

**THE POTENTIAL
OF MODERN SCIENCE**
volume 2

London 2019

The Potential of Modern Science

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Editor: Babych Mykola Mykolayovich

Published by Sciemcee Publishing.

LP22772, 20-22 Wenlock Road

London, United Kingdom

N1 7GU

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First Edition: 2019

A catalogue record for this publication is available from British Library.

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ISBN 978-1-9993071-3-4

Includes bibliographical references and index.



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INTRODUCTION

The monograph includes 22 sections, each of which is devoted to a specific problem of national economy's sustainable development.

The first section "HOW DEEP THE COMPANY'S TRANSNATIONALITY IS: CONCEPTUAL MEASUREMENT". This article devoted to the problem of estimation of the level of transnationality of the companies. The existing approaches to the measurement of transnationality are generalized. The methodology of measurement of the depth of company's transnationality from the operational and geographic dimensions is given. It is proposed to define the transnationality as a function of the extent to which a firm's activities are located abroad and focuses on the intensity of foreign activities in relation to domestic or global activities. The quantitative indicators of the level of company's transnationality are estimated. It is proved that proposed methods allow, as well, fairly comparing the role and position of transnational companies in global economy.

The second section "STATE FINANCIAL POLICY AS A COMPONENT OF SOCIAL-ECONOMIC DEVELOPMENT OF SOCIETY". The paper is devoted to the disclosure of the theoretical foundations of state financial policy as a component of socio-economic development and to identify areas for increasing the effectiveness, adequacy, responsibility and coherence of its instruments for improving the population life quality. The role of state financial policy in the social and economic development system is determined. The characteristic features, subject and object of the state social development financial policy are determined on the basis of generalization of approaches of scientists. It has been shown that strengthening and effective regulation of financial resources by means of state financial policy, depending on the degree and fairness of redistribution of GDP, the phase of the economic cycle and the state of the institutional environment, stimulates or constrains social development. It is shown that both fiscal and monetary policy are integral system concepts with their own mechanisms, tools, levers of realization/solving of specific tasks of socio-economic development. It is noted that it's important to use methods and tools of state financial policy as an interconnected adaptive-dynamic system, which will help to optimize the structure of public financial resources, solving macroeconomic problems, stabilize, economic growth and social development. It is substantiated that achievement of strategic goals and fulfilment of the current tasks of state financial policy requires coordinating budgetary and monetary policy with social policy and taking into account endogenous and exogenous factors of influence, in particular macroeconomic dynamics, the state of the institutional environment, geopolitical tendencies that influence on efficiency and the effectiveness of the mechanism for its realization with

a view to social development of Ukrainian society in the process of economic transformation.

The third section “INTERNATIONAL TRADE LIBERALIZATION IN THE CONTEXT OF THE GLOBAL TREND TOWARDS ECOLOGIZATION”. The article considers the environmental problem as the most important global challenge in the development of the modern world and the development of international trade. The analysis of the evolution of approaches to regulating environmental aspects of international trade liberalization suggests that the ongoing internationalization of socio-economic development reinforces the cross-border nature of environmental problems, which, in turn, predetermine the emergence of new phenomena in the development of international trade. The interaction between factors contributing to trade liberalization and environmental protection can lead to either synergy or conflict between them. It can be concluded that to resolve this contradiction, priority is given to instruments used for their regulation at the national and international levels, such as international cooperation in the development and implementation of environmentally friendly business models, adoption of national and international environmental safety programs taking into account the interests of all economic parties, and others.

The fourth section “EVOLUTION OF LOCAL BUDGETS IN CONDITIONS OF AUTHORITY’S DECENTRALIZATION IN UKRAINE”. This article is devoted to the study of the dynamics of evolution of local budgets in the context of the reform of fiscal decentralization in Ukraine. We’d analyzed the international and domestic practices of defining the concept “local budgets”. In Ukraine, the local budget is considered through the prism of financial functions, it’s the basis of financial management, planning of the fiscal process and redistribution of public goods. Taking into account the United Kingdom experience in considering the local budget as a financial and forecast (planning) category and the basic principles of decentralization, we have supplemented the list of basic functions of local budgets by two other functions – prognostic and developmental. On the basis of a comprehensive analysis of the financial sustainability of the local budgets of the Khmelnytsky region, we’ve built integral indicators of financial sustainability of the local budget and predicted their dynamics in the future, which made it possible to determine the directions of effective management of local budgets.

The fifth section “AGROTREND OF UKRAINE: REALITIES AND PROSPECTS”. The study examined the opportunities for the development of the agro-industrial complex (APC) in the context of the financial crisis of Ukraine, which covered almost all sectors of the national economy. Recently, the society has formed the idea that in the current social and economic situation, only agro-industrial complex can, with relatively low costs, provide a stable economic growth. A systematic analysis of the prospects of the agricultural sector development in Ukraine was conducted. The

analysis of changes in the indices of crop and livestock production proved that the development of agriculture took place in the production of intermediate products with less added value, and APC oriented business to its export. Moreover, the growth of sunflower seed production influenced the indices of plant growing very much which leads to the depletion of land and will negatively affect the yield in the future. The conducted systematic studies stated that the increase in agro-industrial products was accompanied by a drop in production of machinery and chemical industry for the needs of agriculture. In fact, such a strategy for the APC development is the abandonment of the prerogative of high value-added products production in favor of raw materials. Developed countries built their economic policies in the opposite way - they imported raw materials and sold finished products, and at the expense of protectionism. Therefore, such a system-wide strategy for the development of APC cannot lead to a recovery of the state's economy, and the growth of agricultural products exports should not be put forward as a priority objective of the Ukrainian Government.

The sixth section “INFLUENCE OF MOBILE APPLICATIONS ON TOURISM DEVELOPMENT”. The article deals with the influence of mobile applications on the development of tourism industry. The main factors of global usage of mobile applications are presented. There is described the history of mobile applications from the ordinary WAP browser to the App Store and Google Play platforms. There is analyzed the number of mobile applications' downloads, the number of smartphone users, mobile application downloads' revenues, and the costs one user spends for mobile applications in the world. The main advantages of tourism mobile applications are highlighted. Three groups of the most popular tourism applications in the world (according to the number of downloads) depending on the source are investigated. Their functional purpose has been established (related to car hiring, booking of hotels and tickets, search for food facilities and navigation systems). It is revealed that the popularity of applications for tourists is connected with their interesting up-to-date content, user-friendly interface, and the ability to make a purchase, which increases the number of conversions.

The seventh section “CONCEPTUAL BASES OF MANAGEMENT OF THE NATIONAL ECONOMY DEVELOPMENT”. The article describes the essence and importance of management as an integral part of the development process of the national economy. It is established that the concept of management of the national economy development should be formulate taking into account the sustainability of the development of the national economy as a system and the variability of the external environment. It has been proved that development management should be timely recognized among development factors that can be attributed to developmental impulses, as well as to activate them on the basis of the use of appropriate drivers. The expediency of identifying the impulses of development was grounded, the activation

of which should be directed management of the development of the national economy as a socio-economic system. It was established that the basis for identification of impulses is the detection of interconnections between the parameters of the national economy. The sequence of management of the development of the social-economic system on the basis of impulses is proposed and the concept of management of the development of the national economy is developed.

The eighth section “EMPLOYEE COUNSELING AS THE WAY OF EMPLOYEE ASSISTANCE AND ADAPTING IN THE TERMS OF HUMAN RESOURCE MANAGEMENT”. A healthy and productive work environment is dependent on the physical, emotional and psychological health of its employees. Stress and burnout can lead to employee incapacity, sickness, and resulting absenteeism. Employees face through the stress of completing the targets, work-load, meeting deadlines, relations with subordinates or colleagues, **work-life balance**, lack of time and higher responsibility. In this article it is defined that counselling helps the employees to come out from the problems, gives a new way to deal with the problems. Counselling shows how much the employer cares about the employee. Counselling may help to identify the employee the work related problems and the poor performance. The article explores the significance of employee counseling in effective human resource management, its functions and benefits. Research into employee counseling as the way of employee assistance and adapting, are then considered.

The ninth section “MODELING THE PARAMETERS OF ENTREPRENEURSHIP FISCAL RESPONSIBILITY”. The article describes features of entrepreneurship fiscal responsibility modeling. The determination model of entrepreneurship tax burden factor influence on macroeconomic indicators is described. It is proposed to use regression analysis models to predict the entrepreneurship activity and determine the directions of entrepreneurship fiscal stimulation.

The tenth section “FINANCIAL SUPPLY FOR HIGHER EDUCATION IN UKRAINE: REAL AND POTENTIAL SOURCES”. The paper is devoted to theoretical and practical aspects of financial support for the development of higher education in the conditions of globalization and eurointegration. The process of financial support for the development of the higher education system in Ukraine during the years of independence is shown. The analysis of importance of traditional (real) sources of education financing with consideration of various factors is carried out. The analysis of potential sources of investment into higher education was carried out with an emphasis on the possibility of developing sustainable capital funds (endowment funds) and educational lending in Ukraine. The necessity of the state stimulation of the insufficiently involved potentially significant sources of financing of institutions of

higher education in Ukraine in the conditions of modern globalization processes, taking into account the experience of separate countries of the world, is outlined.

The eleventh section “LEADERSHIP IN MANAGEMENT – A METHODOLOGICAL PERSPECTIVE”. The proposed chapter deals with the methodological perspective of the issue of leadership in management. It summarizes the theoretical background of the topic in hand and complements it with two research studies aimed at detecting the possible differences in the perception of leadership by managers, particularly in terms of their gender and comparison with the non-managerial workers. The chapter presents two methodologies used to measure leadership styles – Managerial Grid and PALEQ (Paternalistic Leadership Questionnaire), which were verified by the aforementioned research studies. The results confirm the meaningfulness of studying and conducting research on leadership of managers, as they reveal the leadership tendencies of male and female managers, and compare the use and perception of particular leadership styles of managers with those of non-managerial workers, proving that in terms of leadership, the focus should not always be on the managerial workers and their perceptions, but also on the efficient workers or employees, who may also be equipped with the particular leading skills. The chapter also discusses and brings the results of several other studies conducted by various authors to support the adequacy of the examined issue and its necessity to be studied further.

The twelfth section “ORGANIZATIONAL LEARNING IN THE PROJECT MANAGEMENT SYSTEM”. In this article, it is defined that in the modern condition the development of the specific skills and knowledge of employees become more and more significant. Training methods should be carefully chosen in accordance with available organizational resources and to a defined list of competences for every employees` category. Therefore, it is worth to use methods of multi-criteria analysis for selecting the best alternatives. In this article next of them were used: SAW method, LINMAP method, COPRAS method. This approach gives the opportunity to choose more properly the organizational learning methods for the project manager, depending on the situation and the capabilities of the company currently.

The thirteenth section “METHODICAL APPROACH TO POLYDIAGNOSTIC EVALUATION OF THE NATIONAL ECONOMY DEVELOPMENT”. The article describes the essence and value of evaluation as an integral part of the process of development and implementation of the regulatory policy of the national economy development. It is determined that despite the existing research, the question remains about the implementation of multidimensional assessment of the development of various spheres of the national economy, which will allow to diagnose a wide range of existing problems, the solution of which should be directed regulation of the development of the national economy. It is substantiated that in order to regulate the

development of the national economy as a complex system, it is advisable to use polydiagnostic evaluation, the assessment of the development of the national economy using polydiagnostic indicators. The estimation of the degree of improvement (deterioration) of indicators with the consideration of the character of the indicator (forcing or reversing) is proposed. The methodical approach to polydiagnostic evaluation of the development of the national economy based on the combination of the index method, aggregation methods and calibration methods is proposed. The approach involves multifaceted assessment of the development of various spheres of the national economy.

The fourteenth section “CONCEPTUAL BASES FOR THE FORMATION OF THE STRATEGY OF OUTPUT OF AN INDUSTRIAL ENTERPRISE IN THE GLOBAL MARKET”. The conceptual approaches to the definition of the category of «competitive enterprise strategy» are investigated. The study identified the stages and procedures of the mechanism for developing a strategy for entering the world market of industrial enterprises. The analysis of the world market for bentonite production and the development trends of the domestic industry are determined. Based on the results of the analysis, a conclusion was made to strengthen the position of Ukraine in the world market for bentonite production and orientation of domestic production of its products to the European market. The study assessed the competitiveness of Private Joint Stock Company «Plant weighting» on the basis of the method based on the theory of effective competition, which provides an assessment of four criteria of competitiveness: efficiency of production activities, financial stability, solvency and competitiveness of the company's products. The main scientific result of the research is the competitiveness model of PRJSC «Weighting agents plant» and strategic directions of increasing the competitiveness of an industrial enterprise upon entering the world market.

The fifteenth section “PLACE OF THE INSTITUTIONAL ENVIRONMENT IN THE FORMATION OF ECONOMIC MECHANISM OF CATTLE BREEDING INDUSTRY”. The article gives a theoretical analysis of the approaches to the definition of the concepts "economic mechanism", "institutes" which exist in the scientific literature. The place of the institutional environment in the formation of the economic mechanism of cattle breeding is determined. In the process of research, special attention was paid to the components of the economic mechanism, their place in the formation of state economic policy. Such issues as the importance of the property institute formation regarded by scientists as a basic institution; market institute, which would be formed in conditions of real competition; the institute of state and the mechanism of state support for agrarian producers, in particular, livestock, were well-grounded in the research. All this will create the basis for sustainable development of

the livestock industry and will provide the population with quality products at the level of scientifically grounded standards.

The sixteenth section “LOGISTICS OF OVERTOURISM (ON EXAMPLE OF URBAN TOURISM)”. Revealed essence of complex logistic strategy of sustainable urban tourism development in the conditions of "overtourism", which is based on four concepts: decentralization of tourism, reverse logistics, marketing impact on logistics and increased requirements to tourists safety problems. The first concept is based on the logistics organization of the tourist area of the city, which includes such components as: geogological (geographical and logistical) identification of the resource base of urban tourism; logistical planning of tourist flows and determination of their needs; logistical design of tourist infrastructure network; logistic design of supply chains for tourist infrastructure functioning. The second concept involves an integrated approach to the utilization of the total amount of municipal waste, including tourist one, taking into account their collection and removal from the city, as well as processing at specialized enterprises. The third concept reflects how to use marketing to influence tourist traffic, reducing the volume of unwanted types of tourism (eg, intim-tourism). The fourth concept reflects the aggravation of the tourists safety problems in cities in the conditions of "overtourism". In this context, the experience of the Ukrainian cities like Lviv and Kyiv has been explored, and relevant recommendations have been given.

The seventeenth section “GLOBAL COMPETITIVENESS IN THE AGE OF THE FOURTH INDUSTRIAL REVOLUTION”. This article analyses and systematises the available material that covers various aspects of the new trend in economic development, *Industry 4.0* (the Fourth Industrial Revolution). Information and communication tools and technology are shown to be at the heart of Industry 4.0, leading to an increase in the significance of the IT sector. The Global Competitiveness Index 4.0 has been analysed by component. According to the research, the main resource of Industry 4.0 is production optimisation, and the main threats include irrelevant decisions and data security. Based on the research conducted, Ukraine has sufficient capacity to occupy one of the prominent places among leading countries of the new concept of economic development. This requires, in particular, continuous cooperation of public authorities, industrial enterprises, IT companies, universities, R&D centres, etc. Furthermore, development and implementation of Industry 4.0 requires large investments.

The eighteenth section “THE ECONOMIC ESSENCE OF COSTS AND THEIR CLASSIFICATION”. In economic literature for the purpose of consuming enterprise resources use different terms: “Expenses”, “Costs”, “Payments”, “Expenditures” and others. The content and use of terms “Costs” and “Expenses” are investigated. It is established that they are synonyms and are used in parallel. The positions of different

scientists concerning the interpretation of these concepts are studied. Cost information use to calculate the prime cost of production, and expenses apply to determine the financial result of the enterprise. In these two cases, the cost amounts may not be the same. The fact is that not all incurred expenses include in the prime cost, at the same time there may be work in progress at the beginning and at the end of the reporting period. To determine the financial result, the prime cost of products sold is taken. It can be produced not only in the reporting, but also in the previous period. There are often cases when not all products manufactured in the reporting period are sold in the same period. These situations cause the possibility of deviations between the amount of costs for the period and the prime cost of sales. It is proposed use term “Costs” when costs incurred during the period, and when determine the financial result apply term “Expenses”. Different approaches to cost classification have been analyzed. Cost classification helps to systematize, generalize and group costs according to their economic content. The expediency of classifying costs in three directions is substantiated: for inventory valuation and financial result determination, for management decision-making, for control and regulation. In the first direction, it is proposed to take five features, in particular, by the influence on the financial results. On this basis, costs are divided into inexhaustible, corresponding to term “Costs”, and exhaustible, corresponding to term “Expenses”.

The nineteenth section “AUTOMATION ELECTRONIC CABINET AS TOOL FOR REGULATION OF E-ECONOMY ENTITIES’ BEHAVIOR IN THE MODERN DIGITAL MARKET DEVELOPMENT CONDITIONS”. The article analyzes the revenue regulation of economic processes in Ukraine and European countries; functioning features of the digital economy (DE) were discovered. Extreme vigilance is given to timelessness, as a sign of the DE, which causes specific administrative questions about the important points of the study of economic entities behavior on the digital market: identifications; the extent of business activity determination; informing as for administration and inspection; the final identification of customers, emptors and clients. Due to the analysis of the selected basic model of e-commerce (B2B, B2C, C2C); provided suggestions for filling out the electronic cabinet of DE entities; developed the automation algorithm of electronic cabinet (EC) of DE entities taking into account the alternatives of State regulation of the Ukraine tax jurisdiction. It arranges the sequence to regulate relations between the DE entities and resolve the access question to network resources all geographically distributed users regardless of their location. It also promotes the creation of a single digital market and the increasing pace of IT-technologies, implement of the important legislative changes to combat aggressive tax at the level of the jurisdiction of the law in such a generating economics as digital one.

The twentieth section “PROBLEMS CONCERNING ENSURING FINANCIAL SECURITY FOR AN INDIVIDUAL”. The article deals with the essence of state social policy in ensuring financial security for an individual. The social indicators of financial security for an individual (wages, total incomes per capita, their structure and usage, distribution of population by the level of average per capita income, consumption of food per capita) have been investigated. The authors also focus their attention on threats to the financial security for an individual (poverty, sharp stratification of the population by income and level of money expenditures, unemployment, ineffective system of benefits), their social and economic consequences for society. It has been established that such factors of social development as income differentiation, social polarization, marginalization of society negatively influence the financial security of Ukraine. The Strategy of Social Development and its predicted influence on financial security of people (society) have been investigated.

The twenty first section “CONCEPTUAL MODEL FOR MANAGING THE EDUCATIONAL EFFICIENCY OF INSTITUTIONS OF HIGHER EDUCATION”. Dynamic changes in the market of educational services, caused by numerous factors, both external and internal, call for a quick and effective response and adjustment of the activities of institutions of higher education in accordance with the challenges. The article explores the main directions (components) of effective functioning in the market of educational services. In particular, modern approaches to assessing the performance of institutions of higher education have been analyzed. The authors have proved that the efficiency of the institution functioning in higher education should be determined taking into account four key positions: the state, an individual, an employer and IHE as a business entity. The authors have developed a methodological approach to assessing the effectiveness of education activities of institutions of higher education, which is a system approach. The developed methodology includes a methodology for assessing based on a resource approach and modified methods and approaches to the collection and processing of information, depending on the stage of its conduct.

The twenty-two section “REGIONAL SPECIAL FEATURES OF DEMOGRAPHIC CONSTITUENT OF NATIONAL ECONOMIC SAFETY OF UKRAINE”. The paper provides the issues of determining the demographic security level of the regions of Ukraine as a component of national economic security. To produce the demographic security level and integral regional indicators of Ukraine we analyzed economic and social indicators (the 1995-2017 time series) through multidimensional factor analysis. The result of our research has shown that the current level of demographic security is dangerous for almost all regions of Ukraine. Ukraine economy faced with natural reduction and graying of population, migration crisis and unworkable citizens. Thus, demographic policy of Ukraine must be balanced to protect against negative trends of existing socio-economic citation.

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METHODICAL APPROACH TO POLYDIAGNOSTIC EVALUATION OF THE NATIONAL ECONOMY DEVELOPMENT

Introduction. The spread of globalization processes and their significant impact on the development of the national economy requires the consideration of key contemporary development trends. An effective mechanism for regulating the development of a national economy able to respond in a timely manner to a wide range of problems and challenges is a guarantee of the recovery of the national economy of Ukraine. The development of a regulatory policy for the development of the national economy should be based on the principles of accountability and openness of power to its citizens, as well as on the assessment of past experience and the consideration of successes and mistakes.

In the process of activity people constantly face the evaluation of people, situations and themselves from the standpoint of their own values, morals, expediency, and success. The evaluation, as an intellectual process, has always been inherent in man and society. Therefore, evaluation is part of the conscious attitude of a person to his life, who lives and learns from his experience and experience of others.

Evaluation plays a significant role in promoting effective management at the local, national and global levels.

Evaluation is the most important and indispensable component of strategic planning, regulation and management of the development of the national economy. Evaluation procedures are used in evaluating certain programs of socio-economic development and implementation of various projects, both at the national and local levels. That is, the evaluation can be considered as a necessary component of the development and implementation of regulatory policy development of the national economy. Assessing the development of the national economy enables to establish the efficiency and effectiveness of state programs and work of state institutions, the degree of satisfaction of the citizens' needs, etc.

Evaluation is an important stage in the regulation of processes taking place in the socio-economic system, creating the basis for regulatory influence, which is in line with the basic principles of regulation, is scientifically justified, expedient, sufficient and timely.

The study of the question of evaluating the state policy and implementation of socio-economic development programs, as well as determining the criteria for the effectiveness of the national economy, was studied in the works of many scholars, in

particular: K. Vais, I. V. Kravchuk, I. I. Prodanova, Yu. D. Polianskyi, V. Tertychka and others. However, despite strong research the issue of multi-faceted assessment of the development of various spheres of the national economy remains open. This approach allows us to diagnose problems in various spheres, the solution of which should be directed to regulate the development of the national economy.

Research results. In the Global Assessment Agenda (GEA) 2016-2020 (the first document describing the long-term and global vision for the development of evaluation) evaluation is defined as a value-based instrument used to improve the management, development and implementation of the program, and at the end, to achieve results that are more equitable, inclusive and sustainable for all people. Evaluation is an integral part of all efforts of governments, civil society and the private sector to improve the lives and conditions of all citizens. At the same time, high-quality and value-based assessment can improve the development and implementation of these efforts, track their progress, make mid-term adjustments, and evaluate end-points and outcomes [1].

Evaluation (defined by the UN) - most systematic and impartial study of any activity, project, program, strategy, policy, topic, sector, sphere of activity, organization's work etc. [2].

Evaluation is a systematic and objective evaluation of a current or completed project, program or policy, its development, implementation and results. The purpose of the evaluation is to determine the relevance and completeness of the objectives, effectiveness and sustainability of the development. The evaluation should provide information that is useful and can be used in the process of making further decisions [3].

K. Vais believes that one of the purposes of evaluation is to create a "basis for making decisions" [4]. I. V. Kravchuk highlights the evaluation objectives that "are directly aimed at implementing the principles of good governance (efficiency, effectiveness, openness, accountability) and improvement of public administration" [5]. It should be noted that the main task of the evaluation is to diagnose problems in various spheres of development of the national economy. Studies have shown that evaluation as a process can be classified according to different features.

So I. Kravchuk proposes to distinguish the types of evaluation according to the following criteria [6]: time of implementation (forecast (preliminary), intermediate, final); depending on the purpose of the evaluation (forming and final); depending on the subject, which carries out the evaluation (internal, external, independent, participative and united); object of evaluation (evaluation of the program, project, sectoral program, group evaluation, country assistance programs).

In our opinion, it is advisable to divide the classification features into two groups. The first group of signs includes those of them that allocate equivalent types of

evaluation that can be combined with each other. The second group of attributes may include those that distinguish alternative types of evaluation. These features require a clear choice between the selected types of evaluation, since they cannot be interconnected.

Thus, the features that can be used to classify the types of evaluation are:

I group - signs, which distinguish the equivalent types of evaluation that can be combined:

1) the form of presentation of the results: analytical evaluation; graphical evaluation; matrix evaluation;

2) the nature of the evaluated parameters: quantitative evaluation; qualitative evaluation; combined evaluation;

3) correlation with time factor: evaluation on a certain date; evaluation for a certain period;

4) dynamic characteristics: static evaluation; dynamic evaluation;

5) sources of information: evaluation based on statistical (objective) data; evaluation based on expert (subjective) assessments; evaluation based on a combination of objective and subjective sources of information;

6) method of using the results: preliminary - evaluation as the basis for the justification of further actions; current - evaluation as a tool to verify the correctness of the process; final - evaluation as a way to establish the degree of achievement of the goal;

II group - features that distinguish alternative types of evaluation that require a clear choice:

7) breadth of coverage (object): one-aspect (mono-evaluation); multidimensional (poly-evaluation);

8) evaluation tasks: step-by-step evaluation; diagnostic evaluation.

In developing an approach to the evaluation of a particular process (including the development of the national economy), in our opinion, it is worthwhile to choose the classification of the evaluation based on the breadth of coverage (mono- and poly-evaluation).

One-aspect evaluation (mono-evaluation) is more appropriate to evaluate certain manifestations of individual processes or systems or to evaluate relatively simple objects, while multi-dimensional evaluation (poly-evaluation) is more appropriate to evaluate complex processes, since it allows you to evaluate them in their entirety versatility. In view of the fact that development is a complex multidimensional process, it is more appropriate, in our opinion, to apply multivariate assessment (poly-evaluation).

Thus, according to I. I. Prodanova's definition, "the national economy should be regarded as a complex system in which, in addition to elements, there may be links

between certain complexes of elements that form its subsystems" [7]. That is, the national economy is a complex system that combines various elements and subsystems that interact with each other and with the environment.

Thus, in order to create a basis for regulating the development of the national economy as a complex system, it is advisable to stop choosing polydiagnostic evaluation, evaluating the development of the national economy using polydiagnostic indicators.

The peculiarities of the polydiagnostic evaluation are: when it is applied, it becomes possible to simultaneously take into account the most important criteria, since it is polydiagnostics that is multifaceted diagnosis used in difficult conditions. This is a combination of the joint (direct or indirect) effects of different in nature (sociological, political, medical, demographic and economic, etc.) factors on the investigated process.

There is a problem of the choice of indicators, developing the approach to evaluation, with the help of which an objective and comprehensive evaluation of the development of the national economy as a complex multifaceted process can be obtained.

In our view, in order to obtain this kind of evaluation, it is most appropriate to use the indicators used by World Bank experts in the evaluation of sustainable economic development (Sustainable Economic Development Assessment). SEDA is a diagnostic tool that enables countries to understand their general social and economic conditions [8]. Its application is based on the assumption that there is a direct inextricable link between the wealth of the country and economic growth and the improvement of its welfare.

Therefore, instead of focusing solely on per capita GDP - the most commonly used indicator of overall welfare in the country, it is advisable to use SEDA, which combines objective indicators of results in various areas of development with quasi-objective indicators such as management evaluation.

The main goal of SEDA is to help governments define priority areas of policy and develop a national economy development strategy aimed at long-term social and economic well-being of citizens, based on a comparative analysis with the reference group countries [9]. SEDA evaluates development based on ten groups of indicators combined in three categories: the category "Economics" includes evaluation of income, economic stability and employment; the category "Investments" includes the evaluation of education, health care and infrastructure; the category "Sustainability" covers environmental assessment and three dimensions of social integration: equality, a strong civil society and good governance.

In our view, the indicators used in calculating SEDA most fully characterize the development compared with other countries, and therefore suitable for individual evaluation of the development of a single country. At the same time, when comparing

the characteristics of countries it is expedient to apply the normalization of indicators in order to determine the place of the country among other countries of the world, then in the individual evaluation of the country according to the indicators, it is more interesting to study the dynamics of change for each indicator in order to allocate them to groups depending on the problem situation.

Thus, indicators for assessing country-level development can be used as shown in Table 1.

Table 1 Indicators for evaluating the development of the national economy

Evaluating category	Group of indicators	Indicator	
Economy	Income	per capita GDP, purchasing power parity	
	Economic sustainability	Inflation, average consumer prices (absolute percentage change)	
		Instability of inflation (standard deviation)	
		Unstable GDP growth (standard deviation)	
	Employment	Unemployment, total (% of total labour)	
		Employment rate of the population aged 15-64 (%)	
Investments	Health	Life expectancy at birth, total (years)	
		Mortality rate up to 5 years (per 1000 live births)	
		HIV prevalence, total (% of population aged 15-49)	
		Tuberculosis incidence (per 100,000 people)	
		Prevalence of malnutrition (% of population)	
		Population obesity (% BMI> 30, standard age estimate)	
		Immunization, diphtheria, pertussis, tetanus (% of children aged 12-23 months)	
		Immunization, measles (% of children aged 12-23 months)	
		Number of doctors (per 1000 people)	
		Number of hospital beds (per 1000 people)	
	Education	Enrollment to High School (% gross)	
		Expected duration of study (years), from primary to high education	
		Ratio of student-teacher in elementary school	
		An average score in mathematics and science	
	Infrastructure	Internet users (100 people)	
		Mobile cellular subscriptions (per 100 people)	
			The quality of the road network
			The quality of the railway infrastructure
			Improvement of water supply (% of population)
Improvement of sanitary conditions (% of population)			
Quality of electricity supply			
Sustainability	Equality	Gini index	
		Inequality in education (%)	
		Inequality in life expectancy (%)	
	Civil society	Public activity (0-1)	
		Interpersonal security and trust (0-1)	
		Cluster between groups (0-1)	
		Gender Equality (0-1)	
	Management	Control over corruption (from -2.5 to 2.5)	
		Rule of Law (from -2.5 to 2.5)	

Evaluating category	Group of indicators	Indicator
		Political stability and the absence of violence and terrorism (from -2.5 to 2.5)
		Voice and Accountability (from -2.5 to 2.5)
		Property Rights Index (0-100)
	Environment	Air quality index (0-100)
		Intensity of carbon dioxide (kg / kg of equivalent energy)
		Terrestrial and marine protected areas (% of the total territory, area)
		Electricity production from renewable sources, except for hydroelectric power stations (% of total electricity produced)

Source: [8]

For each of the indicators listed in the table, it is proposed to evaluate the degree of improvement (deterioration), that is, to evaluate the dynamics of changes. It is worth taking into account the character of the indicator (forcing or reversing). Thus, the indicators having an accelerating nature are those whose progressive change indicates the acceleration of the development of the national economy, and regressive - about its slowdown. Regarding the indicators of a reversing nature, such indicators can be considered those whose progressive change indicates a slowdown in the development of the national economy, and regressive - on its acceleration.

The distribution of evaluating indicators to indicators having a forcing and reversing character are given in Table 2.

Table 2 Distribution of indicators depending on the nature of the impact of their change on development

Indicator type	List of indicators
Indicators having forcing character	per capita GDP, purchasing power parity
	Employment rate of the population aged 15-64 (%)
	Life expectancy at birth, total (years)
	Immunization, diphtheria, pertussis, tetanus (% of children aged 12-23 months)
	Immunization, measles (% of children aged 12-23 months)
	Number of doctors (per 1000 people)
	Number of hospital beds (per 1000 people)
	Enrollment to High School (% gross)
	Expected duration of study (years), from primary to high education
	An average score in mathematics and science
	Internet users (100 people)
	Mobile cellular subscriptions (per 100 people)
	The quality of the road network
	The quality of the railway infrastructure
	Improvement of water supply (% of population)
	Improvement of sanitary conditions (% of population)
	Quality of electricity supply
	Public activity (0-1)
Interpersonal security and trust (0-1)	

Indicator type	List of indicators
	Cluster between groups (0-1)
	Gender Equality (0-1)
	Control over corruption (from -2.5 to 2.5)
	Rule of Law (from -2.5 to 2.5)
	Political stability and the absence of violence and terrorism (from -2.5 to 2.5)
	Voice and Accountability (from -2.5 to 2.5)
	Property Rights Index (0-100)
	Air quality index (0-100)
	Terrestrial and marine protected areas (% of the total territory, area)
	Electricity production from renewable sources, except for hydroelectric power stations (% of total electricity produced)
Indicators having reversing character	Inflation, average consumer prices (absolute percentage change)
	Instability of inflation (standard deviation)
	Unstable GDP growth (standard deviation)
	Unemployment, total (% of total labour)
	Mortality rate up to 5 years (per 1000 live births)
	HIV prevalence, total (% of population aged 15-49)
	Tuberculosis incidence (per 100,000 people)
	Prevalence of malnutrition (% of population)
	Population obesity (% BMI > 30, standard age estimate)
	Ratio of student-teacher in elementary school
	Gini index
	Inequality in education (%)
	Inequality in life expectancy (%)
	Intensity of carbon dioxide (kg / kg of equivalent energy)

Source: compiled by the author

For indicators having a forcing character, the degree of improvement is calculated by the formula:

$$I_i = \frac{X_{i1}}{X_{i0}}, \quad (1)$$

where I_i - the index characterizing the degree of improvement on the latter indicator; X_{i1} - the value of the i-th indicator in the reported year; X_{i0} - the value of the i-th indicator in the base year.

For indicators having a reversing character, the degree of improvement is calculated by the formula:

$$I_i = \frac{X_{i0}}{X_{i1}}, \quad (2)$$

where I_i - the index characterizing the degree of improvement on the latter indicator; X_{i1} - the value of the i-th indicator in the reported year; X_{i0} - the value of the i-th indicator in the base year.

At the same time, it is possible to interpret the obtained value using the following scale:

- more than 1, but less than 1,08 - improvement by less than 8% - insufficient rate of change;

- more than 1.08, but less than 1.10 - improvement by more than 8%, but less than 10% - satisfactory rate of change;

- more than 1.10 but less than 1.15 - improvement by more than 10%, but less than 15% - sufficient rates of change;

- more than 1.15 - improvement by more than 15% - optimal pace of change.

At the same time, indices characterizing the degree of improvement of a separate indicator, it is proposed to reduce into aggregated indices for each separate group on the basis of the simple average.

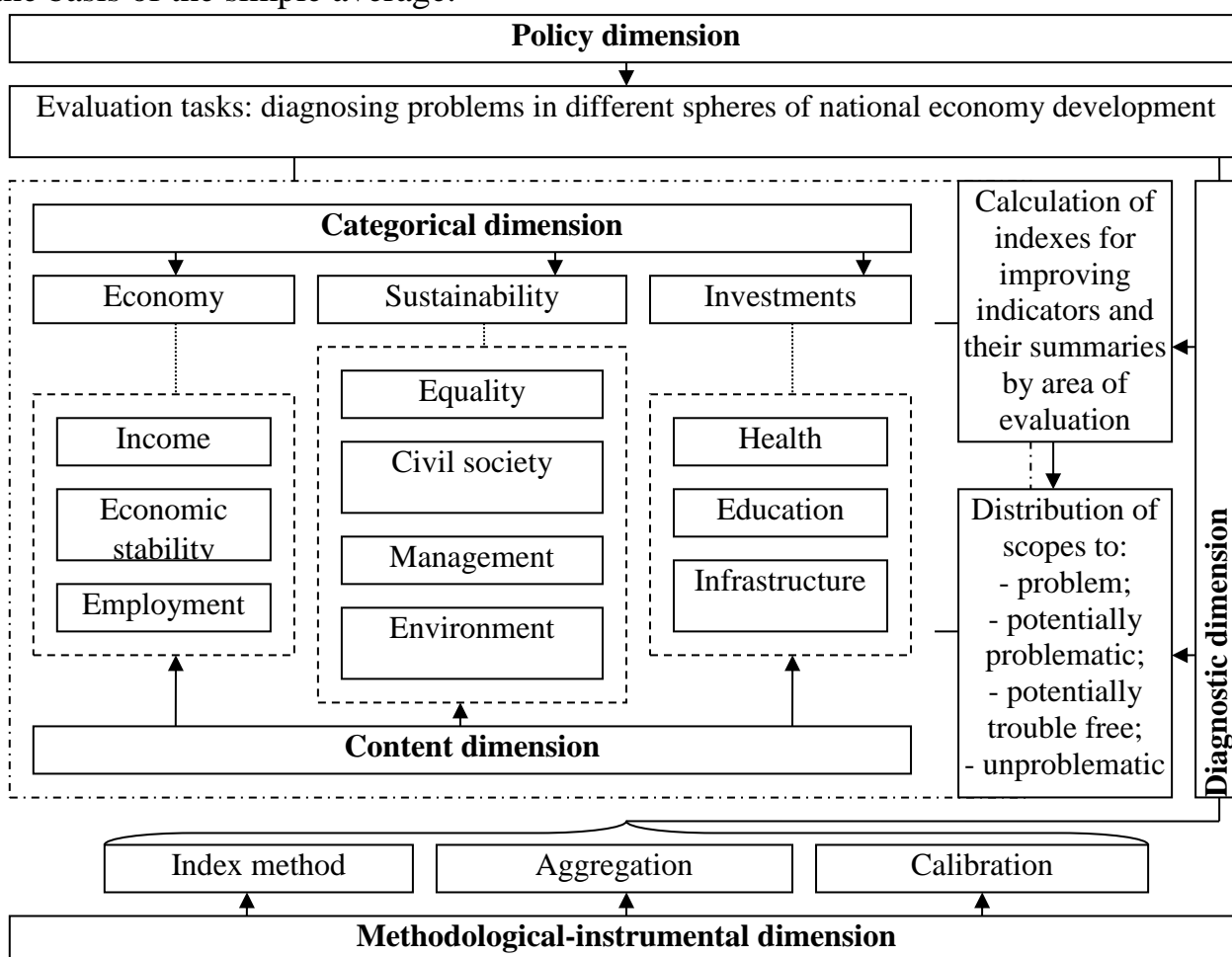


Figure 1. Methodical approach to polydiagnostic evaluation of development

Source: developed by the author

On the basis of values, aggregated indicator of improvement by indicator groups, all areas of regulation can be divided into groups:

- areas of regulation that are problematic (those areas where there insufficient rates of change are);

- areas of regulation that are potentially problematic (those areas where there satisfactory and sufficient pace of change are, provided that the value of the indexes of

improvement is decreasing in the dynamics or do not have a stable tendency to increase);

- areas of regulation that are potentially trouble-free (those areas where there satisfactory and sufficient rates of change are, provided that the value of the improvement indexes is increasing in dynamics);

- areas of regulation that are unproblematic (those areas in which there an optimum rate of change is).

On the basis of the indicators of the evaluation of the development of the national economy, a methodical approach to the polydiagnostic evaluation of the development of the national economy was developed, which is presented in the figure.

As the picture shows, the approach to polydiagnostic evaluation of the development of the national economy based on the combination of the index method, aggregation and calibration methods is proposed, and, unlike the others, involves carrying out a multifaceted evaluation of the development of various spheres of the national economy and allows to diagnose problems in those spheres, on the solution of which should be directed to regulate the development of the national economy.

CONCLUSION

In the course of the study it was determined that evaluation plays an important role in the development of the national economy, in the implementation of programs and in identifying existing problems in various spheres. Evaluation is an important stage in the regulation of processes occurring in the socio-economic system.

In our opinion, an important aspect of evaluating the development of the national economy is the need for its conduct on the basis of polydiagnostic evaluation. This need is due to the fact that development is a complex multidimensional process. The use of polydiagnostic indicators makes it possible to simultaneously take into account the most important criteria for the development of the national economy, since it is polydiagnostics that is multifaceted diagnosis used in difficult conditions.

On the basis of the indicators of the evaluation of sustainable economic development, SEDA proposes to assess the degree of improvement (deterioration) to assess the dynamics of the indicator changes, taking into account the nature of the indicator (forcing or reversing).

On the basis of the proposed indicators of the evaluation of the development of the national economy, a methodical approach to polydiagnostic evaluation of the development of the national economy was developed. The approach is based on the combination of the index method, the methods of aggregation and calibration. Unlike the existing methodological approach, it is envisaged to carry out a multifaceted evaluation of the development of various spheres of the national economy. Thus, the

proposed methodological approach allows us to diagnose problems in those areas where the regulation of the development of the national economy should be directed.

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volume 2

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Editor: Babych Mykola Mykolayovich

Published by Sciemcee Publishing.

LP22772, 20-22 Wenlock Road

London, United Kingdom

N1 7GU

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First Edition: 2019

A catalogue record for this publication is available from British Library.

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ISBN 978-1-9993071-3-4

Includes bibliographical references and index.



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PUBLISHING LONDON