure of the market of dairy products by producers [14]

Table 8

Analysis of operation of the principal producers at the market of dairy products

Producer	Principal brands	Peculiarities of raw material supply
1	2	3
Danone	“Aktyvia”, “Actimel”, “Rastishka”, “Danissimo”, “Veselyi pastushok”, “Zhyvynka”, “Biobalance”, “Prostokvashyno”, “Tema”, “Halakton”	Large dairy and family farms. 97 % of raw material comes from large farms, 3 % – from farms of population
GE Milk Alliance	“Zlatokrai”, “Slavia”, “Pyriatyn”, “Yahotynske”, “Yahotynske dlia ditei”, “Milk alliance”	Main raw material zones include Central and Southern Ukraine
GE Lactalis-Ukraine	“Presydent”, “Dolche”, “Laktel”, “FANNI”, “Bilosvit”, “Laktonia” and “Imun+”	Storage of raw material by creation of purchasing centers of milk in villages (totally 130), which are responsible for keeping to sanitary and veterinary standards and equipped with refrigerators and mini-laboratories

Table 8 continuation

1	2	3
LLC “Loostdorf”	“Selianske”, “Na zdorovie”, “Burionka”, “Loostdorf”, “Totosha”	Productive capacities are located in ecologically favorable Vinnytsia region and are supplied with the raw material from 50 farming enterprises of the region
PJSC Wimm-Bill-Dann Ukraine	“Romol”, “Slovianochka”, “Mashenka”, “Chudo”, “Ahusha”	Main sources of raw material include Vinnytsia, Zhytomyr, Kyiv and Cherkasy regions
PJSC “Prydniprovskiy milk factory”	“Zlahoda”, “Liubymchyk”	There are 5 centers of milk purchase, which have advanced equipment
PJSC “Ternopilskiy milk factory”	“Molokia”	Supply of raw material is secured by farms. German technology “FRESH TECHNOLOGY” is introduced. It is an innovative technology for purification of milk with the following low-temperature pasteurization
GE Terra Food	“Tulchynka”, “Ferma”, “Premialle”, “Bila linia”	Purchase of milk from farms occurs at personal milk-receiving points, which are equipped with modern refrigerating installations. They are used to test milk quality, and only milk of appropriate quality is transported by specialized milk tank vehicles for processing

Source: completed on the basis [11–22]

Analysis of the market of dairy products confirms that nowadays there is a severe competition and producers should actively introduce innovation in their marketing activity to be competitive at the market.

Conclusions

Nowadays, Ukraine is a large producer of milk and takes the tenth position in the world rating of the largest producer countries. However, a considerable reduction of milk production in Ukraine in the recent years has caused fall of the output of some kinds of dairy products.

To estimate impact of the level of milk consumption and consumer price index on milk production in Ukraine, the authors of the research have developed a double-factor econometric model. According to the results of econometric modeling, it is determined that growth of consumption of milk and dairy products per 1 person in Ukraine by 1 % will cause increase of the output of milk by 1.327 %, while increase of the index of consumer prices for food products and soft drinks by 1 % will cause reduction of milk output by 0.255 %.

The market of dairy products belongs to one of the most competitive markets of commodities in Ukraine. Competitive advantage is gained by milk-processing enterprises due to introduction of advanced capacities, supply of new products at the market, production of organic products, possibility to re-use packaging, intensification of flexibility in pricing, extension of the geography of sale and attraction of new agents, creation of consumers’ loyalty to the brand, choice of trade agents with the appropriate image. A negative impact on its development is done by the deficiency of raw material and its low quality.

The following investigation will be focused on introduction of the marketing of significance in operation of domestic milk-processing enterprises in order to improve their competitive capacity.

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FINANCIAL FLOWS IN THE FIELD OF INSURANCE

Abstract. The introduction of an insurance culture in Ukraine should be based on theoretical studies in this area. The authors carried out a certain review of Ukrainian scientific publications devoted to the development of the insurance market, the analysis of the state of insurance and insurance companies, historical experience and comparative analysis of insurance activities of Ukrainian and foreign insurers. This allowed us to formulate a proposal for a research typology and supplement it. The typology of directions of insurance problems studying, which are conducted by Ukrainian scientists taking into account generalizations of foreign experience, is given. At the same time, our research direction is oriented to one segment of the insurance market, namely, health insurance. As a result of the review of scientific publications on this topic, attention was drawn to the absence of research into financial flows in Ukraine in such segment of health insurance as medical insurance for Ukrainian students studying at foreign universities. It is well-known that Ukrainians do not use health insurance at home. This also applies to students studying at Ukrainian universities. Instead, according to foreign experience, medical insurance is compulsory to study abroad at universities. This prompts entrants, who become students of European universities, to buy health insurance policies. It is

clear that such insurance is preferable if the insurance company is chosen in the country of residence of the student. It is proposed to supplement the typology of financial flows of the insurance market by the category of “insurance cash flows”. The proposal is based on the fact that there are practically two streams of medical insurance for Ukrainian students studying abroad. There are two directions of the movement of funds: payment of insurance policies by insured persons and payment of insurance funds in the insurance case by the insurer. For each of these two streams, it is suggested to use the definition “insurance cash flows”. The methodological principles for conducting research are formulated. The indicators for calculations and comparison, as well as the composition of the initial data for calculations are determined. The calculation and comparison of the volumes of insurance flows connected with medical insurance of Ukrainian citizens studying at foreign universities of five countries is made. In particular, settlements for insurance terms of Austria, Bulgaria, Germany, Poland and the Czech Republic are made. The comparison is made in euro currency and hryvnia – the national currency of Ukraine.

Key words: insurance, medical insurance, insurance cash flows, typology of insurance cash flows, volume of insurance cash flow.

Introduction

The insurance sector is specific according to the peculiarities of the insurance funds and their use. The point is, first of all, the very specific nature of the appointment of insurance funds that humanity has introduced in order to compensate for loss from accidents, to assist those individuals or businesses that have suffered a loss. In this case, the concept of loss in the context of insurance should, of course, be considered through the prism of insurance cases. In business, financial categories are predominantly used to assess losses incurred by property. As for individuals, in addition to purely material losses, the loss of health and even life is considered. During a long time insurance exists, a variety of insurance products has been offered. Firstly, this is due to the interest of insurers in expanding the scope of insurance, in the desire to cover the wider range of risks of individuals and business activities of legal entities. Secondly, individuals and legal entities themselves, faced with a wide variety of risks, are interested in having certain financial resources to overcome the consequences of the risks that have become insured. Nor should we forget about those insurance products that are related to the provision of older people who are already disabled. They are introduced for pension insurance. Generally, we can say about social insurance, which should help both individuals and businesses to overcome the difficulties. Thirdly, the state, represented by the authorities and public administration, is interested in ensuring the fact that, at the onset of insured events, citizens and businessmen can restore lost as a result of accidents, due to not only budgetary assistance from the government, local authorities, at the own expense of the victims, but also at the expense of more powerful financial resources, which possess the insurance funds.

An important position among the types of insurance is occupied by health insurance. Assistance to individuals in case of illness due to disability is an important point not only for the individual but for the company (institution) where the person works, and for the state. As for individuals, their interest in protecting their health means the ability to work and support themselves and their families. Enterprises (institutions) are interested in the health and efficiency of their

employees in order to ensure the continuity of the production process and, as a result, obtain the expected profit. The public interest in the health of each individual is, in the economic sense, that healthy people ensure the continuity of the activities of enterprises (institutions) and, through the payment of taxes, fill budgets of all levels. At the same time, the state is interested in minimizing budget expenditures on health care, which, to a certain extent, is ensured by both good health of people and the maintenance of health through timely provision of medical services, including through insurance companies.

Young people also need insurance coverage, as tourist travel, study and work abroad require the provision, if necessary, of medical care. Instead, the insured event occurs suddenly, by accident. Recently, more and more school graduates go to study abroad at universities. Obtaining higher education abroad is gaining popularity among graduates of Ukrainian secondary schools, high schools, lyceums. There are many reasons for this popularity. On the one hand, having received sufficient knowledge of a foreign language and excellent or good knowledge of general compulsory school subjects, graduates feel confident that they can study at foreign universities. Obtaining higher education abroad has always been considered prestigious among Ukrainians. Under the current conditions it became a realistic prospect. On the other hand, obtaining a diploma from a foreign university for many Ukrainians is considered a definite guarantee of further employment, either abroad or in Ukraine in a foreign company. Given the rather powerful advertising campaign for attracting Ukrainian entrants to foreign higher education institutions (HEI), one can admit that Ukrainians are more likely to believe in foreign HEIs than in Ukrainian universities [Kuzmin & Yastrubskyy, 2017; Zaiac, 2014; Zhuk, 2019; Aliksieiev, Mazur & Aliksieiev, 2019]. The discussion of better or worse training in different countries is not the subject of our study. We will focus on other aspects that accompany the transfer of Ukrainian entrants to study abroad. In particular, we are interested in the aspect of cash flows associated with the medical insurance of Ukrainian students abroad.

It should be noted that when it comes to free education of foreign students in countries such as Germany, Finland, Czech Republic (in case of studying in Czech), then medical services are still provided with appropriate insurance. Especially if educational services are also paid.

Literature review

Since medical insurance for student youthstudying abroad is an isolated case, firstly we have to consider the reasons for the occurrence of health insurance, its place in the general insurance system, identify varieties of financial flows in insurance in general, and in medical insurance in particular.

In domestic scientific sources the study of insurance issues is conducted in different directions. Table 1 provides a typology of directions for studying insurance issues conducted by Ukrainian scholars. Of course, having in mind a certain

direction of our research, namely, orientation towards health insurance, we paid more attention to the mentioned topic. We left behind our interest insurance issues related to property insurance, civil liability and others. Nevertheless, since for many researchers the issues are not strictly directed only on a separate type of insurance, we must also point to those works, in which, the issue of other segments of the insurance market is described alongside with the problems of health insurance. As a rule, all types of insurance are covered by educational literature and comprehensive monographs devoted to general insurance issues [Bazylevych, Pikus, Prykaziuk & Motashko, 2014; Hamankova, 2019; Plysa, 2010; Moskalenko, 2015]. Quite a lot of attention is paid to the analysis of the state of the insurance market. An example of such works is [Hamankova, 2019; Melnyk, Kulbachna & Zhulim, 2018; Chumachenko, 2017; Onisiforova, Bolotova & Ostapenko, 2018; Rubtsova & Chkan, 2015].

Table 1

Typology of scientific research of Ukrainian scientists in the field of insurance

Areas of research in the field of insurance	Researchers in the respective directions
General insurance issues	Bazylevych, V. Hamankova, O. Plysa, V. Moskalenko, M.
Analysis of the insurance market of Ukraine	Melnyk, O., Kulbachna, L., Zhulim, M. Hamankova, O. Chumachenko, I. Onisiforova, V., Bolotova, T., Ostapenko, L. Rubitsova, N., Chkan, I.
State regulation of insurance activity	Serdiuk, M. Fedorova, N.
The role of health insurance in the reform of the health care system	Pasichnyk, Yu. Resnikova, N., Rubtsova, M. Tlusta, H. Kyrychenko, A.
Compulsory health insurance	Bora, N. Kyrychenko, A. Livak, P.
History of medical insurance development in Ukraine and abroad	Kochnova, I. Kundytskii, O. Mashevski, O., Baraboi, M. Yermolaieva, M., Skydanenko, Yu. Berezina, S.
Comparison of medical insurance development in Ukraine with foreign medical insurance experience	Herus, Yu. Kostenko, T., Stokolyuk, V., Zavaloka, L.

In the context of market transformations that also apply to the insurance market, state regulation of insurance activity is important, which is reflected in papers [Serdiuk, 2017; Fedorova, 2018]. Of course, the number of such publications is more significant, since the management of economic processes by state regulators of markets has been existing for a long time. And the practice of the previous 80 years has shown different effectiveness of such regulation, both abroad and in Ukraine. This is especially true of the Soviet era of the “planned” economy and the need to overcome the consequences of such a government in the process of establishing market relations.

The currently developing medical insurance in Ukraine is an integral part of the reform of the medical sector, health care system. This issue is devoted to more than one publication, but we only show the following [Pasichnyk, 2012; Reznikova & Rubtsova, 2018; Tlusta, 2014; Kyrychenko, 2018]. Discussions on compulsory health insurance are taking place [Bora, 2018; Livak, 2014]. By building a market economy and forming a market consciousness among Ukrainian citizens, it is not always possible to confidently establish the necessity, and most importantly, the possibility of introducing and approving compulsory health insurance. The obligatory nature of certain insurance measures is confronted with resistance not only in Ukraine but also abroad. So in the United States, several attempts to introduce certain medical treatment systems have come under great opposition despite the considerable economic and financial potential of this state. The last allegedly successful attempt was also defeated [Mashevskiy & Baraboi, 2017].

However, the experience of foreign countries is extremely interesting in the historical context [Kochnova, 2014; Kundytskyi, 2017; Mashevskiy & Baraboi, 2017; Iermolaieva & Skydanenko, 2012; Berezina, 2018], and in purely comparative at the present stage [Herus, 2015; Kostenko, Stokolyuk & Zavoloka, 2018]. Historical experience allows us to correctly assess the current state of the insurance sector and, in particular, health insurance in Ukraine. After all, historical research allows you to see the mistakes of governments of other countries and those positive solutions to problems that have been successfully implemented.

From studies by domestic scientists who have studied in detail the experience of foreign

colleagues in the field of providing services in the health insurance market, it is known that only a limited number of countries, such as Great Britain, Germany, Sweden, substantially finance the provision of medical services for citizens at the expense of budgets [Pasichnyk, 2012]. In these countries, only part of the cost of medical services is paid by patients from their own income. For most countries, cash flows in the healthcare market are at the expense of citizens.

The research of financial flows in the field of insurance is actively conducted, both in Ukraine and abroad. Interesting in this sense is a comparison and generalization concerning compulsory health insurance [Livak, 2014], including the process of implementation of medical reform [Kyrychenko, 2018], the need for the introduction of insurance medicine [Bora, 2018]. Although it is still time for Ukraine to consider health insurance issues, without which the transition to insurance medicine, as evidenced by foreign experience, is impossible.

However, we are not only interested in health insurance. We are interested in the medical insurance of Ukrainian students studying abroad. After all, every foreigner is deprived in any country of the world of the protections that a person has the right to count on in his country. This is true for both: those who go abroad for work and those young people who go to study abroad.

The purpose of the article is to identify and study the volume of financial flows associated with medical insurance of Ukrainian students studying in foreign universities, that is, the volume of insurance cash flows.

Methodological approach

Financial flows in insurance companies are different and they can be connected, both with the receipt of insurance premiums, with the payment of compensation in connection with insurance cases, and with the investment of free funds for deposits with banks, the receipt of interest from deposits, at last with the deterioration of the insurance company itself (payment of wages employees, payment for communal services, maintenance of buildings and premises, rent payment in case of renting premises for a company, etc.).

We proceed from the considerations that medical insurance, in particular for Ukrainian

students studying in foreign universities, has only two directions of movement of funds: payment of insurance policies to insured persons and payment of insurance funds in the insurance case by the insurer. For each of these two streams, we will apply the name of the insurance cash flows. Thus, we propose to supplement the typology of financial flows of the insurance market by such a category as "insurance cash flows".

Studies in the field of insurance cash flows related to the studying of Ukrainian citizens in foreign universities in Ukraine were not conducted. Obviously, this is due to the recent tendency of quite a mass transfer of Ukrainian entrants abroad. Thus, the traditions of studying at European universities in Ukrainians existed from the 15th century to the Soviet era, when studying abroad could be carried out only by selected citizens. Mostly such studying was associated with the training of future diplomats. Instead, such opportunities were not considered for a wide range of other specialties. Only in the 70's and 80's of the last century a limited number of students could study in higher educational institutions of the countries of the socialist commonwealth. However, such studying was not of a mass character.

To study the volume of insurance cash flows associated with Ukrainian students at foreign universities, you need to know about certain background data. Such data includes: the minimum amount for medical insurance for student youth in a particular country; the size of the insurance premium; the number of Ukrainian students in a particular country. Since the countries of Central and Eastern Europe use different currencies, and we are interested in comparing insurance cash flows, it is necessary to know about exchange rates, the ratio of national currencies to euro, since this currency is used in countries of the euro zone, and to hryvnia for the assessment of insurance cash flows in the national currency of Ukraine.

Conducting results of research

Research shows that almost all countries, at least in Europe, which we conducted to study this question, adhere to the requirements of compulsory health insurance. Of course, each country has built such a system of insurance on its own, has defined the appropriate tariffs and insurance procedures, differentiated a set of medical services in accordance with tariffs. However, virtually all

countries of Central and Eastern Europe have set a minimum amount for health insurance for student youth at the level of 30,000.00 euros. Next, we will provide data on medical insurance for students in several European countries.

In Austria there is compulsory health insurance, which is also mandatory for students. For insurance it is necessary to purchase a plastic medical card (e-card), for which you should pay 11.70 € annually. The monthly insurance premium for students is reduced to 58.39 €. Taking into account the annual fee for a plastic medical card, the total annual cost of medical insurance will be 712.38 € for the student.

In Bulgaria, the cost of an annual insurance policy for students is 130.00 leva; with a rate of 0.5104 EUR per 1 BGN (updated April 30, 2019 06:45:02 UTC¹) it will be 66.35 €. However, if an insured event occurs, then a so-called deferred payment of 40.00 leva is required, which is 20.52 €. Consequently, in the absence of insured events during the year the regular annual insurance payment will be 66.35 €.

In Germany medical insurance for students is mandatory and requires an insurance of € 30,000.00. It is allowed to buy insurance policies of different prices, depending on the tariff (28.00 €; 35.00 € or 63.00 € per month²) for the amount of: 336.00 €; 420.00 € or 756.00 € per year. Ludwig-Maximilian University of Munich in its calculations on the training of foreign students indicates an amount of 600.00 € per year³. The insurance company X-Patrio will require a payment of 90.00 € [Chundak, 2019]. Then, the student's total annual medical expenses may amount to 426.00 €; 510.00 € or 690.00 € per year at Ludwig-Maximilian University of Munich, or 846.00 € per year. The contribution for students under 30 years

¹ Source: Online Currency Converter. Access mode: <https://freecurrencyrates.com/ru/convert-EUR-BGN>

² Source: Medical insurance in Germany for foreign students, for all foreign students of language schools, scholarships and postgraduate students. Access mode: <https://www.studentversicherung.de/medicinskaja-strahovka-v-germanii-dlja-inostrannih-studentov-stipendiatov-aspirantov.html>

³ Source: Ludwig-Maximilians-Universität München. Access mode: <https://www.uni-muenchen.de/aktuelles/index.html>

Financial flows in the field of insurance

old in the state insurance company from 2017 is 82.88 €, which is 994.56 € per year. To the generalized table we will add the average amount of money indicated by Ludwig-Maximilian University in Munich.

In Poland the student contribution is PLN 47.00 per month⁴, or PLN 564.00 per year. According to the exchange rate of Polish zloty to EUR 0.23292 PLN / EUR (April 30, 2019⁵), the annual amount of health insurance for a student in Poland will be 131.37 €.

In the Czech Republic the cost of health insurance for students for 12 months is 11,000.00 Kč (CZK). At the rate of CZK / EUR 0.03896 (April 30, 2019⁶) this will be 428.56 €.

The results for student health insurance of the specified countries are summarised in Table 2.

Table 2

Data on compulsory medical insurance for students and the amount of insurance payments

Country	Compulsion of medical insurance	Insurance premium per year, €
Austria	Mandatory	712.38
Bulgaria	Mandatory	66.35
Germany	Mandatory	690.00
Poland	Mandatory	131.37
The Czech Republic	Mandatory	428.56

Of course, talking about cash flows associated with student health insurance should only be in case when the number of students abroad is significant enough. If it were a single student, or even a hundred students, then it is not worth taking insurance premiums as a cash flow that needs research. That is why it is important to provide information about the number of Ukrainian students in the universities of the countries of Central and Eastern Europe. This number is really significant, which is measured by tens of thousands of people (Table 3). Given the annual cost of insurance policies and a significant number of Ukrainian citizens studying in foreign universities, it is

possible to expect fairly significant cash flows in the health insurance of Ukrainians abroad. Of course, the question arises, why should you pay attention to it? One of the answers is simple enough: it is important to know about the scale of cash outflow from Ukraine in the form of medical insurance for students. This option of answering the question is important for the state authorities and administration, for the Ministry of Finance of Ukraine. Another answer is important for the families of such students, for which it is not least important to understand not only the amount of tuition fees, but also the cost of staying in one or another country of their child-student, in particular, the cost of health insurance.

Table 3

Data on the number of Ukrainian citizens studying abroad at universities

Country	Number of Ukrainian citizens studying at universities, persons	
	2015–2016 ⁷	2016–2017 ⁸
Austria	1.607	1.625
Bulgaria	561	669
Greece	285	285
Italy	2.348	2.536
Latvia	233	242
Lithuania	361	377
Germany	9.088	9.638
Poland	30.041	33.370
Russia	6.936	11.440
Romania	246	327
Slovakia	683	1.169
Turkey	464	506
Hungary	1.026	838
Czech Republic	2.395	2.471
Estonia	230	292
The number of students studying at universities total for the academic year	56.504	65.785

⁷ Source: Stadnyi E. (2017) Ukrainian Students Abroad: Facts and Stereotypes. [in Ukrainian]. Retrieved from <https://cedos.org.ua/uk/articles/ukrainski-studenty-za-kordonom-fakty-ta-stereotypy>

⁸ Source: Stadnyi E. (2019) Ukrainian Students Abroad: Data Up to 2017/18 of the Academic Year. [in Ukrainian]. Retrieved from <https://cedos.org.ua/uk/articles/ukrainske-studentstvo-za-kordonom-dani-do-201718-navchalnoho-roku>

⁴ Source: MojaEdukacja. Access mode: <https://mojaedukacja.com/medychne-strahuvanna>

⁵ Source: Currency Converter. Access mode: <https://www.mataf.net/uk/currency/converter-PLN-EUR>

⁶ Source: Currency Converter. Access mode: <https://www.mataf.net/uk/currency/converter-CZK-EUR>

The data presented in Table 3 shows that the highest value of insurance policies is in Austria (712.38 €) and Germany (690.00 €). The lowest cost is respectively in Poland (131.37 €) and Bulgaria (66.35 €). The average value of the cost of a health insurance policy in the Czech Republic (428.56 €). We did not conduct a separate study on the content of health services that can be provided under a specific health insurance policy in each country. It is enough to note that in Germany there are three different costs of the insurance policy and, accordingly, three different sets of medical services. It is well-known that the higher the cost of a health insurance policy, the greater the set of possible medical services for the patient.

Analysing the number of Ukrainian students in these five countries, Poland can be identified as a leader by this indicator, where from 30.041 to 33.370 Ukrainian citizens are studying. The next country in terms of the number of Ukrainian students is Germany. There were 9088 students studying in the 2015–2016 academic year and 9638 – in the 2016–2017 academic year. The smallest

number of Ukrainian students in these periods was in the Czech Republic – 2395 (2015–2016 academic year) and 2471 (2016–2017 academic year) and in Bulgaria – 561 (2015–2016 academic year) and 669 (2016–2017 academic year). Austria had an average number of Ukrainian students: 1607 (2015–2016 academic year) and 1625 (2016–2017 academic year). It should be noted that in these countries there was an increase in the number of Ukrainian citizens who received university education. Comparing the total number of students in these five countries with the number of students in 15 countries (Table 4), it should be said about the increase in the number of Ukrainians in 15 countries and, accordingly, the decline in the proportion of students studying in Austria, Bulgaria, Germany, Poland and the Czech Republic. Such a decrease in the specific gravity is 4.71 % (77.33–72.62). It can be noted that only in Hungary, the number of Ukrainian students decreased by 188 people: from 1026 to 838 people. However, the number of Ukrainian citizens studying in Russia increased significantly: from 6936 to 11440 people.

Table 4

Calculations of cash flows of student health insurance at universities of Central and Eastern Europe

Country	Insurance premium per year, €	Number of Ukrainian students studying in universities of the country in academic years, persons		The amount of cash flow of student medical insurance over the years, €	
		2015–2016	2016–2017	2015-2016	2016-2017
Austria	712.38	1.607	1.625	1.144.794.66	1.157.617.50
Bulgaria	66.35	561	669	37.222.35	44.388.15
Germany	690.00	9.088	9.638	6.270.720.00	6.650.220.00
Poland	131.37	30.041	33.370	3.946.486.17	4.383.816.90
Czech Republic	428.56	2.395	2.471	1.026.401.20	1.058.971.76
Total for a group of countries		43.692	47.773	12.425.624.40	13.295.014.30
Percentage of the group of countries to the number of students of the universities studied		77.33 %*	72.62 %**		

*(43,692:56,504)×100 = 77.33 %.

** (47,773:65,785)×100 = 72.62 %

Calculations show that the largest cash flows related to the health insurance of Ukrainian students were in Germany 6.270.720.00 € (2015–2016 academic year) and 6.650.220.00 € (2016–2017 academic year) and Poland 3.946.486.17 € (2015–2016 academic year) and € 4.383.816.90 (2016–2017 school year). It may be noted that the size of the cash flow in Germany is more determined by the cost of the health insurance policy, according to which the country took the 2nd place. Instead, Poland, in which the cost of the health insurance policy was one of the lowest, received a large cash flow from a large number of Ukrainian students.

The total insurance cash flow per the academic year for five studied countries was quite significant: 12.425.624.40 in the 2015–2016 academic year and 13.295.014.30 in the 2016–2017 academic year.

That is, the gain in just one year amounted to 869.389.90 €. If, in the 2017–2018 academic year, 35.000 Ukrainian students are already studying in Poland (Table 4), this means an even greater increase in the monetary insurance cash flow beyond Ukraine.

Conclusions

The study of insurance cash flows related to the studying of Ukrainian citizens in foreign universities is of interest not only in academic but also in practical terms. In academic terms, such research is, to a certain extent, pioneer, since until today there was not such a thing as a mass exodus of Ukrainians to study abroad. In the applied sense, it is necessary to investigate such a process in connection with a certain type of export of funds from the country. In other words, state authorities and management should pay attention to the magnitude of such a cash flow.

The practical significance such studies have also for individuals who have to pay for health insurance for staying abroad. The assessment of the cost of education or the cost of housing and food must necessarily be complemented by an assessment of the cost of insurance policies. Moreover, if we look at the problem of providing medical services in another state, that is, to go beyond the scope of our study, then unforeseen treatment of injuries and other diseases should be

foreseen. After all, while staying abroad, the student does not give up entertainment, sport events, tourism trips, etc. Instead, even during dance tournaments, and especially during a ski tour, a person, including a student, is in danger of getting damage that will require, at best, primary care and in the worst case - treatment.

This study of potential monetary costs, which are also cash flows, can be considered as prospects for further research.

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THE DEVELOPMENT OF SYNERGISTIC EFFECT IN THE DIVERSIFIED COMPANY

Abstract. The provision of effective activity of business entities requires a proper arrangement of work of all their structural subdivisions and their interaction, in particular, by making timely and informed strategic decisions. These decisions must include all areas and directions of activity, in particular, the relations with suppliers, consumers, contact audiences, market power in relation to main competitors, implementation of investment development programs, etc. Under such conditions the formation of a strategic set becomes of a particular relevance. Being a set of strategies of all levels, it will allow covering the maximum of each area of business entity activity. The article studies the possibility to make effective interconnections not only between the strategies of different levels but between the strategies of different business units of a diversified enterprise as well, which, taken together, will lead to the formation and use of synergistic effect by the enterprise at all levels of a strategic pyramid. Replacing a strategic set with a synergy strategic set for diversified enterprises, thus, will ensure their economic growth in a long-run period without the attraction of significant additional funds. Such development is caused by the formation and application of optimum (the most efficient) methods for enforcing the activity of one business units with others. The efficiency of a synergy strategic set is confirmed by a significant improvement of “Zakhar Berkut” ski resort activity during several

years after its implementation. Such results cannot be achieved in one year, since it takes a certain time to combine and allow for all possibilities of the enforcement of one business units with others.

Key words: strategy; diversified company; strategic set; synergy; relationship; strengthening; business unit.

Problem statement

The development of diversified enterprises is possible due to the formation and implementation of an effective business strategy. Its right choice will ensure that enterprises achieve sustainable long-term competitive advantages, the opportunities of their own capacity-building by reducing or avoiding the threats to the environment and eliminating the weaknesses of the enterprise by maximum and correct use of its strengths and external capabilities.

However, those companies that will develop and implement not one, but a complex of strategies – the so-called strategic set, will be more successful. By the strategic set of the enterprise should be understood a set of strategies for corporate, business and functional levels of management, which collectively form a pyramid of strategies.

The need for the formation of the optimally validated strategic set of the enterprise is associated with a significant number of strategic alternatives at each level of the strategic pyramid. For example, a growth strategy can be achieved due to integration, diversification and concentration of the corporate activity, which in turn involves a set of strategic actions at the business level (focusing, differentiating of the efforts, etc.), which in turn require a specific investment, innovation, labor support, etc. And the more optimal and more thoroughly selected strategies of each level, the easier and more effective will be their implementation at each level of management separately, and for the enterprise as a whole. The development of a strategic set of the enterprise due to decomposition (scattering of the strategy of the corporate level) will allow to bring (to make it clear) to the immediate executors the strategic decisions and necessary actions for the implementation of business, functional and operational strategies as well.

As a strategic set of enterprises is a set of strategies at all levels of management, its development can be an effective tool for the establishment of only one-business enterprises. Diversified enterprises, which consist of a number of independent business units, must, besides the formation of strategies at different levels, also establish appropriate relationship both between the strategies of these levels and the strategies of specific business units, in order to provide with a stable position in the market. The existence of relationship between the strategies of the business units of the diversified enterprise (strategic business unit (SBU), business unit (BU)) will contribute to the formation of a synergistic effect [9], and the relationship between strategies of different levels of the strategic pyramid – the transfer of the synergistic effect to each of these levels, which will result in the establishment of a synergistic strategic set.

Recent research and publications analysis

The issues of the strategic set of enterprises and the synergistic effect are reflected in the works of such foreign and domestic scholars as H. Haken (Haken, 1985) [15], I. Ansoff (Ansoff, 1987) [17], H. Itami (Itami, 1987) [18], A. Thompson and

A. Strickland (Thompson, Strickland, 1998) [14], James K. Van Horne (Van Horne, 2003) [3], T. Svitlychna [13], Zh. Poplavska [11], V. Holika [4], O. Revenko [12], A. Bohatyriova [1], Z. Shatska [16], I. P. Dobronravova [6], A. Dubrovik [7] and others. In their works, the theoretical and practical aspects of the development processes and application by enterprises of strategic set and synergistic effect are summarized. However, beyond the attention of the research carried out is the issue of the possibility of combining them into a whole one and to get the concept of “synergistic strategic set”, which, taking into account the advantages of both, would eliminate the shortcomings of each other. This requires a deeper and more substantial study of the synergistic strategic set issue in the direction of delineating the concepts of “strategic set of enterprise” and “synergistic strategic set of enterprise” with the outline of specific features (characteristics) of each of them and indicating ways of manifestation of the synergistic effect specifically at each level of management, in the formation of synergistic strategic set and at the corporate level when forming a strategic set of enterprises.

The purpose of the article is to develop a synergistic strategic set of a diversified company with features (characteristics) extraction of the synergistic effect on each level of the strategic pyramid, and to determine the effectiveness of its implementation at the example of Zakhar Berkut Ski Resort.

The methods of comparison, systematization and generalization in determining the essential features of the concept “synergy strategic set of the enterprise” were used in the article, as well as the method of portfolio analysis (matrix of the Boston consulting group) to determine the position of ski resort “Zakhar Berkut” and its business units in the market in different periods of the activity, which allowed to visualize the effectiveness of the generated synergy strategic set and determine the directions of further development of business units of the resort.

The main findings of the research

For a diversified company, the components of both a strategic set and a synergistic strategic set

are the strategies for corporate, business, functional and operational levels. The relationship between the strategies of these levels and the results obtained from their implementation are different.

The development of a strategic set is carried out by choosing the strategies at different levels and establishing appropriate relationship between them. At the same time, business units (BU) operate independently to achieve the proper result, and the relationship between business unit strategies is possible only at the business level in the case of application of the synergy strategy at the corporate level. In this case, the synergistic effect is formed as a result of strengthening the activity of some business units by the others within the framework of the established corporate strategy.

In a synergistic strategic set there is the relationship between strategies of different levels of the hierarchy and between strategies (business, functional and operational strategies) of different BU, which allows us to determine which characteristics and which business units are most effected by consumers in different situations, and to take the right strategic decisions on time that will provide the company with profits in the following years without increased costs. In this case, the synergistic effect on the functional level is manifested in the relationship between the individual

functional strategies within the specific direction of the activity of a particular business unit; on the business level – in the relationship between functional strategies of different areas within a single business unit; at the corporate level – in the relationship between the competitive (business) strategies of business units.

That is, in the development process of :

! **the strategic set** – one should take into account that for a level below the organizational hierarchy, the top-level strategy becomes the goal, although for a higher level it was a means;

! **a synergistic strategic set** – not only the top-level strategy, but also business and functional strategies of other business units, mainly SBU, can be transformed into a goal.

The effectiveness of the formation and use of a synergistic strategic set in the activities of diversified enterprises is confirmed by the results of its implementation by Zakhar Berkut Ski Resort [2] (Table 1), which has undergone three stages of development since its foundation: Stage I. without the formation and implementation of strategies; Stage II. with the formation of a strategic set; Stage III. with the formation of a synergistic strategic set. At the first stage of its development, Zahar Berkut Ski Resort operated as one enterprise, which consisted of several units: a hotel; a restaurant; a cableway; two bar lifts.

Table 1

Business results of Zakhar Berkut Ski Resort

Indicators	Business results of Zahar Berkut Ski Resort, thsd. UAH		
	before strategy implementation	having implemented a strategic set	having implemented a synergistic strategic set
Operating expenses	3612.742	8101.08	9010.96
Revenue from the sale of tourist resort services, including:	4852.105	13635.05	25916.85
Revenue from the sports and tourist complex services	2991.805	7394.156	11691.234
Revenue from the hotel complex services	1288.235	4272.404	9773.426
Revenue from the catering services	572.065	1296.12	2930.37
Revenue from the services of the transport complex	–	672.37	1521.82
Profit after tax	323.01	2446.095	9439.811

Source: business results are calculated by the author on the basis of the data collected in the company

Beginning from 2009, Zahar Berkut Ski Resort was first considered as a diversified enterprise divided into strategic business units – “hotel complex”, “sports and tourist complex”, “catering complex”, “transport complex” [8]. This period of the ski resort activity is characterized by the diversification of services – the emergence of new types; the expansion of the range of existing ones. For effective development, consolidation of stable positions in the market and obtaining strong long-term competitive advantages, Zahar Berkut Ski Resort in this period, implemented a strategic set consisting of: at the corporate level, the growth strategy; at the business level – strategies for optimal expenses (for the SBU – catering complex), differentiation (for the sports and tourist complex and the SBU – hotel complex) and the first movers (for the SBU “transport services”); at the functional level – strategies: minimizing costs, improving the quality of existing services (for the CBU – public catering complex), expanding the range of existing services by new ones (for the sports and tourist complex and the CBU hotel complex), active marketing (for all CBUs), significant changes in the organization of production (for the SBU catering complex), etc.

In 2012, Zakhar Berkut Ski Resort established and started implementing a synergistic strategic set, which suggested changing business strategies and functional levels of each SBU (hotel complex) and BU (all other business units of the resort) depending on certain conditions. For example, in the winter period for a sports and tourist complex it was expedient to use a strategy of optimal expenses, which allowed to increase revenues and the volume of services rendered by the hotel complex in the following way: the residents of the hotel for more than 5 days were provided with 1 day skiing for free, etc. In the summer, it was expedient to use a focus strategy for the sports and tourist complex, the essence of which was to focus on the services of the cableway, which attracted a significant number of visitors, who in turn increased the volume of the supplied services and incomes of the catering complex. The complex of catering in this case used a strategy of differentiation of sales points.

Having analyzed the data of the Table 1, we see that the income of business units was variable

in different periods of the development of ski resort, namely, the growth of revenues for: BU “sports and tourist complex” in the 2nd period amounted to 4402.351 thsd. UAH, in III – 4297.078 thsd. UAH; BU “catering complex” – in the 2nd period 724.055 thsd. UAH, in III – 1634.25 thsd. UAH; BU “transport complex” – in the II quarter 672.37 thsd. UAH, in III – 849.45 thsd. UAH; SBU “hotel complex” – II period 2984.16 thsd. UAH, in III – 5501.022 thsd. UAH. The uneven increase in revenues of the business units as a result of implementation of a synergistic strategic set is due to decrease in the values of certain indicators of some of them in favor of others. For example, a reduction in the price for services of the business unit “sports and tourist complex” in order to increase sales volumes, and, accordingly, the revenues of the SBU “hotel complex”.

According to the data obtained, the list and structure of the SBU due to the interest of the revenues received in relation to other BU, since the value of this indicator for the SBU should be the largest, which is explained by the peculiarities of the diversified enterprises operation considered in the paper [9] – the activity of the SBU is strengthened by all other BU.

The influence of the strategic and synergistic strategic sets on the market position of Zahar Berkut Ski Resort is reflected using the matrix of Boston Advisory Group (Fig. 1). Output data for construction is given in Table. 1 and 2.

The growth rate of the industry market is calculated as the ratio of the volume of services provided in the Skole district of the reporting period to the previous one.

The diameter of the circle of each business unit is determined by the ratio of the volume of its services to the total amount of services provided by Zakhar Berkut Ski Resort.

We estimate the relative share of the market as the ratio of the amount of services rendered by a certain business unit of Zahar Berkut Ski Resort to the volume of similar services of the main competitor. Business units with a high and low market share are divided according to the information obtained through surveys of tourists about the activities of competitors and observations of employees of the marketing department of Zakhar Berkut Ski Resort.

Table 2

Source data for calculating the value of the indicator of growth rates of the industry market of tourist services in Skole District

Indicators	Indicator value					
	before strategy implementation		having implemented a strategic set		having implemented a synergistic strategic set	
	2006	2007	2009	2010	2011	2012
The volume of services provided by hotels and restaurants, thsd. UAH	1435.7	1770.8	3861.7	7532.9	8956.6	9664.5
The growth rate of the industry market of hotel services and catering, %	-	-	95		8	
The volume of services in the culture and sports, recreation and entertainment, thsd. UAH.	40.7	28.3	17.7	217.3	264.3	321.2
The growth rate of the sectoral leisure and entertainment market, %	-	-	100		22	
Total provided services, thsd. UAH	1476.4	1799.1	3879.4	7750.2	9220.9	9985.7
The growth rate of the industry market of tourist services, %	22		99		9	
Volume of the provided transport services, thsd. UAH	-	-	8441.1	5240.0	5229.2	3717.2
The growth rate of the industry market of transport services, %	-	-	6.2		7.1	

Source: calculated by the author on the basis of [5]

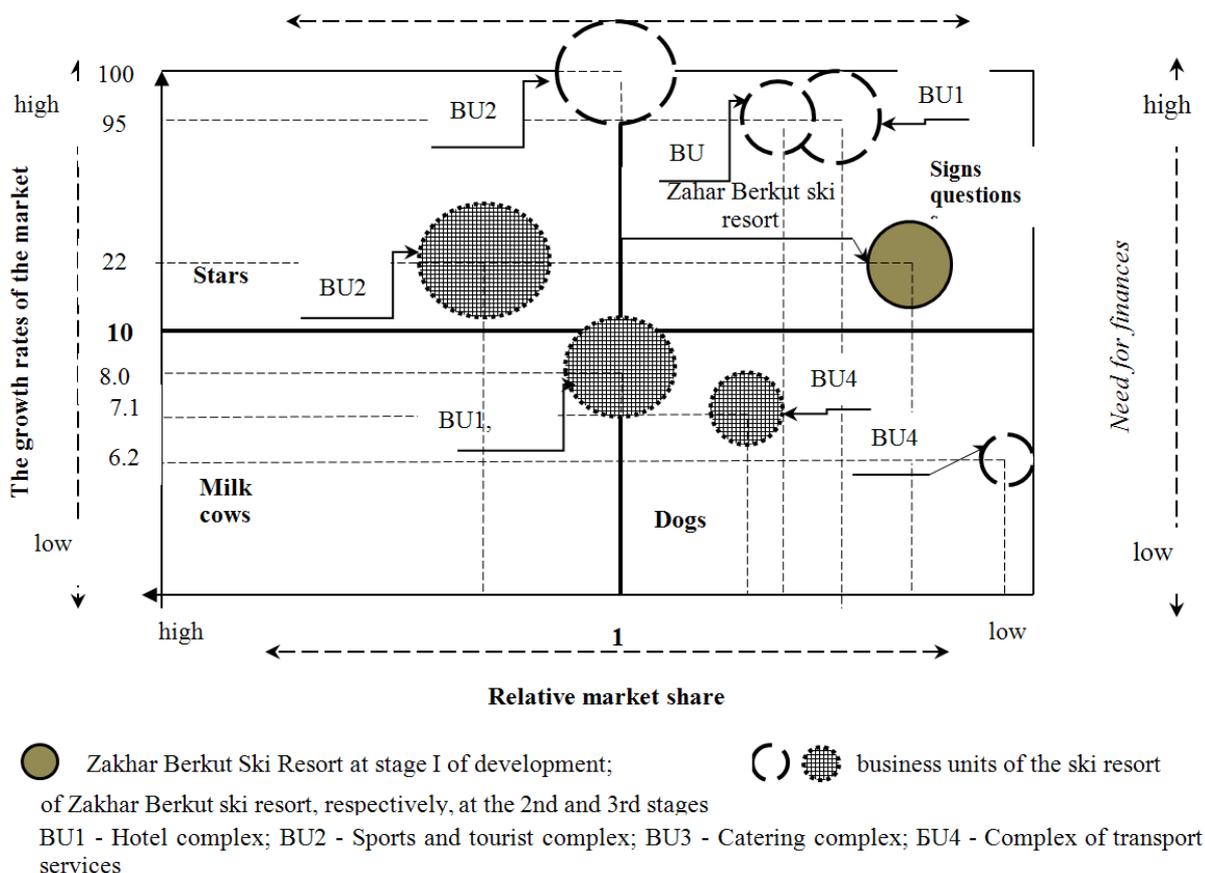


Fig. 1. Positions of business units of Zakhar Berkut Ski Resort according to the BCG matrix

Source: calculated and compiled by the author based on the collected data

At the stage I of the development of Zakhar Berkut Ski Resort its main competitor was Trostian Ski Resort because the range, quality and price for the services of the hotel complex, as well as characteristics of the sports and tourist complexes, calculated using the method proposed in the work [10], were the most similar. However, the market position of Zahar Berkut Ski Resort in relation to Trostian Resort was extremely low, and accordingly the volume of services provided, due to the lack of sufficient information about Zahar Berkut Ski Resort, which has just come on the market.

The competitors of the business units of Zahar Berkut Ski Resort at the stage II of development were: the hotel complex – Pearl of the Carpathians Tourist Centre; sports and tourist complex – Trostian Ski Resort; the complex of catering and transport services was competing by private individuals who attracted considerable attention of consumers at low prices for goods and services, as well as the convenience and mobility of their provision (sales of products on portable flumes, etc.).

Over time, the attractiveness of ski resort facilitated the emergence of a large number of new, redesigned hotels, ski rental stores, attractive proposals from the instructors, and many more, near Zakhar Berkut Ski Resort. That caused the need to link the activities of Zakhar Berkut Ski Resort facilities with each other in such a way as to make them attractive at the right moments of time (development stage III). This became possible by the effect of synergy, and the possibility of forming this effect at all levels of management allowed to control the resort activities in general and, in particular, support the development and market positions of its business units at the appropriate level.

Thus, implementing a synergistic strategic set, there was a search for new opportunities for strengthening some business units by the others and fixing favorable conditions for each of them, which confirms the receipt of a significant profit level of the ski resort without increasing the costs – the growth of profit in the period II mounted to 2123.085 thsd. UAH, in III – 6993.761 thsd. UAH, with the growth of costs in period II by 4488.338 thsd. UAH, and in III – 909.08 thsd. UAH.

It is clear that the effectiveness of a synergistic strategic set over a long period of time will depend on correctly selected strategies for each SBU and BU at each hierarchy level of strategies (corporate, business, functional, and operational).

Conclusions and perspectives of further research

The conducted research allows us to conclude that:

Ä the efficiency of the operation of diversified enterprises is strengthened by the coordinated activity of all its business units, which, using a synergistic effect, is more efficient than the sum of the results of each business unit (BU) separately. This caused the need to study the possibility of forming a synergistic strategic set, which, unlike the strategic set, implies the functioning of a diversified company as the only mutually agreed entity by generating a synergistic effect at each level of management through the interactions between business, functional and operational strategies of all of its SBUs and BUs;

Ä the implementation of the optimal synergistic strategic set of a diversified enterprise formed by establishing and choosing the most effective relationship (from the maximum possible) between the strategies ensured the maximum achievement of the strategic targets of Zakhar Berkut Ski Resort: the conquest of new market positions; the achievement of long-term competitive advantages; the access to international markets, etc.

However, considering a diversified enterprise as consisting of SBU and BU, the question arises: “What strategies to consider at the given level, taking into account a different set of business units: one SBU, one BU; one SBU, several BUs; some SBUs, one BU, etc.?” This issue requires a deeper and more detailed examination and describes the prospects for further research.

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