

**Management mechanisms and
development strategies of
economic entities in conditions
of institutional transformations
of the global environment**

**Collective monograph edited by
M. Bezpartochnyi**

ISMA University
Riga (Latvia) 2019

**Ekonomisko vienību vadības
mehānismi un attīstības
stratēģijas globālās vides
institucionālo pārveidojumu
kontekstā**

**Kolektīva monogrāfija
M. Bezpartochnyi zinātniskajā redakcijā**

Informācijas sistēmu menedžmenta augstskola
Rīga (Latvija) 2019

UDK 65.005.339.9

Management mechanisms and development strategies of economic entities in conditions of institutional transformations of the global environment: collective monograph / edited by M. Bezpartochnyi, in 2 Vol. / ISMA University. – Riga: “Landmark” SIA, 2019. – Vol. 2. – 352 p.

The authors of the book have come to the conclusion that it is necessary to effectively use modern management mechanisms and development strategies of economic entities in order to increase the efficiency of their activities. Basic research focuses on financial diagnostics of the enterprise, assessment the quality of services, efficiency of business process management and implementation of innovative projects, monitoring of the labor market, diagnostics of the country's debt security, and research of the country's investment image. The research results have been implemented in the different models of development the commercial awareness, smartization, production of functional food products, use of eco-innovation, development of the e-commerce market, formation a new paradigm of work motivation, crisis management of economic security, modern tools of higher education management. The results of the study can be used in decision-making at the level of international business, ministries and departments that regulate the processes development of economic systems, ensuring stability and efficiency. The results can also be used by students and young scientists in modern concepts of the development of economic entities in the context of institutional transformations of the global environment.

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The collective monograph is approved for publication at the meeting of the Scientific Council of the Information Systems Management University of 08th January 2019, Minutes No. 1-19.

Reproduction or citation reference is mandatory.

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ISBN 978-9984-891-06-4 (print)

ISBN 978-9984-891-07-1 (electronic)

INTRODUCTION 10

Chapter 1

**THEORETICAL BASES AND MANAGEMENT MECHANISMS
OF DEVELOPMENT THE ECONOMIC ENTITIES 11**

Batrak O., Vyshnevskaya M.

Methodological provisions and tools for financial diagnostics of the
enterprise 11

Bogdan N., Sokolenko A., Pisarevsky M.

Providing the quality of the services of hotel restaurant business
enterprises as the basic aspect of their functioning in competitive
environment 29

Forkun I., Gordeeva T.

State financial support as a factor of increasing financial
sustainability of subjects of economic activity 38

Minchak N.

Theoretical bases of management development and use of enterprise
personnel 47

Olshanskiy O., Kovyakh I.

The trade enterprises' business process management effectiveness
assessments algorithm 55

Zerkal A.

Developing commercial awareness: strategies for enterprises 63

Chapter 2

**MECHANISMS OF USING AND INTRODUCING INNOVATIONS
IN ENSURING OF DEVELOPMENT THE ECONOMIC ENTITIES
..... 73**

Bashynska I.	
Smartization as an alternative to innovative activity	73
Ditrikh I., Reshetnyk S.	
State and prospects of production of functional food products: international experience	81
Kirieleeva E., Kostiuchenko D.	
The role of eco-innovations in the rural areas development	92
Kuzmin O., Chemakina O., Kuzmin A.	
The quality management system in the banquet service as one of the elements of innovative development of the hotel-restaurant industry	101
Lutay L., Prodanova L., Cherkasov A.	
Implementation of information technologies in the activities of trade enterprises as a primary development of the market of electronic trade	110
Mazur V., Mazur N.	
Investment image of Ukraine: current trends	119
Mitsenko N., Mishchuk I.	
Scientific bases of integrated enterprise development strategy formation	129
Satyr L., Novikova V.	
Information-analytical ensuring of statistical monitoring system of development agribusiness of Ukraine	138
Tovt T.	
Effectiveness of implementation of innovative projects of the enterprise	149
Chapter 3	
MANAGEMENT OF SOCIO-DEMOGRAPHIC PROCESSES AND FORMATION OF MOTIVATIONAL MECHANISMS IN THE CONDITIONS OF INSTITUTIONAL CHANGES	159

Berezina L., Bahan N.	
Labor market of Ukraine: trends of development	159
Borshch V.	
Improving the motivation mechanism of medical staff in Ukraine	167
Kalyna A.	
New paradigm of labor motivation in the system of development of social and labor relations	179
Kartashova O., Huba M.	
Gender equality policy in the management of rural areas in the context of transformation of economic development	190
Reshmidilova S.	
Marketing personnel as an effective method of development the personnel policy enterprise	198
Chapter 4	
FORMATION AND USE OF MODERN SECURITY MECHANISMS IN THE CONDITIONS OF PERMANENT CHANGES IN THE GLOBAL ENVIRONMENT	207
Brezhnyeva-Yermolenko O.	
Diagnostics of Ukraine's debt security in the conditions of growth of the global debt	207
Laptiev S., Sidak V., Mihus I., Koval Y.	
Actions to improve crisis management of economic security of banking institutions at the national level	216
Mykoliuk O., Bobrovnyk V.	
Scientific-methodological bases of choice the strategy of ensuring energy safety of machine building enterprises	224
Polishchuk V., Liakh I.	
Enhancing the safety of assessment of expert knowledge in fuzzy conditions global environment	234

Chapter 5

PRACTICAL ASPECTS THE IMPLEMENTATION OF MANAGEMENT MECHANISMS AND DEVELOPMENT STRATEGIES AT THE LEVEL OF SECTORAL ECONOMIC STRUCTURES 244

Bilous S., Malsky M., Mashuk Y., Belanyuk O.

The influence of global processes on the strategic development of festive tourism in Ukraine 244

Blagoy V., Blaga V., Kasatonova I., Khoroshilova I.

Studying gender stereotypes in the current advertising of Victoria's Secret company 253

Burennikova N., Yarmolenko V.

Practice for use of comparative analysis for the force of subprocesses of processes of functioning of the enterprises on the basis of authorial rates of components of the efficiency 263

Nakonechna K.

Main aspects of improvement of the state support mechanism for agricultural production in Ukraine 275

Rjashchenko V., Živitere M., Bezpartochna O.

The main trends in the development of tourism in Latvia 284

Yushchenko N.

Timing in the implementation of upgrade works on heating networks in Ukraine for the balanced use of labour, material and financial resources 293

Chapter 6

MODERNIZATION OF EDUCATIONAL MANAGEMENT AND INTRODUCTION OF THE NEWEST METHODS OF EDUCATION TO ENSURE THE OPTIMAL DEVELOPMENT OF THE ECONOMIC ENTITIES 301

Horbal N., Hoshovska O., Romanyshyn S.

Modern realities of Ukrainian higher education and educational migration 301

Miroshnichenko V., Hanaba S.	
Educational innovations in the modern world: philosophical and methodological aspects	315
Savyuk L.	
Innovative instruments for management of educational quality in the conditions of market economy	330
Tarasenko O., Tsymbalenko N.	
Financing of higher education in Ukraine	339
CONCLUSION	349

INTRODUCTION

Institutional transformations of the global environment are characterized by complex socio-economic processes and management problems. Disruption of production, economic and financial relations with consumers and suppliers, technological backwardness of many industries, unstable financial position of most economic entities provokes a high level of uncertainty and instability of conditions for effective functioning, which creates a real threat to the positions of economic entities in the market. As a result, most economic entities are not able to fully use their resource potential and production capabilities, often reducing their own work to the struggle for survival instead of sustainable functioning.

An analysis the current state of economic entities shows that market conditions have highlighted the challenges of their sustainable development. The problems existing today cannot be solved without the formation of a mechanism and strategies ensuring the sustainable development of economic entities. The mechanism should be based on the sustainability of economic entities, which is ensured through deep transformation processes, raising economic relations to a new stage of development, endowing them with new qualitative content and making them more viable and effective. As a result, there is a need to implement modern strategies for the development of economic entities, taking into account the institutional transformations of the global environment.

The purpose of writing this collective monograph is to substantiate the theoretical-methodological foundations and develop of organizational-economic mechanisms for the development of economic entities in the context of institutional transformations of the global environment.

The object of the author's research is the economic, organizational, social, production, resource, political, regulatory and spatial transformations of the global environment, features and development trends of economic entities, the synthesis of international experience in the field of sustainable development of economic entities in various areas of the national economy and international economic relations.

The subject of the research was various processes development management of economic entities; rationale for the formation of organizational-economic mechanisms to ensure the sustainable development of economic entities; formation of development strategies for economic entities in the context of institutional transformations of the global environment; socio-economic processes; formation of mechanisms for regional decentralization; modernization of educational management and implementation of international law.

Chapter 1

THEORETICAL BASES AND MANAGEMENT MECHANISMS OF DEVELOPMENT THE ECONOMIC ENTITIES

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METHODOLOGICAL PROVISIONS AND TOOLS FOR FINANCIAL DIAGNOSTICS OF THE ENTERPRISE

Efficient functioning and development of modern enterprises directly depends on the financial management perfection, which objectively increases the requirements for management system flexibility and competence of the personnel, methods and tools for making informed operating and strategic decisions. It should be emphasized that the effectiveness of management decisions often depends not only on the amount of available information, but on its quality, on the perfection of the indicators system that characterize the financial condition of the investigated object, the depth of their processing, synthesis and representation of data in an appropriate and understandable form. This testifies to the urgency of the problem of developing a data collection holistic system, processing, transmission and storage, as well as their analysis in order to make decisions on managing the investigated object. All these tasks are solved by the development and implementation of an integrated system of financial diagnostics at the enterprise.

It should be noted that, despite the large number of scientific publications on the use of financial diagnostics in practical work, the organizational mechanism and methodological support for its implementation at enterprises should be improved. The solution to these issues is somewhat complicated by the fact that in the approaches of academics and practitioners there is no unity in understanding the nature

and definition of methods and practical tools of financial diagnostics: in particular, financial diagnostics is often identified with a financial-economic analysis, while these concepts are not identical.

Analysis (Greek) – decomposition – is a method of scientific knowledge of phenomena and processes, which is based on the study of the constituent parts, elements of the studied system. In the economy, the analysis is used to identify the nature, patterns, trends of economic and social processes, research results of economic activity at all levels (in the country, industry, region, in the enterprise, in private business) and in various spheres of the economy (production, social). The analysis serves as the starting point of forecasting, planning, management of economic objects and processes that occur in them. Economic analysis is intended to justify scientific decisions and actions in the field of economics, socio-economic policy, and promote the selection of the best options for action [1].

Diagnosis is a process for recognizing the status, identifying a problem, and deciding how to improve it. Financial diagnostics, which is sometimes equated with financial analysis, at the same time, is significantly different. Diagnostics solves the main problem: establishes the necessary and sufficient in qualitative and quantitative expression for comparison with the normative values of the research object indicators, taking into account the trends of economic entity, industry, society and tradition in order to further compare the current state of the research object parameters with currently recognized their optimal or promising values. Regarding the essence of financial diagnostics, S. Zhukevych and N. Kudlaieva state that it contributes to solving the issue of current movement of financial resources, their formation and use, current and long-term planning of activities; it is a means of combining financial and general management in terms of analysis, as well as financial support for enterprise strategy.” [2]. Table 1.1 presents approaches to the definition of the concepts of financial diagnosis and financial analysis of the enterprise.

While preparing for financial diagnostics at the enterprise, it is envisaged to solve the following programmatic and organizational-methodical tasks: definition of the purpose, subject and principles of financial diagnostics; formation of a target indicators system (targets are indicators that adequately characterize the investigated object - a process or phenomenon); Justification of the methods to be used at the stages of data collecting, processing and visualization.

Table 1.1

Approaches to definition of concepts “financial analysis” and “financial diagnostics”

Financial analysis is
1
a deep, scientifically grounded study of financial relations and the movement of financial resources in a single production and trade process [3]
the process of studying the financial condition and main results of the enterprise financial activity in order to identify reserves to increase its market value and ensure effective development [4]
a process based on the study of data on the enterprise financial position and the results of its activities [5]
the research process, the main purpose of which is to develop the most substantiated proposals and forecasts for changing the financial conditions of the entity's operation [6]
the process of obtaining the largest number of key (most informative) parameters that give an objective and accurate picture of the financial state of the enterprise, and on the basis of which almost all users of financial reports take decisions on optimizing their interests [7]
Financial diagnosis is
the process of studying the financial condition of an enterprise to detect in the dynamics of symptoms of phenomena that can delay the set goals achievement and the tasks solving, creating a threat to the planned activity. This involves developing corrective solutions and/or reviewing goals and forecasts [8]
the process of assessing the state of the economic entity relative to the optimal criteria established at the moment [9]
managerial work on identifying problems and bottlenecks in the enterprise management system [10]
the process of assessing the state of an object, its liquidity and solvency through the methods of express analysis and in-depth analysis, which will enable to identify problems of the enterprise financial condition and their causes, and identify methods for improving the situation [11]
the way of installation, determining object attributes, causes of deformations and deviance from the norm, trends, plan, goals [12]
the method of analyzing the state of production system to detect and eliminate its disproportions, which contribute to the emergence of “bottlenecks”, that is, “diseases” of the production organism [13]
financial diagnostics is an essential element of financial management and audit. It acts as the prerogative of the highest and middle level management structures of the company, able to influence the formation of financial resources and cash flows, the effectiveness of management decisions related to price determination of products, replacement of equipment or technology, economic growth of the enterprise [2]

Table 1.1 (the end)

1
bankruptcy diagnostics is a kind of financial analysis, aimed primarily at identifying various failures and disadvantages in the enterprise as early as possible, potentially dangerous from the point of view of the bankruptcy possibility [14]
the system of rapid bankruptcy diagnostics provides early detection of signs of an enterprise crisis development and allows to take operational measures for their neutralization, and the fundamental diagnostics of bankruptcy allows you to get the most detailed picture of the enterprise financial crisis and specify the forms and methods of its future recovery [4]
analytical diagnostics is a process of decentralized analytical processing of economic information on the basis of PC using in order to develop an effective financial strategy of the corporation [15]

The essence of financial diagnostics is the ability to promptly recognize destabilizing factors and processes in the enterprise, to ensure the adoption of preventive management decisions in order to prevent the emergence of new problems in its development and increase the efficiency of the management system in general. All this calls for information that must meet the following requirements:

- be broad in scope and subject matter;
- to provide the base for both, a large number of consolidated calculations, cross-data, and for obtaining more differentiated structural data;
- to be sufficiently informative and exhaustive, on condition of an acceptable level of costs which is provided by a rational data collection system.

Among the tasks of financial diagnostics of the enterprise there are: the formation of a target indicators system (development of the integral indicator model) and the choice of methodology for the implementation of financial diagnostics; obtaining a quantitative estimate of the individual indicators level to justify programs and measures aimed at financial improvement of the enterprise and preventing or eliminating crisis phenomena.

The role and capabilities of financial diagnostics are determined by a set of functions it performs. Since the scope of application of financial diagnostics technologies is quite wide, it is characterized by various functions, which in practice are carried out simultaneously in the diagnostic process.

The main functions of financial diagnostics are:

- informational (reduction of information asymmetry between users of information responsible for making financial decisions and the object of management);
- control (tracking performance of scheduled tasks in the list of controlled indicators);
- actually diagnostic (identification of factors and their systematization of influence with the selection of positive ones, which determine the possibilities and indicate the level of enterprise financial potential, and negative, which are threats to the financial position of the entity, followed by an analysis of the tendencies for changing the indicators and the conditions for their formation);
- cognitive (formation of the basis for analysis and forecasting of the enterprise financial and economic development, which provides an opportunity to analyze and identify the qualitative side of the phenomena under study, as well as to reveal their essence);
- management (overhauling and adopting managerial orientation measures for improving management efficiency at all levels).

The purpose of financial diagnostics is to consider obtaining information on the level of impact in the financial and economic sphere on the basis of qualitative and quantitative analysis and evaluation of the relevant indicators for the development and approval of management decisions in the enterprise management system, forecasting the state of the object of diagnosis and informing the stakeholders.

The subject of financial diagnostics are: financial state of the enterprise – as a result of interaction of all elements of the enterprise financial relations system; effective indicators of financial activity of the enterprise as a result of the aggregate of production and economic factors implementation, reflecting the presence, placement and use of financial resources; business processes of the enterprise; financial management system of the enterprise; financial potential of the enterprise and its internal reserves.

The analysis of academic literature has shown that financial diagnostics as a process of scientific research (control, analysis, synthesis and forecasting) uses its tools and methods to achieve the goals and substantiate effective management decisions. Methodological basis of the financial diagnostics process are the methods and techniques used in its implementation.

The complex of scientific and methodical tools for financial diagnostics is consistent with the methods of its implementation, which, according to the degree of validity, are divided into formalized and non-

formalized.

The most objective methods are based on formalized methods of financial diagnostics, based on scientifically grounded, hard links and tested analytic dependencies – balance, differential, logarithmic, integral, chain substitutions, allocation of the individual factors influence, absolute differences, percentages, simple and complex interest rates, discounting, etc. [16].

Unofficial methods include methods based on the characteristics of analytical procedures at the logical level, built mostly on the intuitive sense, experience and knowledge of the analytics – psychological, morphological, comparative, analogy, expert estimates and predictive scenarios, the construction of indicators system, analytical tables, definition of absolute and relative changes in the values of various items of the balance sheet for the reporting period, calculation of the individual articles share in the total currency of the balance (studying the structure of the balance sheet items on the report date) [16].

The techniques used in financial diagnostics according to the depth of analysis are divided into simplified and deployed.

Simplified methods of financial diagnostics include [16]:

- vertical (structural) analysis – studying the structure of balance sheet items at the reporting date using a percentage determination of the influence of various factors on the final financial result (calculation of individual articles share in the total currency of the balance sheet);

- horizontal analysis (in dynamics) – comparison of each position of reporting of the current period with the previous one and determination of their absolute and relative changes;

- analysis with coefficients – studying the level and dynamics of relative indicators of financial condition, calculated as the ratio of balance sheet items value or other absolute indicators, derived from the forms of reporting (calculations of relations between individual financial indicators of the enterprise, the definition of indicators interrelations).

Extended techniques for financial diagnostics include:

- Trend analysis – comparing each position of reporting with the previous period and determining the trend as the main tendency of indicators dynamics, free from the influence of particular periods individual characteristics (using the trend extrapolation of the most important financial indicators for the perspective period, i.e., a forecast analysis of the enterprise financial state is prepared);

- comparative analysis – an internal analysis of consolidated reporting indicators for certain types of activities, as well as an inter-

industry analysis of enterprise performance versus competitors or medium-sized enterprises;

- factor analysis – determination of the individual factors influence on the resultant indicator of deterministic or stochastic methods of research. In this case, the factor analysis can be either direct (actual analysis), when the performance index is divided into separate components, and the reverse (synthesis), when its individual elements combine into a general performance indicator.

Financial diagnostics of the company provides a systematic and comprehensive assessment of its activities using different practices, techniques and methods of analysis. The main objective of an enterprise financial diagnostics is an objective, accurate and reliable assessment of the dynamics of enterprise development, its financial status and financial mechanism, which is a complex of specially developed and legally established forms, methods, levers, instruments and incentives, through which the formation and effective use of financial resources is provided in the process of economic activity in order to meet the needs of owners and population of the state.

Recently, the issues of financial condition diagnostics are becoming especially relevant; their results are used to substantiate managerial decisions in financial management. This necessitates the creation of a financial diagnostics system at the enterprise in order to study the financial stability and profitability of the enterprise; determining the efficiency of using current and non-current company assets; estimating company's own working capital; assessing the dynamics of enterprise liquidity and solvency; determining the state of the enterprise in the financial market; assessing business activity, competitiveness and efficiency of financial resources using; complex substantiation of investment projects and strategies of the enterprise; estimating financial support of enterprise investment activity and control over meeting target indicators.

The main features that categorize the types of financial diagnosis are presented in Table 1.2 [16].

Consequently, the financial diagnostics of an enterprise is a set of researches to find out the goals of its functioning, ways of achieving these goals, and identify deficiencies and internal reserves with the help of financial methods, tools and factors. Financial diagnostics is a method of knowing the effectiveness of the enterprise financial mechanism, the processes of formation and use of financial resources for its financial, operational and investment activities. The result of financial diagnostics

Table 1.2

Classification of enterprise activity financial diagnostics types

Characteristic	Diagnostics types
By scale of the study	Industry and inter-industry
By time lag	Predictive and retrospective
By subjects of diagnostics	Internal and external
By goal of diagnostics	Integrated (general) and selective (problem)
By functional area of the enterprise	Operational Investment Management Marketing Innovative

is the assessment of enterprise financial soundness, its property, the speed of capital turnover and its individual parts, the efficiency of using funds.

In market conditions, users of the information received as a result of financial diagnostics of the company are the following: shareholders and founders of the company, who are interested in the profitability of equity capital; managers of the enterprise, who receive reliable information about the efficiency of enterprise management from financial diagnostics; investors, who invest in a certain level of risk capital in order to generate income from it; lenders, interested in solvency of the enterprise and the risk of non-repayment of borrowed funds; employees of the enterprise, who are interested in obtaining information about the ability of the enterprise to pay wages on time; suppliers of material and technical resources, to determine the solvency of the entity; consumers of products (clients of the enterprise), who are interested in the stability of the financial state as a guarantee of timely supply of goods; State Tax Service, to find out revenues to the budget; insurance companies, to determine the possibility of an insured event; public administration bodies and public organizations, interested in the economic well-being of the state and the region.

Table 1.3 presents the basic principles on which the process of enterprise financial diagnostics is based. Taking into account the features of a particular subject area, it has been concluded that the system diagnosis of the enterprise financial state should be endowed with the properties of the developing system, that is, have a base shell to fill in information that can be modified and improved. Agreeing in general with the list of features of strategic diagnostics system of financial and economic activity, it should be noted that for the system of

financial state diagnostics of the enterprise the following features are indicative: purposefulness, integrity, completeness and transparency, flexibility, objectivity, dynamism, cyclicality, efficiency, adaptability and perspective.

Table 1.3

Principles of financial diagnostics of an enterprise [16]

Principle	Characteristics
Scientific character	Use of modern scientific methods and techniques of studying the state of object
Integration	Taking into account all factors of influence on the object of research
Consistency	Creation of financial diagnostics system in the context of a general strategy of enterprise economic development
Objectivity	Use of effective methods and techniques to minimize subjectivity in research
Specificity	Providing a clear target orientation of the financial relations (factors) study
Accuracy	Real financial processes study
Reliability	Providing company owners with reliable information about the results of financial diagnostics
Integratedness	Target and organic combination of business specifics and the interests of the enterprise owners
Expediency	Taking into account the dynamics of economic activity and the stasis of evaluations when preparing operational information about the state of the research object
Efficiency	Comparison of financial diagnostics results with current expenses for its implementation

Based on the research results, a methodical approach to the implementation of an internal diagnosis of financial condition, which includes the following main stages has been developed.

Stage 1. Identifying a goal and defining a list of targets. When conducting a diagnostics of the enterprise financial condition, the main groups of indicators are indicators of liquidity, indicators of business activity, indicators of profitability and indicators of enterprise solvency.

Stage 2. Organizing observation process (data collecting) and preparing information for diagnostics. Each group of financial condition indicators is assessed on the basis of an individual indicators set, which are formed in accordance with the standards of accounting and financial reporting and adapted for use in the system of enterprise financial management. For each of the indicators to be analyzed in the diagnostic

system of the enterprise financial state, it is necessary to establish the forms of data and information sources representation (operational data or data of reporting forms); timelines and responsible persons.

Financial diagnostics can cover a wider range of indicators than it is provided by financial reporting. In case the data in the form for diagnostics is not available (previously no such analysis has been carried out), it is necessary to develop new forms and forms of reporting for the divisions, to appoint persons responsible for submitting such information, and, if necessary, organize special sample surveys.

Stage 3. Evaluation and primary analysis of unit indicators. Different methods are used to find the level of indicators and their interpretation in the practice of analysis. Thus, in particular, when assessing individual financial sustainability indicators for each calculated parameter, certain limits of its changes in time are determined. This proceeds from the assumption that for any parameter it is possible to determine which parameter values are acceptable, normal or crisis, taking into account the current state of the enterprise.

Stage 4. Calculation of group and integral indicators of the enterprise financial condition.

Stage 5. Analysis and interpretation of data, development of recommendations for improving the financial performance of the enterprise. At this stage, it is expedient to carry out a multidimensional analysis, which provides an analysis of financial status indicators and indicators of financial capacity. The evaluation (interpretation) of the results obtained, namely, conclusions about the state and trends of the target indicators change, evaluation of dynamics of the studied processes is the basis for making management decisions, developing and adjusting the strategy of financial development of the enterprise.

Stage 6. Short-term forecasting of target indicators is carried out in order to identify trends in their development in the prevailing conditions. Forecasting involves (as a mandatory stage) the construction of relevant one-dimensional and multidimensional models.

Stage 7. Visualization and documentation of data (drawing up a report based on the results of financial diagnostics). According to the results of diagnostics, it is recommended that enterprises compile two types of reports: for internal use in the process of financial development management and for external users - stakeholders. Internal use information should be more detailed and allow analyzing at the level of primary and intermediate data as well as performance indicators.

The application of financial diagnostics methods at various stages of

managing business facilities activity will promote the understanding of business and its driving factors; identification and assessment of financial and business risks; analysis of key indicators of financial activity; asset quality analysis and constant cash flows; understanding the financial effects of tax schemes that the company uses.

A large number of methodological approaches to financial diagnostics of the enterprise, which are used in science and business practices, necessitated their systematization. Let us consider some of the features and criteria by which it is possible to systematize the methods of financial diagnosis (Table 1.4).

The information basis of financial diagnostics are: internal data of accounting and reporting, statistics, external information about trends of industry development and economy as a whole, market dynamics, potential of enterprises, conclusions of experts on the main factors of their success.

Legally regulated diagnostic techniques include models implemented by state authorities, among which there are the Ministry of Finance of Ukraine and Bankruptcy Agency methods. State methods of diagnosing financial condition and threats of bankruptcy are mandatory for use in certain specified situations. Scientific methods are developed and offered by scientists, financial analysts, used in the process of diagnosis by choice of analysts [17].

According to *the method of forming (generalizing conclusion) of the diagnosis*, modern methodological approaches can be combined into two large groups [18]:

- 1) those that involve the formation of a summary conclusion (diagnosis) subjectively;
- 2) those that involve obtaining a summary conclusion by means of a certain processing of the research results in separate areas and on the basis of various techniques application.

By way of information processing methodological developments on diagnostics are divided into manual (non-automated) and automated. The latter provide all necessary calculations and the diagnostic conclusion on the basis of a PC using by applying specially designed software products.

According to the methods of the valuation indicators study, the following methodological approaches have been disseminated:

- 1) dynamic (retrospective) analysis of certain indicators, which provides their study in dynamics;

Table 1.4

Classification of financial diagnostics methods

By information basis		Financial diagnostics methods				By methods of indicators research			
By status		By forming general conclusion		By ways of data processing		By methods of indicators research			
By status		By forming general conclusion		By ways of data processing		By methods of indicators research			
External	Internal	State methods (required)	Scientific methods (recommended)	By subjective methods	By objective methods	Non-automated	Automated	Dynamic analysis	Comparative analysis
		According to evaluation criteria	According to diagnostic conclusions	According to indicators and their information support	According to indicators and their information support	By method of determination	By method of indicators	According to research directions	
Detection of pathologies	State identification	Descriptive models	Predictive models	Quantitative Indicators	Quantitative Indicators	Coefficient approach	Index approach	Financial position	Organization and management
		Normative models		Accounting and statistic reports	Accounting and statistic reports	Aggregation approach		Resource support	Combined approach
Individual research				Combined	Combined			Results of economic and financial activity	
				Qualitative Indicators	Qualitative Indicators				
				Respondent	Expert				
				Mixed indicators	Mixed indicators				

2) comparative analysis, the basis for which is a comparison of the actual achieved value of the indicator with the average or the average of the group of similar enterprises;

3) benchmark analysis, which involves comparing the actual achieved value of the indicator with a certain standard, which is defined as the permissible (critical) limit of its change.

The reference analysis is considered the most basic one, however, the mandatory prerequisite for its implementation is the availability of an effective system of benchmarks for valuation indicators.

Accurate diagnosis of a company's condition is possible only if there are certain criteria – quantitative and qualitative characteristics, scales, knowledge bases, etc.

From this perspective, it is common to distinguish three types of diagnostics [18]:

1) detection of pathology – a study in which the state of the enterprise is compared with a certain standard (norm), which allows identifying the presence of “bottlenecks” – deviations and their size;

2) identification of the state (i.e. belonging to a certain class, group, aggregate) – a study in which the state of the enterprise is compared with a certain statistical sample;

3) an individual study carried out in the absence of analogues and the impossibility of using the comparative method, based on the use of knowledge and skills of the subject analyst. In this case, the state of the enterprise is studied as a unique combination of characteristics (resources, results, management systems, etc.), and the determined diagnosis is of an expert nature.

According to the diagnostic conclusion in international practice, it has been decided to allocate the following types of models: descriptive, predicative, normative [19].

Descriptive models are the main ones, such as: creation of a balance sheets system, presentation of financial reports in various analytical sections, vertical and horizontal analysis of reports, trend analysis of performance indicators, analysis of relative indicators and coefficients, comparative or spatial analysis, factor analysis, system of analytic coefficients.

Predictive models are models of predictive nature. They are used to forecast the company's income and expenses, its future financial position.

The most common of these are:

- calculations of critical sales point (analysis of break-even);

- construction of prognostic financial reports;
- models of dynamic analysis;
- models of situational analysis.

Normative models are models that allow comparison of actual results of the enterprise with normative ones. These models are usually used in the internal financial analysis; their essence is to set standards for each article of expenditure for the relevant technological processes, types of products and to find out the reasons for the deviations of the actual data from these standards.

By the nature of indicators and information provision of the diagnostic process, existing methodological approaches to its implementation may involve the use of exclusively quantitative, qualitative or mixed information [19].

The most appropriate is the combination of the using quantitative and qualitative indicators of the enterprise, since the separate application of only quantitative (objective) or only qualitative (subjective) information has significant disadvantages. The main disadvantages of quantitative information are: static, possible incorrectness, the use of only quantitative indicators does not always provide an early diagnostics of bankruptcy, the crisis precursors identification. The use of only qualitative information gives conclusions of diagnostics subjective character depends on personal professional qualities of an analyst, experience of work, correctness of databases formation.

The following methodological approaches can be identified by the method of determining the following estimated indicators [20]:

- 1) coefficient approach, which involves the calculation and use of various coefficients;
- 2) index approach, which involves the calculation of dynamic indicators of change in the state of research object in time (growth rate, growth, etc.);
- 3) aggregate approach, the essence of which is to calculate the valuation units – absolute estimates, calculated by special methods.

According to the directions of research, the functional orientation of the evaluation indicators, methodological approaches to the diagnosis can be focused on the study of such areas of the enterprise:

- 1) financial and property condition;
- 2) results of enterprises economic activity in certain areas (operational, financial, investment);
- 3) organization of enterprise management;
- 4) resource potential of enterprises;

5) combined approach (balanced system of diagnostic indicators in the context of various aspects of enterprise activity, such as resource, client, financial, managerial (process) component).

The combined approach should be considered as the most correct and expedient to use, which enables to summarize almost all components of the emergence and course of crisis phenomena in the enterprise.

The number of features and aspects by which it is possible to classify the methods of financial diagnostics of an enterprise is so big that it is impossible to consider all in the framework of this research. In addition, certain sectoral or thematic approaches are proposed, the most famous of which are: bankruptcy diagnostics, fundamental diagnostics of the enterprise, and diagnostics of certain industries enterprises [21].

The most important part of effective management is to ensure the stable development of the enterprise, which is a prerequisite for its financial condition optimization. This determines the necessity of creating a system of financial state diagnostics of the enterprise as a result of the interaction of all financial management elements, an indicator of the company provision with the necessary financial resources for effective economic activity and timely settlement of their obligations. Financial diagnostics is a multi-factor support system for making managerial decisions based on a new management concept. Such a system is designed to provide a comprehensive identification, analysis, elimination and promotion of enterprise problems with a view to developing outreach measures aimed at achieving its strategic and tactical objectives.

In Ukraine, the use of foreign diagnostic methods has certain limitations: the parameters used by foreign analysts, significantly different from domestic ones; models of financial diagnostics are developed using examples of other countries' enterprises; the indicators of Ukrainian enterprises activity are more influenced by factors of a noneconomic nature; the limits of stability offered by foreign analysts are often unattainable for domestic enterprises. Problematic aspects are also discrepancies regarding the definitions of the main concepts of the enterprise financial condition, the indicators and the algorithm for their calculation, as well as the dynamism of legislation and contradictions in various methods of assessing financial and economic activity.

Consequently, the advantages of using financial diagnostics in the management of the enterprise should include the possibility to reasonably approach the definition of goals and objectives not only in

relation to the object of diagnosis, but also the enterprise as a whole; the flexibility of the diagnostic system provides the possibility of its use in management through development and use of an appropriate system of diagnostic indicators; the diagnostic system complexity involves monitoring the state and trends of the diagnostic object components and ensuring the interaction of all structural units in order to manage the financial and economic performance of the enterprise, eliminate deviations from the planned values of indicators, prevent crisis phenomena and achieve the set goals.

In order to implement the proposed conceptual model for the formation and functioning of financial diagnostics system in the activities of enterprises in order to ensure their financial stability and profitability, the development of the corresponding structure is required. The main elements of such a system should be the system of proper diagnostics of the enterprise financial potential and the state of the environment; strategic analysis and strategic planning; system of diagnostics of the performance level; system of motivation; strategic control; certification system for compliance with international standards in the field of management: quality; social responsibility and information security. The introduction of the proposed system of financial diagnostics will facilitate the activation of enterprises to secure financially sustainable development, increase their competitiveness in the national and international markets through the formation of a positive image, achievement of high level of performance in all spheres.

The research has revealed that comprehensive financial diagnostics is an effective tool for substantiating managerial decisions in the system of financial management and the formation of a qualitative financial strategy of the enterprise. Analysis of financial diagnostics results can be performed not only on the basis of a “paper report”, but also in an interactive mode (by studying the information structures of the corresponding database with the help of PC). Visualization and documenting the results of financial diagnostics may involve the preparation of a report and the preparation of information for display in two modes: interactive analysis and synthesis of final reports. The process of financial diagnostics needs to adapt the management system to a range of tasks that are solved in the field of financial management, which determines the need to develop an appropriate diagnostic system. This will help to increase the responsibility of the enterprise for the results in the financial and economic management, both at internal and external levels; establishing a dialogue with interested sorrows in order

to ensure the expectations of each of them, taking into account their own capabilities and interests of the enterprise; growth of trust and image improvement and, consequently, increase of the market share of the enterprise and its competitiveness.

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**PROVIDING THE
QUALITY OF THE
SERVICES OF HOTEL
RESTAURANT
BUSINESS
ENTERPRISES AS THE
BASIC ASPECT OF
THEIR FUNCTIONING
IN COMPETITIVE
ENVIRONMENT**

Creating a qualitative and competitive hotel product is a strategic goal of the hotel industry in Ukraine. But the effective development of the hotel business requires changes not only in the structure of hotel product development and production, but also in the development and organization of processes for guaranteeing and continuous improvement of its quality. All these processes require in-depth scientific research, the development of theoretical foundations and methodological approaches to the formation of a competitive tourism industry and high-quality hotel product. The issues of the quality of the hotel and tourist product and the development of the market for services in the field of hospitality were studied by domestic and foreign scientists such as Apopiy V.V., Barabitskaya V.K., Berry L. [1], Bychkivskyi R.V. [2], Bochan I.O., Fadeeva N., Gludkin O.P. [3], Dainovsky Yu.A., Zapisotsky A.S., Zeytanl V. [1], Zorin I.V. [2], Ismaev D.K., Kaurova A.D., Kvartalnov V.A., Kotler F. [4], Lapidus V.A. [5], Levitskaya E.V., Malinovskaya O. Yu., Parazyurman A. [1], Shapoval M.I. [6], Tkachenko T.I. [7] and others.

Quality of hotel services, as well as the quality of products, is a combination of quality and the type and quality of performance. In the field of hospitality, the type of quality is related to its various types, at the same time reflecting the standard of facilities and environment. Therefore, in accordance with the concept of the essence of the hotel product, which is defined in a broad and narrow sense, one can analyze:

- the quality of a single (separate) service or a homogeneous assortment group of services;
- the quality of the hotel product as a set of services, which is manifested through the intermediation of all the goods and services

purchased by tourists in connection with the departure from the permanent residence place at the time of travel.

To ensure the quality, in accordance with the international standard ISO 9000, we require:

- necessary material base (funds for placement);
- qualified personnel interested in high-quality work (human factor);
- well thought-out organizational structure and clear management of the enterprise [8].

Given the differentiated nature of production in the hotel industry and the need for long-term contact of service staff with tourists, the problem of quality service in the face of fierce competition, which becomes the main aspect of the functioning of hotel enterprises in the market, arises.

An essential element of the set of actions aimed at improving the quality of hotel services is the quality of customer service. The service staff affects consumers and helps to establish long-term relationships with the firm. Personnel's special role is to cooperate with the client when creating the common value and quality of the product. However, this problem largely forms the market relations between employees of tourist enterprises and their clients in certain spheres of tourist activity.

The quality of customer service is one of the important factors that distinguish enterprises in the competition. The proposal of the desirable quality of service for a tourist requires the application of not only relevant production factors, procedures, techniques and technology, but also the appropriate level of employees' skills.

Customer service involves actions aimed at taking the orders, manufacturing and delivery of ordered items, as well as actions that are intended to correct errors made at any stage of the implementation of the order. Customer service is a reliable, guaranteed provision of goods and services to the customer in a specified place and time, in accordance with the customer's expectations. Moreover, this is a set of actions of individual components of the entity that participates in the provision of goods and services in a manner that meets the customer's expectations and ensures the achievement of the main objectives of the firm [3].

Consumers of tourist and hotel products are increasingly paying attention to the ratio of "quality / price", which for the enterprise is embodied in the ratio of "service / income", since in tourism, as in most fields of the service sector, the final profit depends on the quality of service, and the quality of service is the result of the activities of travel enterprise employees. The employee, directly communicating with the

consumer, is able to create an idea of the value in the tourist product. At the hospitality enterprises, a five-level service quality model is introduced.

It determines the quality of service in terms of meeting customer expectations. The staff of the firm must know what the client expects and fulfill his expectations with excellent quality. Serving guests in the hotel industry is a system of events that provides a high level of comfort and satisfies the diverse household, economic and cultural needs of the guests. Every year, demands and service requirements are increasing. Moreover, the higher the culture and the quality of service to the guests, the higher the image of the hotel enterprise, the more attractive it for the guests is, the more successful its activities are [5].

The culture of service is a complex concept of the level of physical and psychological comfort.

Quality of service – a combination of properties and degree of utility of services, which determines the ability to meet the needs of guests in greater scale; It is a dynamic indicator that is constantly evolving and improving.

The formation of quality of service is influenced by external factors (state policy in the tourism sector, hotel industry structure, scientific and technological progress in hotel industry, territorial distribution of enterprises of the hotel industry) and internal (personnel policy and personnel management, complex material and technical basis) [1].

Principles and elements of the quality system that cover all the processes necessary to ensure the effectiveness of services, including the analysis of services are established in “DSTU ISO 9004-2-96 Quality management and elements of the quality system. Part 2. Service guidelines.” This standard applies to institutions, organizations, enterprises, including hotels operating in Ukraine, regardless of ownership [8].

Improving the quality of service at the hotels of the hotel industry is important for the hotel itself, the consumer and the national economy as a whole. Providing quality services helps to increase their sales volume, profitability of the enterprise, increase the hotel prestige, etc.

In terms of business, the hotel is an enterprise for the production and provision of services (hotel product) of commercial hospitality, offering its facilities and service to the consumer.

This concept includes several factors:

- a location that affects the convenience of access to the hotel and the attractiveness of its environment (infrastructure) for the guest, which

depends largely on the purpose of the visit (business, recreation, training, etc.);

- facilities (amenities) – bedrooms, restaurants, bars, recreational facilities - available to customers and differentiated by type, size, price;

- the level of service, which includes the range of services, the availability of various types of amenities, their style and quality, favorable for the satisfaction of clients needs;

- image – provision of a favorable perception of the hotel, which is known by clients. The hotel's image is determined by its location, the services and amenities offered, the external perception and the interior atmosphere of the hotel, the qualification of the staff.

- price – expresses the cost of service [4].

There are five most common criteria by which consumers evaluate the quality of a hotel service, namely:

- 1) Reliability or ability to perform the promised service in a predefined time. This means that the organization fulfills its promises in a timely and correct manner from the first time. It also means that the information disseminated by the service company is correct.

- 2) Benevolence, that is, the desire and willingness of employees to provide a service. This concept takes into account the timeliness of the service, for example, provision of urgent service, prompt response, providing the necessary information, etc.

- 3) Security, that is, customers must be confident in the professionalism of the service provider. This criterion relates to the knowledge, competence and courtesy of the staff and its ability to inspire confidence.

- 4) Mutual understanding with customers is defined as care and personalized attention given to customers. Contact with employees should be affordable and enjoyable, and they, in turn, should make efforts to understand customers and their needs.

- 5) The evidence takes into account the physical aspects of the service, such as the means of service, the appearance of the staff, the tools or equipment used to provide the service, the physical incarnation of the service and the presence of other clients.

The results of the study of the importance of the criteria for assessing the quality of hotel services among the guests of Kharkiv hotels showed the importance of the above mentioned indicators. Therefore, according to consumers, the most significant indicator is reliability – 32% of respondents came to such conclusion, kindness – 22%, security – 19%, mutual understanding with the buyer – 16% and obviousness – 11%

(Figure 1.1).

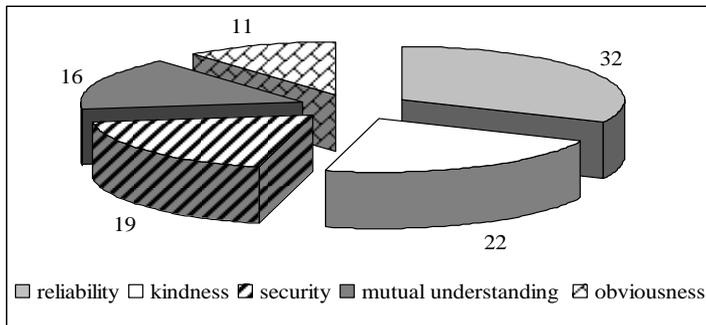


Figure 1.1 The degree of quality indicators importance according to consumers

Quality is a mandatory requirement for the existence of a service company, a condition not only for development, but also for survival in a competitive environment.

The quality of services is the compliance of the services provided with the expected or established standards. Thus, standards, their real form and content are a criterion for the quality of service. The criterion for assessing the quality of the service provided to the consumer is the degree of satisfaction, that is, the correspondence between the received and the expected.

The quality of the service is determined by the requirements of Article 12 of the Law of Ukraine “On Protection of Consumer Rights”, according to which “Seller (manufacturer, service provider) is obliged to deliver the goods (work, service) to the consumer, which in quality complies with the requirements of the normative documents, the terms of the contract, as well information about goods (work, service) provided by the seller (manufacturer, service provider)” [9].

Modern perception of quality is considered as one of the most important factors concerning the competitiveness of the hotel company.

Service buyers are becoming more and more demanding and demanding in the standard of service. This element is gaining momentum in the functioning of business entities in the face of intense competition. Activities related to the maintenance of tourists, covering actions before, during and after the end of the transaction. The quality of a hotel service ordered by customers affects both their aspirations and

real experience gained as a result of relationships with tourists. Hope is determined by the promises and commitments that the firm provides to its customers through various communication methods. Additionally, account must be taken of the influence of such factors as listening to opinions, recommendations, reviews.

In the context of providing quality hotel services, it is necessary to conduct regular internal quality audits to verify the application and effectiveness of the quality system, as well as compliance with the service specification, the service provision specification and the quality of management specification.

The largest hotels, especially hotel chains, regularly evaluate the quality of service both at their own enterprises and their competitors. To do this, a number of methods are used, including, for example, control purchases for the next comparison, hidden purchases, consumer surveys, complaints and suggestions analysis, service audit teams, etc. Many qualitative characteristics that have been subjectively evaluated by consumers can be used for quantitative assessment in the future [10].

The use of monitoring service results is now becoming the most effective element of the quality management system in the hotel business.

Internal quality audits should be conducted on a regular basis to verify the application and effectiveness of the quality system, as well as compliance with the service specification, service provision specification, and quality management specification. A necessary requirement to improve the quality of services in the hospitality industry is the observance of certain principles (Table 1.5).

An integral part of reaching the high quality of services is the availability of a control system. When creating a control system, one must also adhere to the principle of continuity. The system for monitoring the quality of services should provide literally every second control at all stages of the technological cycle and in all its parameters. In addition, the control function, being a turning point, must directly provide flexibility and adjust to all other actions to ensure the quality of services. Thus, two main criteria of the quality system can be distinguished: it must provide a high level of service quality, its compliance with the standards and needs of the tourist, and also serve as a tool for the creation of special technologies for sound business management. Main directions of service and service improvement are:

- 1) increasing the requirements for personnel during the recruitment;
- 2) staff training:

Table 1.5

Principles of conditions formation that ensure the improvement of the quality of services in the hospitality industry

No.	Content	Characteristic
1	2	3
1	Compliance with the main and most important for the hospitality sphere principles of modern service	Maximum conformity of the services provided to the requirements of consumers and the nature of consumption
		Inextricable link to the service with marketing, its main principles and objectives
		Flexibility of the service, its focus on the accounting of changing market requirements, the benefits of consumers of tourist services
2	Creating the necessary conditions for personnel, designed to provide high-quality service	Ergonomic workplaces
		Clear formulation of the rules required by each employee;
		A clear system for evaluating the quality of work of each employee, which allows to objectively measure quantitatively and qualitatively the effectiveness of the service, especially those poorly measurable elements such as benevolence and politeness
		The motivation of the staff, his sincere interest in the prosperity of the whole enterprise, the desire and ability to do all the work as efficiently as possible, the mood for self-improvement
3	Optimization of the organizational structure of hotel business management	Formation of the organizational structure of management, where the number of elements is extremely small (but without damage to the quality of service), that is, the longer the chain of the order, the greater the likelihood of error
		Continuity of the technological process with the same level of quality of service is also the effectiveness of the interaction of all elements of the structure, which allows you to immediately correct the errors and eliminate the possibility of their repetition
4	Comprehensive, complete, objective and continuous monitoring of the	Participation of the guest in the assessment and monitoring of quality
		Creation of methods and criteria that allow to correlate the requirements of standards with the actual state of affairs

Table 1.5 (the end)

1	2	3
	quality of the service	Creation of systems of personnel self-control
		Continuous work with quality groups
		Applying clearly formulated quantitative criteria for assessing the quality of services provided
		Participation of personnel in the creation of systems and quality criteria
		Application of technical means of quality control
		Creation of control services, which would include representatives of different services: the directorate, the financial department, the security department, the personnel service, the managers or staff of all functional services

Source: developed by the authors

- initial training according to the tasks of the enterprise and the specifics of the work;
- training for eliminating the gap between the requirements for the position and personal qualities;
- training for general qualification improvement;
- training for the acquisition of new techniques and methods of performing operations;

3) the introduction of new technologies in the maintenance of tourists;

4) application of the method of zero defect;

5) reduction of cases of violation of labor discipline due to work with personnel;

6) reduction in the amount of expenses related to carrying out maintenance work;

7) introduction of activities of scientific organization of work: placement of personnel in accordance with qualifications, education, age, temperament, etc.

Effective and consistent application of quality management services creates essentially new possibilities:

- improving service delivery and customer satisfaction;
- increase productivity and reduce costs;
- increasing the competitiveness of the services market [11].

Hence, the quality of customer service becomes one of the important factors that distinguish enterprises in competition in the complex and changing market of hotel services. The proposal of the desirable service

quality to a tourist requires the application of not only relevant production factors, procedures, techniques and technology but the appropriate level of skills of employees as well.

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**STATE FINANCIAL
SUPPORT AS A FACTOR
OF INCREASING
FINANCIAL
SUSTAINABILITY OF
SUBJECTS OF
ECONOMIC ACTIVITY**

Financial sustainability of the enterprise is one of the most important characteristics of its financial condition, which reflects the state of the most important characteristics of financial and business activities of the enterprise. Financial sustainability of the enterprise implies, that resources, invested in entrepreneurial activity, should be repaid by cash-flow from economic activity, and received profit should provide self-financing and enterprise's independence from external sources of asset formation.

We will analyze the financial and economic activity of Ukrainian business entities and evaluate their financial sustainability. According to the State Statistics Service (from *Official Website of the State Statistics Service of Ukraine*) at the end of 2016, there were 1 million 865 thousand 530 enterprises and entrepreneurs operating in Ukraine, the number of which, as compared to 2012, increased by 265 thousand 403 units, or by 16,59%. This increase was due to an increase in the number of individuals-entrepreneurs by 323 thousand 969 units. Instead, the number of enterprises has decreased by 58 thousand 566 units, which is due to the aggravation of the financial-economic and political-economic crisis, military events in eastern Ukraine (Table 1.6). Among the enterprises of Ukraine for 2012-2016, the number of large enterprises declined by almost half, the number of medium-sized enterprises decreased by 26,5% (or by 5,357 units), the number of small enterprises decreased by 15,4% (or by 52 thousand 894). The largest share, both among enterprises and among individual entrepreneurs, belongs to small businesses.

Organizationally, it is more flexible and capable of adapting to changes in the external economic environment, but the financial capabilities and capitalization of such enterprises are substantially limited by the scale of their activities. The ability of the entrepreneurship' entity to fulfill its obligations in a timely manner is

Table 1.6

**The dynamics of the number of entrepreneuring subjects in Ukraine
for 2012-2016**

Indicators	Number of entrepreneuring subjects					Abs. dev., (+,-)
	2012	2013	2014	2015	2016	2016/ 2012
Total subjects of entrepreneurship, units, incl.:	1600127	1722070	1932161	1974318	1865530	265403
Enterprises, incl.:	364935	393327	341001	343440	306369	-58566
- large enterprises	698	659	497	423	383	-315
- medium enterprises	20189	18859	15906	15203	14832	-5357
- small enterprises	344048	373809	324598	327814	291154	-52894
% to the total number of subjects						
- large enterprises	0,19	0,17	0,15	0,12	0,13	-0,07
- medium enterprises	5,53	4,79	4,66	4,43	4,84	-0,69
- small enterprises	94,28	95,04	95,19	95,45	95,03	0,76
Individuals-entrepreneurs, incl.	1235192	1328743	1591160	1630878	1559161	323969
- individuals-entrepreneurs (large business)	According to the Economic Code (as amended on March 22, 2012), individuals-entrepreneurs can't be subjects of large business (from <i>The Economic Code of Ukraine</i>)					
- individuals-entrepreneurs (medium business)	361	351	712	307	281	-80
- individuals-entrepreneurs (small business)	1234831	1328392	1590448	1630571	1558880	324049
% to the total number of subjects						
- individuals-entrepreneurs (medium business)	0,03	0,03	0,04	0,02	0,02	-0,01
- individuals-entrepreneurs (small business)	99,97	99,97	99,96	99,98	99,98	0,01

one of the qualitative characteristics of the financial condition and, in accordance with financial security, the assurance of property obligations must be relatively stable over a certain period of time. Whereas the main condition for ensuring an acceptable level of financial sustainability of enterprises should be the presence of a positive value (positive size) of equity capital and own working capital, then we will analyze the trends

of their changes in the enterprises of Ukraine in 2014-2016.

Table 1.7 shows, that in the investigated period the value of property of Ukrainian enterprises increased from 6060319,8 billion UAH to 9991791,2 billion UAH, or by 64.9%. The growth of the value of the equity capital of Ukrainian enterprises in absolute terms from 1810179,6 billion UAH to 2445803,7 billion UAH, or by 35.1%, is a positive phenomenon that supposedly would improve the financial stability of enterprises. However, reducing the equity' share in the liability structure indicates a reduction in the financial sustainability of enterprises, as in the context of positive growth of equity capital by 35% in the investigated period, financial liabilities of enterprises increase by 77%, that is, significantly faster, which confirms the dependence of economic entities on external sources of financing. The current liabilities are dominating in the structure of enterprises' obligations, which is due to the accounts payable of enterprises, which is almost 50% of current liabilities, and is due to the short-term banks' loans that enterprises involve securing their financing.

From Table 1.7 it's also clear, that domestic enterprises in the investigated period are losing their financial independence, as evidenced by the value of the coefficient of autonomy, which is <0.3 .

This coefficient is an analytical indicator of the implementation of the concept of saving financial capital, which is a prerequisite for a successful business. Unfortunately, in recent years at the macro level there has been a tendency for the deterioration of more important indicators of financial sustainability of the Ukrainian enterprises, such as the coefficient of maneuverability of equity capital and coefficient of security by own working capital. Thus, the financial condition of the Ukrainian enterprises has deteriorated, and a discrepancy of the most important indicators with the recommended value is confirming that. In 2016, the financial result of Ukrainian enterprises at last reached its positive value – profit, which is 28583,4 billion UAH.

Agriculture is one of the leading sectors of the Ukrainian economy and is crucial for the social development of our country (Table 1.8).

After all, this sector of the national economy at the present stage performs a number of decisive socio-economic functions. Producing agricultural commodity products provides food products to the population and raw materials of a number of industries. In recent years, the agro industrial complex has become one of the locomotives of the domestic economy in terms of volumes of production and sales of products, including for export. Foreign currency income of the agrarians

Table 1.7

**Assessment of financial sustainability of Ukrainian enterprises in
2014-2016**

Indicators	Years, billion UAH			Abs. dev., (+,-)	Growth rate, %
	2014	2015	2016	2016/2014	2016/ 2014
Indicators of the enterprises' balance					
Non-current assets	3027708,0	3960148,9	4212813,1	1185105,1	39,1
Current assets	3028941,8	4108602,7	5772816,5	2743874,7	90,6
Equity capital	1810179,6	2288741,4	2445803,7	635624,1	35,1
Long-term liabilities	1311419,3	1668158,0	1696870,6	385451,3	29,4
Current liabilities	2936220,2	4114903,2	5846688,7	2910468,5	99,1
Liabilities related to non-current assets and disposal groups and net asset value of non-state pension funds	2500,7	1980,8	2428,2	-72,5	-2,9
Total value of assets	6060319,8	8073783,4	9991791,2	3931471,4	64,9
Indicators for assessing the enterprises' financial sustainability					
Coefficient of autonomy (>0,5)	0,30	0,28	0,24	-0,1	-18,0
The coefficient of financial dependence (<0,5)	0,70	0,72	0,76	0,1	7,7
The coefficient of maneuverability of equity capital (>0,4)	0,60	0,56	0,42	-0,2	-29,1
Coefficient of the provision of working capital own working capital (>0,1)	2,36	2,42	1,50	-0,9	-36,2
Coefficient of the ratio of equity and borrowed capital (coefficient of financial stability) (>1,0)	0,43	0,40	0,32	-0,1	-23,9
Coefficient of the ratio of borrowed and equity capital (coefficient of financial risk) (<0,5)	2,35	2,53	3,08	0,7	31,4
Coefficient of security by own working capital (>0,1)	1,60	1,52	1,15	-0,4	-27,8
Current liabilities ratio (>0,5)	0,69	0,71	0,78	0,1	12,1
Long-term liabilities ratio (<0,2)	0,31	0,29	0,22	-0,1	-27,1
The ratio of non-current and own funds (>0,5)	1,67	1,73	1,72	0,0	3,0

is significant, which positively influences the rate of the national currency.

During 2012-2016, agriculture has taken a leading position in terms of the growth of sales volumes and amounts to 147.9% (Table 1.9).

In the structure of products sold (goods and services) in 2012-2017, medium and small enterprises of agriculture, forestry, and fisheries

Table 1.8

Distribution of number of economic entities by types of economic activity in 2012-2016

Indicators	% of the total number				
	2012	2013	2014	2015	2016
Total, including:	100,00	100,00	100,00	100,00	100,00
agriculture, forestry and fisheries	4,28	4,13	3,92	4,02	4,00
industry	7,13	7,04	6,81	6,84	6,81
construction	3,18	3,08	2,70	2,79	2,69
wholesale and retail trade; repair of motor vehicles and motorcycles	52,69	51,72	51,17	50,09	48,80
transport, warehousing, postal and courier activities	5,45	5,36	5,79	6,03	5,86
temporary placement and organization of food	2,76	3,02	2,98	2,96	3,09
information and telecommunications	4,16	5,02	5,92	5,88	6,95
financial and insurance activities	0,65	0,64	0,62	0,63	0,64
real estate transactions	5,11	5,34	5,06	4,76	4,87
professional, scientific and technical activities	5,46	5,64	5,96	6,64	6,71
administrative and auxiliary services activities	2,42	2,33	2,28	2,40	2,47
education	0,46	0,49	0,52	0,55	0,59
health care and social assistance	1,03	1,05	1,09	1,10	1,16
art, sports, entertainment and recreation	0,58	0,67	0,70	0,75	0,74
provision of other types of services	4,66	4,46	4,49	4,55	4,62

occupy more than 86% of all enterprises in the industry (Table 1.10). The share of turnover of agricultural enterprises in the structure of sales volumes increased from 3.75% in 2012 to 6.03% in 2016.

However, the financial condition of agricultural enterprises remains unsatisfactory.

The quality of financial funding for enterprises is primarily attested by financial stability and solvency indicators, which are based on comparison of own and borrowed sources of funds of enterprises (Table 1.11).

According to the reduction of the equity's share in the liabilities of the agricultural enterprises, the amount of borrowed funds is increasing, and consequently the financial risk and financial dependence of the agricultural enterprises on creditors increases. If at the beginning of the investigated period, own funds were practically equal to the borrowed, then by the end of the period, own funds accounted for only ¼ of the total sum of liabilities. Our calculated coefficients, starting in 2014, do

Table 1.9

Volume of sold products (goods, services) by types of economic activity in 2012-2016

Indicators	Total, million hryvnias		% of the total number		Abs. dev., (+,-), million UAH	Growth rate, %
	2012	2016	2012	2016	2016/2012	2016/2012.
Total, including:	4459818,8	6877077,3	100,00	100,00	2417259	54,20
agriculture, forestry and fisheries	167332,5	414799,9	3,75	6,03	247467,4	147,89
industry	1517617,7	2343000,4	34,03	34,07	825382,7	54,39
construction	159430,4	180966,5	3,57	2,63	21536,1	13,51
wholesale and retail trade; repair of motor vehicles and motorcycles	1783736,9	2628672	40,00	38,22	844935,1	47,37
transport, warehousing, postal and courier activities	228906,6	398913,7	5,13	5,80	170007,1	74,27
temporary placement and organization of food	23906,6	37613,4	0,54	0,55	13706,8	57,33
information and telecommunications	90074,4	175050,9	2,02	2,55	84976,5	94,34
financial and insurance activities	165844,5	214430,1	3,72	3,12	48585,6	29,30
real estate transactions	63020,4	103770,5	1,41	1,51	40750,1	64,66
professional, scientific and technical activities	186857,2	274279,9	4,19	3,99	87422,7	46,79
administrative and auxiliary services activities	42976,5	64457,8	0,96	0,94	21481,3	49,98
education	2356,5	3891,5	0,05	0,06	1535	65,14
health care and social assistance	9873,4	16803,1	0,22	0,24	6929,7	70,19
art, sports, entertainment and recreation	9032,6	7691,5	0,20	0,11	-1341,1	-14,85
provision of other types of services	8852,6	12736,1	0,20	0,19	3883,5	43,87

not comply with the regulatory requirements in accordance with the Methodological recommendations for identifying signs of insolvency of the enterprise and indications of actions to conceal bankruptcy, fictitious bankruptcy or bankruptcy proceedings (from *The Order of the Ministry of Economy of Ukraine*), according to which the owners of the enterprise should finance activities at least the same amount as lenders. There is, therefore, a risk of reducing the amount of sources of self-financing of agricultural enterprises.

Table 1.10

The structure of products (goods and services) of enterprises of agriculture, forestry, fisheries 2012-2017 (%)

Size of enterprise	2012	2013	2014	2015	2016	2017
Large	12,0	14,6	14,8	16,9	13,1	11,4
Medium	57,8	55,1	54,7	50,6	51,2	50,6
Small	30,2	30,3	30,5	32,5	35,7	38,0
Total	100,0	100,0	100,0	100,0	100,0	100,0

That is why the state financial support of the agro-industrial complex should become a priority direction of the state policy of Ukraine. The volume of expenditures of the State Budget for financing agriculture is given in Table 1.12.

Table 1.11

Indicators of financial sustainability of enterprises of the agroindustrial complex of Ukraine in 2013-2016

Indicators	Calculation and recommended value	Years				Dev. 2016/2013
		2013	2014	2015	2016	
The ratio of own and borrowed funds		1,00	0,72	0,67	0,31	-0,69
The coefficient of autonomy	$\frac{\text{Own funds}}{\text{Total assets}} \geq 0,5$	0,50	0,42	0,40	0,24	-0,26
The coefficient of financial dependence	$\frac{\text{Total assets}}{\text{Own funds}} \leq 2$	2,00	2,38	2,50	4,18	+2,19
Coefficient of concentration of borrowed capital	$\frac{\text{Borrowed funds}}{\text{Total assets}} \leq 0,5$	0,50	0,58	0,60	0,76	+0,26

From the table 1.12 it is clear that, despite the fact that the industry is underfunded in line with budget allocations, the share of agricultural expenditures is decreasing in dynamics. Structurally, domestic state support to agriculture was characterized by small volumes of direct state support (which is currently only provided for livestock sector, but its volume is rather insignificant: 30 million UAH in 2016) (Table 1.13) and significant volumes of VAT preferences. Direct state financial support of agribusiness entities and agricultural enterprises is carried out through the mechanism of cheapening of loans and compensation of lease payments. A reduction in loans is made in the credit subsidy regime and consists in subsidizing part of the fee (interest) for the use of

Table 1.12

**Expenditures from the State Budget of Ukraine for financing of
agroindustrial complex in 2013-2016**

Expenditures by functional classification of expenditures	Years				Deviation 2016 - 2013 (+;-)
	2013	2014	2015	2016	
0421 Agriculture					
plan, million UAH	8679,36	6322,98	4702,22	4327,06	-4 352,30
fact, million UAH	6776,10	5135,64	4143,79	4075,40	-2 700,70
% effectuation	78,1	81,2	88,1	94,2	+16,1
Total expenditures from the State Budget					
plan, million UAH	432930,87	461161,18	599472,40	708578,66	+275 647,79
fact, million UAH	403456,07	430217,78	576911,41	684883,73	+281427,66
% effectuation	93,2	93,3	96,2	96,7	+3,5
Share of expenditures for agriculture					
plan, %	2,0	1,37	0,78	0,61	-1,39
fact, %	1,7	1,19	0,72	0,60	-1,1

loans provided by banks in national and foreign currencies.

According to Table 1.13 we see that the budget under the program “Financial support of measures in the agro industrial complex by reducing the cost of loans” (from *The Resolution of the Cabinet of Ministers of Ukraine*) is practically not increased (the law on the budget for 2017 provided for this measure 300 million UAH, in 2016, the actual budget funding for this area was 279,81 million UAH).

Starting from 2017, the new budget program 2801580 «Financial support of agricultural commodity producers» starts to operate, which allocates 4774,3 million UAH (from *The Law of Ukraine “On the State Budget of Ukraine for 2017”*). At the same time, in 2016 took place revision of the simplified tax system and the rate of the single tax for agricultural producers has increased which additionally increases the tax burden on agricultural enterprises and worsens the conditions for its functioning (from *The Tax Code of Ukraine*). In the near future access to credit resources for domestic agricultural producers will also be limited, especially given the unstable financial situation of the banking system in Ukraine in the last three years. Therefore, in the context of the decentralization reform, it is better to formulate budget support programs for sectors of the economy in the context of regions, since at the oblast level it is easier to take into account the specifics and priority directions of the development of the economic complex.

Table 1.13

Expenditures from the State Budget of Ukraine for the financing of the agroindustrial complex for individual budget programs in 2013-2017

Expenditures for the program classification of expenditures	Years					Dev. 2016 - 2013 (+;-)
	2013	2014	2015	2016	2017	
2801540 State support to the livestock sector						
plan, million UAH	1 239,80	888,01	250,00	30,00	170,00	-1209,80
fact, million UAH	721,01	371,20	40,58	29,99	-	-691,11
% effectuation	58,16	41,80	16,23	99,9	-	-
2801030 Financial support of measures in the agroindustrial complex by reducing the cost of loans						
plan, million UAH	0	0	300,00	285,00	300,00	+285,00
fact, million UAH	0	0	290,65	279,81	-	-
% effectuation	-	-	96,88	98,17	-	-
2801180 Financial support of measures in the agroindustrial complex						
plan, million UAH	76,78	50,00	5,00	5,00	-	-71,78
fact, million UAH	0,96	0	0	0	-	-0,96
% effectuation	1,25	0	0	0	-	-1,25
2801580 Financial support of agricultural commodity producers						
plan, million UAH	0	0	0	0	4 774,3	-
fact, million UAH	0	0	0	0	-	-
% effectuation	-	-	-	-	-	-

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**THEORETICAL
BASES OF
MANAGEMENT
DEVELOPMENT AND
USE OF ENTERPRISE
PERSONNEL**

In modern conditions, providing a high-quality company with a workforce is a decisive factor in the competitiveness of any enterprise in the market, that’s why managers of all levels of management, using personnel technologies, must be able to provide enterprises with highly skilled personnel with high motivation to work, create conditions for its comprehensive development and implementation of abilities for the benefit of the company and each employee. Knowledge of the basics of theory and the practical skills of personnel management at all levels and fields of activity of enterprises operating in the field of economics is especially important. That is why the need for effective management of people employed in the economy is more than ever relevant. Personnel management activity is a targeted influence on the human component of the organization, which focuses on bringing staffing capabilities into line with the goals, strategies, and conditions of the organization’s

development. In modern research on the problems of the development and use of personnel in the conditions of the enterprise, where people act as a management object, depending on the purpose of the research, the personnel is determined by different socio-economic categories (concepts), which are accepted as the basic object of management, namely: “population”, “human capital”, “personnel”, “work force”, “personnel”, “labor resources”, “labor potential”. “Personnel” is a specific and most important of all types of economic resources. As a factor in economic development, staff is employees who have certain professional skills and knowledge and can use them in the labor process [114]. In recent years, in the international management, the views of the staff have changed radically. In our opinion, the human resource is, by its very nature, exhaustive and capable of self-updating. Therefore, in modern management, the newest scientific school is called “School of Human Resources Management”. The investigated category is considered as the main factor, the strategic resource of the enterprise. The essence of the new approach to the management of this resource outstanding classic of modern management P. Drucker expressed as follows: “People do not have to be managed. The task is to direct people”. Modern scientific schools “For humanization of management”, in relation to the category of “personnel” distinguish two types of strategies: organizational and functional. To organizational relations: the strategy of managerial culture, strategy of organizational development, strategy of knowledge management. To functional strategies should include: strategies for providing resources, managing efficiency, development of staff, rewards, labor relations. All these strategies have their niche in relation to the organization of the enterprise, but at the same time, each of them is interrelated and plays a significant role in the management of the enterprise as a whole. Organizational strategies are fundamental for building an organizational structure of an enterprise and determine its structure. Functional strategies are aimed at determining the essence of the enterprise, the formation of its functional systems. It is the provision of appropriate resources, and the efficiency of management, and personnel development, and the formation of a system of incentives, and the determination of the specifics of labor relations, and the effective use of personnel, etc. Speaking about organizational strategies, one should stay on the processes of intellectualization of labor. The processes of intellectualization of work involve the formation and use in the process of the intellectual capabilities and abilities of the employee, involving the application of non-standard innovative

approaches and solutions in various aspects of professional activity, continuous updating of knowledge, flexibility of thinking, ensuring the effective interaction of intellectual capabilities of man with new methods and means of work, from new information in new organizational conditions[27]. The key concept in the study of intellectual activity is “intellectual activity”, defined as the change in the efficiency of creative work aimed at solving specific tasks within established goals and time limits [132]. Mental labor becomes intellectual, when it acquires a creative innovative character that is, getting rid of routine repetitive elements and is aimed at improving the production activities of the enterprise, a qualitative update of the range of products and services with a view to their effective implementation in the market. It should be emphasized that, along with the development of the intellectual component of the staff, attention should be paid to the organization of the conditions for its practical implementation, since a person can study throughout his life and remain an average specialist, since there is no opportunity to realize the labor potential while occupying a certain position, working under conditions of authoritarian management style, unfavorable motivational climate, difficult financial condition of the enterprise or limited resources for its realization. To ensure the knowledge acquired during the learning process leads to the expected economic outcomes, at least it is necessary to formulate key hypotheses for the development of business processes and, in accordance with them, determine the direction of professional development of personnel. Most modern scholars [21, 87, 120, 210, 211] classify the personnel of economic entities on the basis of such qualifications as: qualifications, education, gender, age, work experience. In addition to the commonly accepted classification features, the author proposes to structure the personnel of the enterprise by functional group, which involves their division into: “personnel of the management group”, “engineering staff”, “personnel of the trade group”, “staff of the main production group”, “staff ancillary group (non-core personnel)”. Under the personnel of the management group, the author proposes to understand the persons who carry out management functions; under the personnel of the engineering and technical group – persons who carry out economic, engineering, technical and other functions; under the personnel of a group of production workers – persons who directly create a material product or provide services of a productive nature; under the personnel of the ancillary group – those who ensure the functioning of the main

production; under the guidance of the sales team staff – persons involved in the marketing and sale of finished products. The proposed classification of personnel of enterprises contains such criteria as: state of psychophysiological potential; intellectual potential; income level; sex; age; the pace of development of intellectual potential; level of personnel usage that's used by functional groups; level of qualification; educational level. Such classification of personnel by position groups will allow the qualitative assessment of the state of development and effective use of the personnel of the enterprise in the context of individual functional groups of employees, which will enable to identify problems and ways to increase effective development and its use at the enterprise. Solving the issue of the effectiveness of the development and use of personnel of enterprises in any sphere of activity will improve the economic indicators such as labor productivity, profitability, cost of production, profit, reduction of production risks, etc. The state of the intellectual potential of an enterprise can be characterized as one of such signs as development or aging, because in the conditions of formation of knowledge economy and innovative development of the economy, the lack of updating of knowledge leads to their moral impairment. Under the development of intellectual potential, it is proposed to understand the process of continuous updating of workers' knowledge through professional training, enrichment of the content of their work, mastering of new specialties, increase of interest and level of activity of employees for innovative activity. On this basis, the development of intellectual potential should be recognized when at the enterprise for four years training of personnel, conducting training, attending trainings, which led to the activation of innovation activities, development and implementation of innovative projects that ensured the increase of the efficiency of the enterprise. Highly developed intellectual potential causes less training and more for advanced training, promotes the generation and effective implementation of innovative projects, which is the key to the competitiveness of the enterprise. The expediency of classification of personnel at the pace of development of their intellectual component is confirmed by global trends in accelerating the pace of knowledge renewal. Scientists note that at the beginning of the twenty-first century human knowledge doubles every four years, and according to projected estimates after 2019, they will double even faster – every month, which will require timely appropriate training of workers. It is proposed to structure personnel on the pace of development of intellectual potential by distinguishing workers who

improve their qualifications, move on career stages, propose innovative proposals or become owners of rights to industrial property objects, attend various trainings: once every six months or a year (rapid development of knowledge); every two years (accelerated development of knowledge), once every four years (stable development of knowledge); less than once every four years (slow development). The influence of the structure of the company's personnel on the activity of the enterprise itself in the context of the development of the knowledge economy lies in the fact that not only the motivation climate and staff turnover, but also the level of expenses of the enterprise on health care, training, qualification improvement depends on the structure of the psycho-physiological, intellectual and personal components, labor remuneration, incentive methods, level of quality of products or services rendered, staff competitiveness, timeliness of planned tasks, readiness, favorability and efficiency of innovation activity of the enterprise etc. In today's economic development, there are fundamental differences in the essence of the two main approaches to the management of development and the use of human resources – management of personnel and human resources management. Therefore, regardless of which approach is taken as the basis for formulating tasks at the theoretical level (“management of personnel”, “human resources management” or “human capital management”) at the application level, the approach should be completely different. It is human resources management that is an important factor in improving competitiveness, long-term development of the enterprise, ensuring the efficiency of production, and, consequently, profitability. From the above mentioned, it follows that the staff is a socio-economic category. It directly affects the latter and is an integral part of it. The development and use of personnel are components of the management process. According to the classical approach to this issue and in accordance with the cybernetic principles under management, they understand the process of maintaining the system in the specified parameters, that is, ensuring that it is stable in a state in which it is able to perform in the optimal way the functions which are characteristic of the particular subject field within which it exist. The management process is carried out by continuous analysis of information on the actual values of the parameters characterizing the current state of the system, and the adoption of decisions on the impact on the system on this basis. Thus, management is a derivative or consequence, a reaction to a particular situation, the information about which we received. Since the use and development of the personnel of

the enterprise precede the processes of its formation, distribution, adaptation to implementation in certain organizational and economic conditions, the organization of which provides for a certain order and consistency, we can assert that the achievement of high efficiency of the use and development of personnel of the company is the result of the effectiveness of its management system, which involves managing the processes of formation, organization, motivation for a certain implementation and development. Taking into account that in the economic literature under the mechanism understand the set of processes, methods, approaches, certain actions to achieve the goal; internal system of anything [96], we conclude that the efficiency of using the personnel of the enterprise and its development depends on the managing mechanism. Consequently, under the mechanism of management of development and use of personnel of the enterprise should be understood as a set of processes, methods, approaches aimed at achieving the effectiveness of its use and development. Based on the fact that the mechanism for managing the development and use of personnel is simultaneously influenced by factors of the macro and micro environment, it can be argued that the study of the functions of the subjects of human resources management will allow to recreate the mechanism for managing it. The analysis of the Ukrainian legislation testifies [110, 214, 263] that the macro-level management of the development and use of personnel is carried out by the executive bodies of state power, which consists of: planning and formation of quantitative and qualitative characteristics of personnel; stimulating the effective division of personnel between enterprises through the development of cooperation between educational institutions and enterprises, enterprises and the State Employment Service for more efficient development and use of personnel between territorial units and enterprises of different industries; control over the reproduction of personnel by audit of enterprises in respect of remuneration in the amount not less, than the minimum level approved by the Law of Ukraine on the state budget, regarding compliance with compulsory state insurance against temporary disability, accidents at work, taking into account the size and structure of the population by degree of disability; financing the development of education, science, culture, art in order to ensure the comprehensive development of both labor and personality characteristics of workers. Today, the functions of management of development and use of personnel of the enterprise at the micro level are carried out by the staff of the personnel department, heads of structural

units, headed by the head of the enterprise. For the successful formation of the personnel of the enterprise and its maintenance, not only specialists of the personnel management service should be involved, but also linear managers of each unit of the enterprise. During the period of the existence of the personnel departments there is a reorientation of their functions: from the search and recruitment of personnel to planning needs in it, the formation, development and the use of economically justified its size and quality, planning its development directions, developing measures for the maintenance of key employees, evaluating and monitoring the effectiveness of use, development, implementation and monitoring of the effectiveness of the system of motivation observing the Rules of the internal labor regulations, observance of the corporate culture of the enterprise, labor discipline, observance of the norms of the collective agreement; branch agreements and agreements of the Confederation of Employers of Ukraine; organization of development of human resources by raising the level of education, science, culture, art; support of human resources reproduction processes; stimulating the efficient allocation of human resources between regions and enterprises. In a market economy, the management of the development and use of personnel, in our opinion, should acquire systematic and completeness based on an integrated solution of personnel problems, introduction of new and improved existing forms and methods of personnel work. An integrated approach to the management of the development and use of personnel involves taking into account organizational, economic, socio-psychological, legal, technical, pedagogical and other aspects in their totality and interrelationship with the determining role of socio-economic factors. The system approach to the development and use of personnel involves taking into account the interrelationships between individual aspects of HR management and is to develop the ultimate goals, determine the ways to achieve them, create an appropriate management mechanism that provides integrated planning, organization and stimulation system of personnel work. In view of the above mentioned, it is advisable to consider the personnel management system of the enterprise, which is a subsystem of a comprehensive enterprise management system. Consequently, the personnel management system of the enterprise is a set of goals, tasks and main areas of activity, personnel policies of the enterprise, as well as different types, methods and appropriate management mechanism, aimed at increasing the productivity and quality of personnel. In this context, the managerial goal that the

subsystem must achieve is of great importance. Such goals for functioning of management subsystem of development and use of personnel of the enterprise, within the system of personnel management of the enterprise, in our opinion, should be: 1. Increase of competitiveness of the enterprise; 2. Increase of efficiency of the enterprise activity, in particular achieve maximum profit; 3. Ensuring high social efficiency of the functioning of the labor collective; 4. Formation of a positive image of the company in the labor market, goods, works and services; 5. Formation of a qualitatively new system of personnel motivation; 6. Increasing the interest of the staff in the final result of their work. Compliance with the above objectives of the functioning of personnel, their implementation will enable the development of not only personnel, but the entire enterprise as a whole. At the same time, when forming the system of personnel management of the company should take into account both external and internal factors. The effectiveness of management of the development and use of personnel, the most complete realization of the goals set largely depends on the choice of building the company's personnel management system, knowledge of the mechanism of its functioning, the choice of the most optimal technologies and methods of working with people. The development of personnel is a process of continuous professional training of employees to prepare them for new production tasks in the conditions of globalization of the economy, creation of a reserve of managers and improvement of the social structure of the personnel. The training and development of staff has become an indispensable condition for the success of a modern enterprise. In fact, the training and development of the personnel ensure the effectiveness of its activities and management. They are a task, and at the same time – the most important method of effective management. The staff must not only acquire new knowledge, but also create this new knowledge in their field, hence – and new technologies, products or services on the market. The new role of personnel development has created a new essence and a new organization of this work, which should be based on a certain organizational and economic mechanism. Thus, the organizational and economic mechanism should be regarded as a set of elements that are in relationships and relationships with each other, and also form a certain integrity and unity. The main task of the organizational and economic mechanism for the formation and effective use of personnel should contribute to the rational use of all components through the division of responsibilities among all the subjects of human resources management.

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THE TRADE ENTERPRISES' BUSINESS PROCESS MANAGEMENT EFFECTIVENESS ASSESSMENTS ALGORITHM

The article focuses on the pressing issues of assessing the efficiency trading companies' business process management. Our analysis has produced the algorithm for assessing the effectiveness of business process management at trade enterprises which includes six successive stages. The proposed algorithm has allowed developing an effective model for analyzing trade enterprises' business processes management effectiveness. Compared to analogues, the offered performance assessment algorithm allows to carry out the assessment of trading companies' business processes against the planned level attained.

Currently, trade enterprises' competitiveness in the market depends on whether the key processes of the enterprise can be turned into strategic initiatives aimed at the best possible satisfaction of customers' requirements and, moreover, on flexible monitoring and forecasting

changes in the market conditions. The latest examples of such initiatives are companies' business process reengineering and process innovation.

Thus, one of the most burning issues is the task of reorienting trade enterprises to a high-tech model of improving and developing business processes. The development of the algorithm for the trading companies' business processes management effectiveness assessment lets find ways to optimize their activities (economic efficiency) taking into account the specifics of management for the future.

As to the theoretical and methodological basis of the research, it is drawn from the scientific works and practical developments of international and Ukrainian scientists devoted to the problems of companies' business process management. The issues of improving the management of enterprises' business processes are considered by Y. Borgianni, J. Vom Broke, M. Weske, R. Gardner, R. Kemp, M. Hammer, N. Harington, J. Champy.

Nevertheless, some issues of business process management, in particular those concerning the algorithm for assessing the effectiveness of business process management, remain unexplored, since the economic transformation requires the development of new approaches and solutions. Despite the large number of publications and various approaches to the development of the criteria and methods for assessing the effectiveness of business process management at enterprises, there is no integrated approach to these issues in the scientific literature. In view of this, the problems of integrated assessment of trade enterprises' business processes management efficiency in the competitive and globalized economy need further study, research and development.

The transformational processes taking place in the Ukrainian economy, high competition, the pressure of crisis factors, high unpredictability of changes in the external environment require the Ukrainian enterprises to constantly seek new, more effective management methods. New management methods should be aimed at strengthening the competitive advantages of the enterprise in the market and its stable operation in the strategic perspective.

The purpose of the work is to develop practical recommendations to work out the assessment algorithm for evaluating the effectiveness of business processes management at trade enterprises.

The analysis of scientific works in the field of business process management methodology allowed formulating a number of conclusions regarding the effectiveness of enterprises' business process management as follows [1, 2]:

– under market conditions where the main characteristics of external factors are mobility and uncertainty, the efficiency of management is an important indicator of such a dynamic system as an enterprise and manifests itself as a result of the interaction of business processes, as well as the interaction of the enterprise with the external environment;

– management efficiency characterizes the business process from the point of view of achievement of the set goals and planned results of production, marketing, financial, social, innovative and other kinds of activities of the enterprise;

– management efficiency characterizes the ability of the business process to fulfill the obligations to internal and external customers through the fulfillment of their requirements.

Thus, in line with the above-mentioned we will consider the effectiveness of business process management as a degree of achievement of the objectives of the business process and satisfaction of the requirements of both internal and external customers.

Our previous research solved the problem of determining the criteria for evaluating the effectiveness of business processes of an enterprise. We proposed an algorithm to determine the criteria for assessing the effectiveness of business processes which consisted of five stages (Figure 1.2) [3]:

1. Defining strategic goals of the enterprise and consumers' requirements.

2. Defining the composition of business processes, their classification and interaction.

3. Identifying business processes.

4. Defining the goals of business processes.

5. Determining the criteria for evaluating the effectiveness of the enterprise's business processes.

The study of existing approaches to assessing the effectiveness of business processes has shown that they are largely confined to defining a performance indicator without any further improvement steps, so the use of these approaches does not yield any significant results in achieving the objectives of the enterprise. Based on the study of works on the evaluation and improvement of business process management effectiveness, it has been determined that there is no scientifically sound evaluation methodology that covers all business processes of an enterprise.

There are methods for evaluating the effectiveness of management system processes, most of which are developed with respect to the

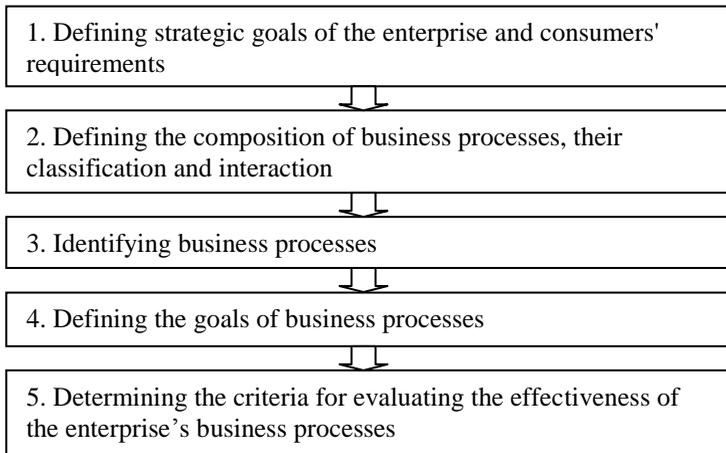


Figure 1.2 The algorithm to determine the criteria for assessing the effectiveness of business processes

management of quality system and tools to improve the effectiveness of processes that are not interconnected.

We believe that the procedures for evaluating and enhancing the effectiveness of business process management should be, firstly, coordinated and conducted consistently, since in the case of obtaining the value of the indicator of the effectiveness of the business process, which is below the permissible norm, it is necessary to develop measures to increase the effectiveness of the business processes. Secondly, the assessment should cover different activity areas of the enterprise. In view of this, a methodology for evaluating and enhancing the effectiveness of business processes of the enterprise was proposed.

In our opinion, it was important to determine the criteria based on the goals of business processes, which had been developed taking into account the strategic goals of the enterprise and consumers' requirements. The classification helps dividing business processes into groups: core business processes, support business processes and management business processes. Determining the relationship between business processes was essential for building a business model. When identifying business processes we made a description of their characteristics: functions, the performance order, input and output flows and requirements to them, suppliers and consumers of processes, resources. On the basis of the above-mentioned actions, the goals of business processes were defined, which act as a declaration that has a

temporary, quantitative and qualitative characteristics and provides the basis for choosing the criteria for evaluating the effectiveness. The proposed algorithm defines criteria for assessing core business processes, auxiliary business processes and management business processes [4].

In the works related to the management of business processes various criteria for evaluating their effectiveness are offered: the level of product compliance with the requirements, the degree of execution of plans in a specified period, the level of labor productivity [5]. At the same time, the problem of determining the assessment criteria has not yet been resolved. Taking into account the above-mentioned the paper proposes an algorithm for assessing the effectiveness of improving the business processes management of trade enterprises which includes the following stages (Figure 1.3):

1. Analyzing the effectiveness of the trading company's business processes.

2. Identifying the trading company's problem and core business processes.

3. Determining the resources for the business process management improvements.

4. Choosing the forms and methods for improving business processes; economic modeling of business processes.

5. Calculating the effectiveness of the proposed steps to improve the management of the company's business processes.

6. Controlling and implementing the measures to improve business process management at the enterprise.

The first stage involves conducting system diagnostics of the business processes of the enterprise, which allows determining qualitative and quantitative characteristics that define the degree of effectiveness of management of functions and processes at the enterprise. The proposed system of key performance indicators identifies business processes that are subject to improvement and development in order to enhance competitive advantages.

At the second stage, using methods of qualitative analysis, one should highlight the business processes with most problems and identify their "bottlenecks". The result of the diagnostics should be the formalization of the problem and the identification of the causes of ineffective management of the functions and processes of the enterprise, as well as the factors due to which they appeared.

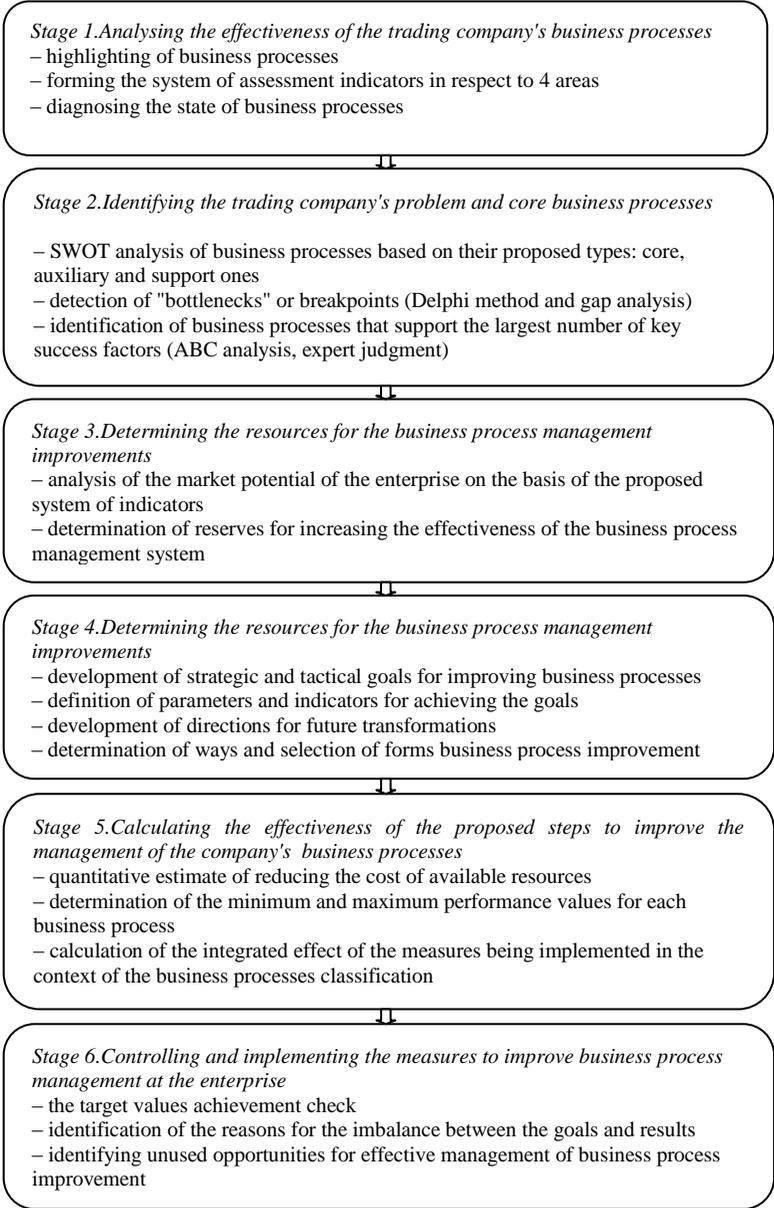


Figure 1.3 Trade enterprises' business process management effectiveness assessment algorithm

The third stage involves carrying out a qualitative and quantitative assessment of the resource capabilities of the enterprise to implement measures for improvements in four areas. The assessment of production potential is aimed at finding options for upgrading production and trading capacities, or for a partial renewal of the resource base. The analysis of labor potential allows us to determine the infrastructure that will ensure growth and development of personnel in the long run.

The results of the integrated assessment of business processes and the identification of resource capabilities of the enterprise will be the basis for the fourth stage – modeling business processes and identifying measures to improve them.

The main purpose of the fifth stage is to determine the economic effect of implementing the proposed measures for each business process and calculating the integral effect. We believe that in calculating the effectiveness of changes in business processes of trading enterprises, it is necessary to take into account the influence of various external and internal factors that determine the forecasts of business process development in the future. The internal factors include: the qualifications of management personnel, the location and trade specialization of the enterprise, innovative activity, mobility and efficiency of decision-making, accounting and control of expenses. The external factors influencing the effectiveness of trading enterprises' business process management include: the areas and volumes of state regulation of the industry, the technical and technological support, the development of scientific and technological progress, the taxation and credit system, the access to resource markets; the development of cooperation and integration processes. In the course of the research it was determined that the substantiation of the economic expediency of improving business processes must be based on the system of integral indicators used to diagnose the state of business processes of enterprises (formula 1-3).

The integral indicators for improving the effectiveness of business processes of enterprises:

$$E_{IPB} = \sum_{i=1}^n \sum_{t=1}^T [-\Delta S_p + S_{im} + P_p + \Delta P_f] \quad (1)$$

where: E_{IPB} – is the expected integrated effect of introducing the measures to improve the business processes;

T – is the term of implementing the measures;

S_p – is the planned cost reduction due to the improvement of the business process;

S_{im} – is one-time expenditure on improving the business process;

P_p – is the planned profit before the start of the improvement process;

P_f – is the profit after implementing improvement measures.

$$E_{IBP} = \sum_{i=1}^n \sum_{t=1}^T \Delta P_{it} Q_{it} - \sum_{t=1}^T \Delta S_{im}^t \quad (2)$$

where: E_{IBP} – is the expected integrated effect of introducing the measures to improve the business processes;

P_{it} – is profit forecast from the sale of i - type of products in the year t ;

Q_{it} – is forecast of the volume of sales of the i - type of products in the year t ;

S_{im} – is one-time expenditure on improving the business process;

$$E_{IBP} = \sum_{i=1}^n \sum_{t=1}^T \Delta P_n G_{it} - \sum_{t=1}^T \Delta S_{it}^t \quad (3)$$

where: E_{IBP} – is the expected integrated effect of introducing the measures to improve the business processes;

P_n – is forecast of profit from sales of i -type of products in year t produced due to the introduction of new technology;

G_{it} – is the increase in production and sales of the i -type of products in the year t ;

S_{it} – is production and sales unit costs after implementing innovative technologies.

In case the future transformations of business processes are ineffective it is necessary as early as at the design studies stage to abandon the expensive measures envisaged within the framework of the changes.

The final stage includes the implementing and monitoring the steps to improve business processes to detect deviations and timely adjustments of the transformations already completed. The information obtained during the control (evaluation of management performance) should be the basis for the analysis by the management staff. It should be used for operational control of business processes, review of objectives, analysis and improvement of the company's activities.

Thus, increasing the effectiveness of trade enterprises' business process management will promote the rational use of production

potential, the increase in competitiveness, production and sales performance, as well as the increase of quality of management systems.

Consequently, the proposed algorithm has allowed developing an effective model for analyzing the effectiveness of business process management in trade enterprises. Compared to analogues, the offered algorithm allows to assess the business processes of the trading company in respect to the attained planned level.

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DEVELOPING COMMERCIAL AWARENESS: STRATEGIES FOR ENTERPRISES

The world is constantly changing and enterprises have to change and adapt or else go out of business. The problem is that by the time many of them realise their world has changed, it's too late. That the risk that businesses run if they do not have a strategic sense of their environment and how it is changing around them.

This is why every CEO worries constantly about who is about to eat his or her lunch – in short, which competitor is about to take his or her customer base away. Business is about competition – being the biggest, best, cheapest, quickest (a bit like sport, which is why business people often like sport). Businesses cannot afford to stand still. If they do, they will die – they will be overtaken by competitors who will copy their goods or services, produce those goods or services more cheaply and steal their customers away.

The best businesses – the market leaders – are aware of what makes them stand out in the market (what differentiates them from their competitors). They call this their Unique Selling Proposition (USP). How you achieve your USP is your strategy and developing of your commercial awareness. If you want to understand your client, make sure you grasp its strategy.

Whole libraries have been written about strategy – what it is and how to do it. Management consultants (you may be en route to becoming one) earn fortunes telling businesses what their strategy really quite simple. It is knowing where you want to go and how you are going to get there. It's about having a destination and a map. (Here's a tip: if you are a job-seeker, be sure to ask prospective employers about their strategy.)

Knowing where you want to get to is sometimes called the strategic goal or 'vision' – the best business leaders can paint a picture of what their enterprise, markets and clients will look like in, say, five years' time. How you get there – the route map – is sometimes called the 'mission'. The reason why it's the enterprise's mission is because there must be something unique about the enterprise which gives it the ability to achieve its mission: its differentiating factor; its USP. Sometimes the mission is described in terms of an enterprise's values or culture. As a partner from McKinsey, the famous management consulting group, once said: 'Culture is the way we do things round here' and strategy is sometimes described in value terms, in which case it is called normative strategy ('norms' being the principles that regulate behaviour within the organisation) [1].

For example, take the Body Shop: its strategy was to create a brand built on environmental values – that's what made it different. Likewise, the Cooperative Bank's strategy is based on being ethically-led. A more straightforward strategy was adopted by General Electric, the US company, immediately after the 1939-45 war which was 'to put a refrigerator in every home'. Similarly, Microsoft's was to put a PC on every desk. The American space programme's vision was – and is – to put man into space, to conquer this final unknown frontier. Its mission

in the 1960s was ‘to put a man on the moon’ [2].

A good way of engaging with a client is to ask them what their enterprise’s strategy is. Business people who are any good at what they do love talking about their business and its strategy. This chapter gives you some of the language and models you need to initiate and sustain that discussion, so that you can see how the It also helps if you are aware of your own enterprise’s strategy: usually, if you ask, you will be told or be able to find out – enterprises used to be secretive about their strategy but are now more open, at least with their own people. You can then see how working for a particular client fits your own enterprise’s strategy.

Do all organisations and enterprises have a strategy? Yes. Not having a strategy is itself a strategy. It’s a bit like steering a supertanker: even if you’re not steering it’s still being blown in some direction – probably sideways on. This means that you can cast off and set sail without any idea of where you want to go. But you’d be better off knowing where you are going (vision), how to get there and the obstacles and pitfalls en route that you will need to navigate round. In which case you will probably realise that it would help to have a map or chart (mission).

Now, if you do know where you are going, it is easier to decide which actions are useful (because they help you get there) and which you can ignore (because they won’t). In other words you can establish a set of priorities – things you need to do and in which order. And this applies in business: you can decide where to channel your resources – what to invest in and what not to.

Now, if by contrast you do not have a strategy you have no idea where to focus your efforts so you will waste a lot more time, energy and money doing things that may or may not be beneficial. One advantage of having an explicit strategy is that, in developing it, you will almost certainly have thought about the risks and pitfalls you may encounter and – crucially – how to overcome them. These contingency plans mean that you will be prepared. And this is what makes the difference: strategising isn’t about predicting the future; it’s about being prepared for whatever the future holds.

What follows is a brief discussion of a small number of models (a ‘model’ is management-speak for a way of thinking, a template, which is usually expressed visually) that business people are familiar with. If you want a more detailed discussion, look in any good management or strategy book.

Porter’s five forces. There is a risk that organisations become

inward-looking as they try to examine what their USP is. It is just as important to look outwards, at the external environment, and to define your USP in relation to competitors.

So the most important thing about strategy is to look outwards, beyond the enterprise's boundaries, to see how the world out there is changing – something the frog failed to do. One of the most famous management models to encourage business people to do this was formulated by Michael Porter in the 1970s [3].

Porter said that any business was subject to five competitive pressures from:

- Industry competitors (other organisations in the same sector competing for the same customers)
- Potential entrants – organizations in other sectors that might enter this sector
- Buyers (customers) – because they are constantly shopping around, seeking increased quality at lower cost
- Suppliers – because the business has to buy in goods and services and the price it pays will affect its own profitability
- Substitutes – where customers decide to do it themselves or find an alternative which means they don't buy the business's goods or services at all.

This model was – and remains – so influential that it is sometimes dismissed as old hat. But it's still good. For a start, it prompts business leaders to focus on barriers to entry – how easy or difficult it is for a new entrant to the market to gatecrash and move into your business. It also means that when focusing on customers you start to segment them, sorting them into different categories. In order to adapt it to professional service firms (PSFs) – the sort of organisation you are or will be working for – you need to read 'suppliers' as meaning 'recruits'. All PSFs compete for talent – people like you.

Even more hackneyed – but still useful, I would argue – is the SWOT analysis. Here, a business looks internally at its own strengths and weaknesses and then looks externally at the opportunities (such as new markets or types of customer) and the threats (for instance from competitors).

Critics say this can be too subjective an assessment. But it is quick to do and repeat on a regular basis and can be applied at any level in a business. It can be applied to an entire PSF or the different departments, practices and service lines within it.

Strategy as a matching operation. You are probably beginning to see how important an analysis of the external environment is. In an ideal world, you would scan the horizon, identify a commercial opportunity and then set up a business to exploit it. But most businesses have to start with what they are and what they've got by way of people, assets and expertise. Grant is one of many strategy writers who acknowledge that, in practice, strategy is a matching operation, as this diagram shows.

You can see on the right-hand side the reference to the industry environment – which is what Porter's Five Forces is about. The macro-environment is about the Big Things (what economists call the 'secular trends') that affect all our lives.

PEST is the acronym that covers these Big Things or secular trends. It stands for the Political, Economic, Social and Technological forces that shape our world and necessarily affect commercial activity within it.

The most common distinction in business is between 'process' and 'content'. Process is the way in which something is done or discussed. Content is the actual subject-matter. So, strategy consists of the actual plans themselves (content) and the way in which they are developed and implemented (process). This is a useful dichotomy [4].

Take a meeting. You get together a room full of people who all have great ideas. But before you know it they are all talking over each other, trying to express their views, making their own notes, and after a while the meeting breaks up without any apparent progress. There's been plenty of content but no process – and so, therefore, no progress.

So, instead, you kick off the meeting by getting everyone to agree how long they want the meeting to last and what the outputs should be: in terms of outputs they may agree that it's too early to do anything concrete except have an exchange of views; you may then need a further meeting to take the ideas expressed forward. Eventually you will need some outputs – who will do what and by when. When everyone has agreed, you now have a process. Now you can start discussing people's ideas – the content.

It's always good to use a flipchart so everyone can look up at a single focal point and concentrate on listening and speaking rather than looking down as they make their own notes. The flipchart sheets can be typed up afterwards and the notes circulated. It sometimes helps to have a facilitator, a third party who keeps the discussions on track and on point, who ensures the meeting keeps to time and achieves its desired outputs, and who enables everyone to speak and records what is agreed

on the flipchart.

So learn how to write in straight lines and clearly on a flipchart (or smartboard) without feeling self-conscious: it will always come in handy. The CEO's role: being strategic. If you see any bigwig from a company being interviewed, they will rapidly start talking about the market for their goods or services and the competition (other companies providing the same or similar goods or services at an equivalent price). Companies are acutely aware of who their competitors are, what goods or services they provide and at what price.

A company and enterprise only makes money and stays in business – in other words, survives – if it provides goods or services that people want to buy at a price they are prepared to pay. It offers its goods/services to the market and those people in the market who buy its goods/services become customers. But those customers will only stay loyal if its goods/services remain attractive – i.e. represent value for money (quality commensurate with the price).

I've worked for a number of CEOs and the best have one particular attribute in common: they are always thinking about the business and where it is going.

For example, I once worked for a financial publisher. My CEO would take me to meetings with advertisers (customers). The taxi would stop at a traffic light and a cyclist would go past 'Are more people cycling to work?' my boss – who had no small talk at all (true of many CEOs) – would ask. I had no idea, so I said nothing. At the next red lights we'd stop outside a builder's merchants and my boss, gazing in through the window at the bathrooms on display, would ask: 'Are more people taking showers rather than baths?' No idea Nor did I have any idea why he was asking me these weird questions.

Then, over time, I twigged. My boss was constantly thinking of our products (in those pre-web days, books and magazines). If more people were cycling to work, fewer would be commuting by train or bus so fewer would be reading our products (you can read a book on a bus but not on a bicycle). If people were taking showers rather than baths, they wouldn't be reading our products in the bath (in the shower they'd go soggy). So he was constantly thinking about where the business was going and what was changing in people's behaviours that might affect it [5].

This is the single most compelling reason for being commercially aware: the best business people (the sort of people you want to have as clients) are switched on, interesting, interested people. They are helping

to change the world – before it changes them.

Corporate planning departments. Given all of this, you can possibly begin to see that it might be tempting to try to predict these changes and to try to predict how the external environment (including customers, markets and competitors) will change. For a long time, enterprises tried to do this: they had corporate planning departments that did huge amounts of research and analysis, devised strategies and then handed them down for the company to implement (at one point it was rumoured that Sony had a 500-year plan). These plans had the attraction of looking scientific. The problem was that they were still a guess or a series of guesses; and were just as likely - or even more likely (predicting the future being what it is) – to be wrong rather than right. Which seemed a pretty risky way of doing things. What's more, these strategies didn't prepare companies for unexpected changes – the paradigm shifts mentioned above [2].

Scenario planning. So over the past 30 years companies have ditched this central 'command and control' approach in favour of 'scenario planning' – this is where you don't try to predict the future but you imagine a series of possible scenarios and plan what you would do if faced with any of them. This set of plans then becomes part of your strategy: when one of these eventualities comes to pass, you reach into your desk drawer for the appropriate plan of action.

There is a well-known Gary Larson cartoon in which a dinosaur is standing on a stage, at a podium, delivering a speech to a congress of fellow dinosaurs (by a strange quirk the crest on the podium bears a striking resemblance to that of RICS – the Royal Institute of Chartered Surveyors, but nothing should be read into this coincidence). Mr Dinosaur is saying something like, 'Gentlemen, the future's bleak. The ice age is upon us, we lack warm blood and we have brains the size of peanuts.' I like this cartoon because it demonstrates simultaneously why scenario planning is essential but why, like all planning, it is not fool-proof [4].

Scenario planning is 'what if' or contingency planning. You posit a number of scenarios and work through the consequences for your business. The scenarios can be as absurd or as extreme as you like. A certain amount of lateral thinking and doomsday scenario setting is a good thing. After all, an ice age was a doomsday scenario for the dinosaurs above: if they had addressed the possibility millions of years before, they might have been able to evolve into creatures able to withstand it. 'What ifs' can include everything from 'What if the government is thrown out at

the next election?’ to ‘What if they turn the street in which our office is located into a pedestrian precinct?’ [4].

Whether these scenarios actually happen is almost irrelevant. The point is that they make an enterprise lighter on its feet. It gets into the habit of thinking about where the threats and opportunities lie. This is important because like the water in the pan containing the frog, nothing remains the same, whatever it may appear to be doing. This is not about trying to predict the future (although ‘futuurologists’ who specialise in this kind of thing may claim they can). Businesses that are successful in coping with the future are able to do so not because they can predict it but because they have learnt how to cope with its uncertainties. That is why many large companies have ditched their formal planning departments in favour of something more dynamic, able to deal with previously unforeseen business disruptions such as terrorist bombs in city centres.

Emergent strategy. There was another problem with central corporate planning: getting ‘buy-in’ from the people at the enterprise’s coal-face. If a strategy was handed down loftily from above, there was no guarantee that the people further down the enterprise would do much to implement it and this issue became more pressing as companies dismantled their hierarchies in order to get closer to their markets and customers. The ‘flatter’ enterprises became – often in response to cost-cutting measures which stripped out tiers of middle management – the less bureaucratic they were and the less easy it was to tell people to do things.

It was at this point that a celebrated management writer called Henry Mintzberg came to the rescue. He said that strategy could be ‘bottom-up’ as well as ‘top-down’ (top-down being the old style of command-and-control corporate planning). Strategy is particularly bottom-up in PSFs: here, the fee-earners are at the coal-face dealing daily with clients and getting a sense of what is happening in the market from that constant interaction with clients. The fee-earners can then feed this information up the organisation. Mintzberg also said that strategy can be ‘emergent’ – you can see an organisation’s strategy evolve in the way it responds to these external market stimuli. Provided, of course, that this isn’t used as an excuse for not having a strategy at all [6].

Mintzberg did businesses a big favour in emphasising that what matters is having the mindset to keep constantly attuned to your external environment or as the maxim has it: ‘Planning is everything, plans are nothing’. What matters is the activity rather than the output: in other

words getting into the habit of strategic thinking rather than worrying about the look of any resulting document. If you keep surveying changes in the external environment, responding to those changes and planning how to respond to further changes, it is that strategic activity that matters, not what the individual plans themselves say. [6]

Or, to put it another way, it's no good having a beautifully presented 40-page strategy document that sits on a shelf gathering dust.

No mention of strategy is complete without reference to Peter Drucker, the finest management thinker of the last century. It was Drucker who pointed out that we now live and work in a knowledge economy where what a business knows matters more than what it makes.

He also talked about the 'theory of the business', saying that implicit in any business are assumptions about:

- the environment of the firm, its marketplace, customers, technology and society
- the organisation's specific mission
- the core competencies required to achieve its mission [7].

He said these assumptions must fit reality and not be just some kind of wish-list. He also said that the theory of the business must be known and understood throughout the organisation – easier to do the smaller and younger it is. And he said the theory of the business has to be constantly tested. What is right today may not be right tomorrow.

Drucker said that successful businesses think through what it is they really offer their customers and why it is their customers buy their product or service in preference to anyone else's. This leads us to what businesses actually produce [7].

The balanced scorecard (Kaplan & Norton). Businesses, as we shall see, focus on money. But you need to worry about more than money to create a successful business. The management academics Kaplan & Norton identified three other areas that an organisation needs to focus on to secure its long-term success:

- clients – obvious, really, since without clients there is no business
- processes – this is more subtle and means that an organisation has to look at everything it does in terms of how efficiently it does each of those things, from R&D to management
- learning – this is more subtle still, and means that an organisation has to be developing and learning' all the time rather than standing still; particularly relevant in a knowledge economy where a business's success depends on know-how and keeping that know-how up-to-date

[8].

Talk of commercial awareness brings us to two other aspects of strategy. The first is that the goal of strategy is to create sustainable competitive advantage (SCA). In other words there must be something business offers that make it different and which others cannot easily replicate: otherwise it won't be around for the long term. Which means – and this is the second point – that it must make something that people actually want to buy.

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Chapter 2

MECHANISMS OF USING AND INTRODUCING INNOVATIONS IN ENSURING OF DEVELOPMENT THE ECONOMIC ENTITIES

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**SMARTIZATION AS AN
ALTERNATIVE TO
INNOVATIVE
ACTIVITY**

Innovation has always been driving force of the progress. It is innovation that allows the company to apply the skimming strategy, leaving behind competitors, improving their performance and, sometimes, welfare of countries and the world as a whole.

However, innovation has two drawbacks: they are expensive and very few of them are commercially successful.

If we pay attention to statistics, then very small numbers of industrial enterprises are innovative-active: from 16 to 19% in recent years (Table 2.1).

The enterprise can accelerate and (or) reduce the cost of the innovation process. This can be done at the stage of innovation development at the expense of the fundamental and applied developments of partners – third-party enterprises and institutions. The main partners are:

- business angel – a private investor, that invests in innovative projects (start-ups) at the stage of setting up an enterprise in return for returning investments and equity capital (blocking and, rather than controlling).
- innovation fund – a fund of financial resources, created for the purpose of financing scientific and technical developments and risk projects. The source of financial resources is the sponsorship of firms and banks. The funds of the fund are distributed among the applicants for investment on a competitive basis;

Table 2.1

Total expenditures for innovation activities

Year	The share of enterprises engaged in innovations	Total cost	Including directions					
			research and development	Including		acquisition of others external knowledge	the purchase of machinery equipment and software	Other expenses
				Internal GDR	external GDR			
%	UAH million							
2013	16.8	9562.6	1638.5	1312.1	326.4	87.0	5546.3	2290.9
2014	16.1	7695.9	1754.6	1221.5	533.1	47.2	5,115.3	778.8
2015	17.36	13813.7	2039.5	1834.1	205.4	84.9	11141.3	548.0
2016	18.9	23229.5	2457.8	2063.8	394.0	64.2	19829,0	878.4
2017	16.2	9117.5	2169.8	1941.3	228.5	21.8	5898.8	1027.1

Source: compiled by the author according to the State Statistics Service [2]

- grantees providing grants, that is, money or other means transferred by citizens and legal entities (including foreign ones), international organizations for conducting specific research, drafting bills, training personnel, and other purposes on the terms of the grantor. Grants are provided free of charge and without refund [1].

It should also be noted that Ukrainian enterprises are not yet able to attract foreign investment to finance innovation (Figure 2.1).

From the figure one can see how the financing of innovation activity in industrial enterprises has decreased: almost 3 times in 2017 compared with 2016. So this confirms the assumption of the first disadvantage.

Confirmation of the second disadvantage of introducing innovation activity is evident from Table 2.2, where a small part of the volume of the realized innovation product in the industrial volume is still decreasing with each passing year and in 2017 it is less than 1%.

Thus, we can assume that in modern realities, Ukrainian industrial enterprises need to look for another way to increase their welfare apart from innovation activity. Moreover, the author believe that not always

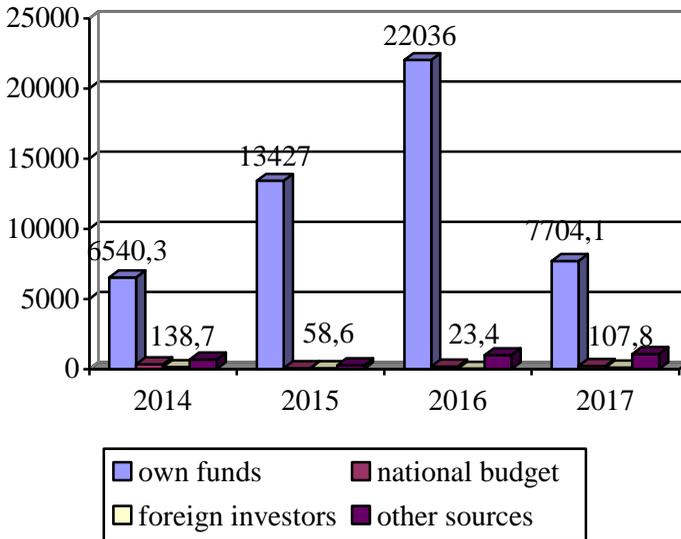


Figure 2.1 Sources of funding for innovative activities of industrial enterprises

Source: compiled by the author according to the State Statistics Service [2]

(not at all stages of the life cycle) innovation is necessary. Innovation is a breakthrough tool; it should be used at certain stages of the enterprise's life cycle (Figure 2.2).

Therefore, innovations should be used at the following stages:

- the birth of the enterprise – the stage preceding the establishment of the enterprise, its occurrence / formation. Probably the best stage for innovation: the enterprise still has no competitors and there is time to increase volumes;
- from incipience to growth and from growth to maturity – the right time for process or managerial innovation: the enterprise has not yet increased the necessary funds for decent competition.
- for the sake of revival – the second (after the birth) on the importance of the stage of innovation: there are already many competitors on the market, sales / production are falling, growth is slowing down. This situation is due to the high level of competition and saturation of the market. At the maturity stage, enterprises can also generate a good level of profit, but the transition to a downturn is inevitable unless implemented.

Table 2.2

Implementation of innovations at industrial enterprises

Year	Share of enterprises that introduced innovations. %	Introduced new technological processes and processes	incl. low-waste, resource-saving	Introduced production of innovative types of products, names	Of these, new types of technology	Share of realized innovative products in volume of industrial, %
2013	13.6	1576	502	3138	809	3.3
2014	12.1	1743	447	3661	1314	2.5
2015	15.2	1217	458	3136	966	1.4
2016	16.6	3489	748	4139	1305	...
2017	14.3	1831	611	2387	751	0.7

Source: compiled by the author according to the State Statistics Service [2]

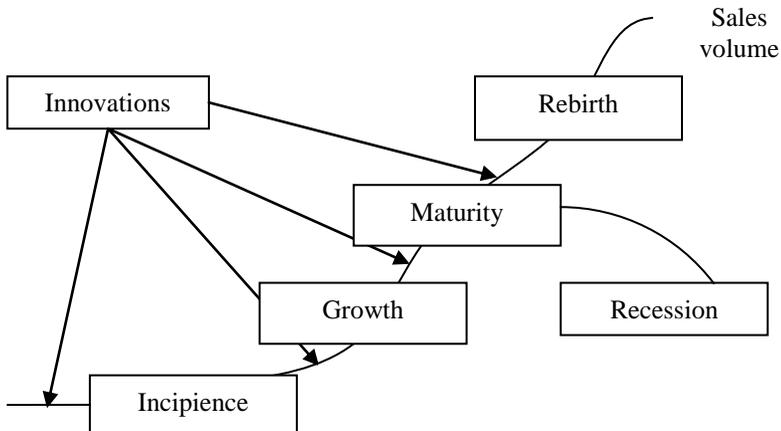


Figure 2.2 Application of innovations at certain stages of the company's life cycle

Source: developed by the author

- at the downside, the company loses its competitiveness, sales and profits are falling. Lack of innovation reduces enterprise profitability. All decisions become very conservative. The enterprise refuses any innovations and even does not go to the

minimum risk, goes into a mode of hard economy and reduction of expenses, can begin to leave the industry or go to the stage of rebirth. But at this stage, introducing innovation is very difficult, because, as a rule, the company has already spent almost all the resources to maintain its life at the stage of recession.

A reality of Ukrainian industrial enterprises is that most of them are in the stage of maturity or decline, that is, at the stages when innovations require significant funds for their introduction.

An alternative to innovation is the enterprise's smartization. First of all, it should be noted that the author adheres to the classical definition of the term innovation, namely the definition I. Schumpeter [3] as a volatile process of introducing new combinations in five cases: the introduction of a new product, the introduction of a new method of production, the opening of a new market, the conquest of a new source of raw materials or semi-finished products, regardless of whether it existed before, in general, the introduction of a new organizational structure.

The term "smartization" recently often used by domestic and foreign scientists [4-7], but this term does not have the definition. Moreover, this term is for the most part considered in the context of smart-city rather than industrial enterprises.

Smartization term corresponds to the approach of P. Drucker [8] to the criteria to be met management targets that have to be written in the context of "reasonable management" with such development:

- 1) specific (what needs to be achieved?);
- 2) measurable (how will the result be measured ?);
- 3) attainable (at the expense of what can achieve the goals);
- 4) relevant (definition truthfulness of purpose);
- 5) time-bounded (definition of time the end of which the goal should be achieved).

Under the smartization, the author understands the targeted implementing at the enterprise the latest world's innovations in order to ensure its economic security.

In its turn, economic security is a state of the economic system characterized by the presence of competitive advantages, which are achieved by the effective use of existing own and borrowed resources, timely implementation of a set of measures to maintain the normal working conditions of the system to maximize the achievement of the goals in the short and long term in conditions constant change of environment [9].

Thus, *smartization* – is the targeted optimal implementation of the enterprise's latest global achievements in innovation to ensure efficient use of existing own and borrowed resources, increasing synergetic efficiency of all processes at the enterprise in order to maximize achievement of objectives in the short and long term in constant changes in the surroundings.

Like any process, a smartization consists of several stages defined by its definition:

1. An analysis of the enterprise's activities in order to identify weaknesses
2. Definition of global proposals for the implementation of innovations for these processes
3. Budget calculation for implementation
4. Correction of measures to ensure maximum synergy effect and depending on the budget of the enterprise
5. Development of a plan for the gradual introduction of a specific complex, specifying terms, budget and responsible persons
6. If not all measures for the processes that were identified in the first stage have been introduced, the plan for the complete smartization of the enterprise
7. Monitoring of interim results and, if necessary, its correction
8. Constant monitoring of all processes of the enterprise in order to identify weaknesses

Smartization – is a very individual process that depends on many factors of the internal and external surroundings of the enterprise: the size of the enterprise, the country of operation, the scope of operation, dependence on resources, the availability of qualified personnel, etc. However, for all spheres it is possible to distinguish common features. So, for domestic industrial enterprises:

- the dependence on energy. In Ukraine, each year, the cost of energy increases, which significantly increases the cost of the enterprise. To impose this direction, it is possible to introduce two options:
 - a) transition to alternative sources;
 - b) review of interaction with suppliers and producers of electricity.It is also worth considering the transition to interchangeable resources.
- the use of high-tech automated equipment. Such equipment, firstly, significantly less energy, secondly, it accelerates

production, and thirdly, minimizes the use of human resources, which avoids the costs of subjective errors, illnesses, the dismissal of workers, etc. From 01.01.2019 the minimum wage increases to UAH 4,173, what leads to an increase in taxes and expenditures. Moreover, the scientific and economic growth of China allowed the market to offer analogues of European equipment, which sometimes even surpass them in technological capacity, but much cheaper. The development of world logistics and trade allow Ukrainian enterprises to import them into the country without significantly increasing their final value;

- the implementation of a risk management culture. Risk management should be considered at the enterprise as a system process, in which all the employees of the enterprise take part.
- The introduction of management accounting and analysis. Accounting in many respects makes it impossible to in-depth analysis of all processes in an enterprise. Thus, the enterprise's smearing can be delayed in the first stage, because the company does not have sufficient relevant information for analysis. Moreover, the development of the software allows integration of management accounting and analysis in parallel with the accounting so that workers do not need to spend time on management accounting, all this happens automatically and allows you to receive a variety of reports for making managerial decisions.
- the social responsibility [10].
- the use of open procurement of resources – raw materials, components, etc. With only clarification – where it is possible, because there are a number of industrial enterprises that choose the supplier of optimal raw materials through years of trial and error. However, unified raw materials and components such as packaging, water, computer equipment can be purchased every time from new suppliers – those who offer with other similar features, the lowest price.

Several times we turned to responsible persons who must take part in the smartization of the enterprise. In order to prevent loss of information or reconsideration of processes, we recommend creating a working group of enterprise' smartization, which should be headed by a top manager (director, financial director) and should include heads of all major departments of the enterprise.

Conclusion

As the study showed, the enterprise's smartization is a decent alternative to innovation-activity, which should be used by domestic industrial enterprises.

Smartization – is the targeted optimal implementation of the enterprise's latest global achievements in innovation to ensure efficient use of existing own and borrowed resources, increasing synergetic efficiency of all processes at the enterprise in order to maximize achievement of objectives in the short and long term in constant changes in the surroundings. A smartization consists of several stages, an individual process for each enterprise, which depends on many factors of the internal and external surrounding of the enterprise. The study revealed its common features for domestic industrial enterprises. Also were presented the stages of smartization, which must be carried out at the enterprise by the working group on smartization.

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**STATE AND
PROSPECTS OF
PRODUCTION OF
FUNCTIONAL FOOD
PRODUCTS:
INTERNATIONAL
EXPERIENCE**

The popularity of “healthy” food throughout the world is constantly growing. The current development of the world market of health nutrition describes the following figures: in 1995, the sales of “health products” amounted to 10 billion US dollars, after 5 years, in 2000 – 15 billion dollars, in 2002 – about 33 billion dollars, in 2008 – 75 billion dollars. Today, the potential of this segment of the food market is estimated at \$ 120 billion, representing 5% of the total volume of the world food market. Almost 40% of the market for health foods is owned by the United States, 25% by Japan, and more than 30% by Central European countries, among which Germany, Great Britain and France are leading [1].

The populations of these countries are increasingly adhering to the rules and standards of rational nutrition. In Europe, caterpillars began to take into account the personal wishes of customers for cooking from “healthy” ingredients. Retailers are forced to adapt products that are marketed to individual consumers who prefer health products when choosing food.

The food industry solves this need by increasing the number of products with new ingredients that can improve their health and have therapeutic and prophylactic properties.

The development of medical and prophylactic foods is carried out in two directions:

- Creation on the basis of already developed general purpose products with the inclusion in their recipe of one or several components of the target direction, or with the replacement of components of the product, and others;
- Development of new therapeutic and prophylactic products without taking into account the basis of recipes and technologies of traditional food products.

“Unhealthy” diets and lack of physical activity are the main causes of the emergence of most non-infectious diseases associated with diet and physical inactivity.

According to international experts, soon functional products in Japan can push some medicines on the market. So, probiotics and functional nutrition, including using bifidobacteria, in the first quarter of the XXI century will shorten the existing market for medicines by pushing out many traditional pharmacological agents [2].

In European law, “functional foods” are products that: provide one or more of the target functions of the body that is appropriate for any improvement in health and well-being and reduce the risk of the disease; not tablets, capsules or other forms of dietary supplements; consumed as part of a normal diet [3].

Schuhnemann Veren, refers to a nutritional diet that meets the nutritional and physiological requirements of specific population groups. Therefore, it offers functional food to consider foods with additional functions, useful, nutritional and physiological characteristics.

Goldberg expanded the concept of functional nutrition and reduced it to three basic provisions:

- Must be part of a daily diet;
- The ingredients of food should be natural (of natural origin);
- Food components, along with nutritional value, should help regulate the proper function of the body.

In 2000, the World Health Organization (WHO) presented the first “WHO Action Plan on Food and Nutrition in the WHO European Region for 2000-2007”, 2007 – the second “Action Plan on Food products and nutrition for 2007-2012” and 2014 – the third “Action Plan for Food and Nutrition for 2015-2020”. It is worth noting the main

objectives of these documents are “... providing stable supply of the population with safe and healthy food products; ... the need to promote the appropriate enrichment of the main food products with micronutrients and the development of products for supplementary food with sufficient content” [4].

There is a long, positive experience of developed countries to compensate for the inadequate consumption of vitamins A, D, group B, iodine, iron. In most economically developed countries (USA, UK, Italy, Belgium, etc.), the problem of optimizing vitamin content niche is solved by regulating the enrichment of vitamins food products of mass consumption: flour, pasta and bakery products – on vitamins B1, B2, PP and folic acid, margarines – vitamins A, D and E, sugars – on vitamins A and C, fruit juices – vitamin C.

In the United States, the enrichment of dry breakfast cereals with vitamins and minerals in the amount of 15 to 25% of the recommended daily intake per serving is carried out since the 1970's, and since the 1980's, calcium enrichment is carried out - at a dose of 30% of the recommended consumption rate.

Today, there are many baby food products on the market that can replace mother's milk and give children all the necessary vitamins, minerals and many other nutrients.

The baby food market is divided into three major segments: female milk substitutes (dry or liquid), which includes:

1. Modern adaptive mixtures containing serum proteins enriched with taurine, carnitine and other biologically active substances; adapted casein formulas; partially adapted mixtures; “the following formulas”, intended for children older than 6 months.
2. Livestock products: fruit juices and mashed potatoes, vegetables, meat, milk or cereals; porridge is dry and ready; baby water and ready-made dishes for children.
3. Products for medical nutrition of children – various types of products intended for dietotherapy of hereditary diseases of metabolism, food allergy, lactase deficiency.

All three segments are developed in approximately the same degree. Each of them is a necessary part of the daily diet of the child. However, the most underdeveloped categories belong to the second segment – these are special products for children, such as baby water, desserts, prepared dinners, etc.

According to the production technology, all baby food products can be divided into two large groups – dry (dehydrated) and liquid or semi-

liquid products, including products ready to be consumed. The most widely used products in the world's infant food industry are dry products with a moisture content of not more than 10% – food concentrates. The assortment of concentrates for baby food is diverse, includes both female milk substitutes and supplements. Depending on the destination and recipes, dehydrated cereals and vegetable products of baby and dietary foods are divided into the following groups: Dehydrated tomatoes; Milk mixtures with decoctions; flour for children's and dietetic food; milk flour mixes; flour mixtures; vitamin milk flour mixtures; vitaminized porridges; kisses; Mashed Vegetable Soups [5].

The global baby food market is one of the most progressive markets, and its total cost is expected to be about \$ 55 billion in 2015 and \$ 63.7 billion by 2017 with an annual growth rate of almost 9% [8]. Demand in the market is due to an increase in the number of working mothers and the desire to provide the best nutrition for their children. Parents want nutritional products for children to help them save time and provide their child with all the necessary components for their development.

The leaders in the global market for infant food products are companies with very long experience:

- Mead Johnson (USA). The largest company that created and produces infant food products under the trade name “Enfamil”, designed to meet the diverse needs of pregnant women, nursing mothers and children from birth and up to three years old. The company delivers its products to 110 countries of the world;

- Nestlé (Switzerland). A great producer of infant food products for dairy, meat, fish and fruit and vegetable products for healthy children, as well as children with different pathologies and intolerance of food ingredients. For over five decades, the company has been a leader in the baby food innovation process and invests more than 1.4 billion Swiss francs each year in research and development. This allowed her to become the first manufacturer of infant food products, which offered the market a scientifically developed effective blend for the feeding of preterm infants, as well as a number of hypoallergenic and sour-milk infant formula. The company has 130 years experience in food production and has branches in many countries of the world (Finland, Germany, France, Belgium, Russia). In Finland, the company produces baby food products with the trademark “Bona”;

- Nutricia (The Netherlands), a global leader in infant nutrition innovations has been producing high-quality products for young

children for over a century. Now Nutricia is part of the “Numico” Corporation, which holds the leading position in the market for specialized food products. As part of the company – “Numico Research” – one of the largest research centers in the world on specialized nutrition issues:

– Heinz (USA). Heinz is engaged in the development and production of food products for adults and children from 1869 and supplies baby food products to more than 100 countries. In the CIS countries, the company offers 35 product names for babies of the first year of life, which are manufactured in Russia, Italy, England. All products of “Heinz” are prepared with the addition of a vitamin-mineral complex, do not contain genetically modified raw materials, dyes, preservatives and artificial flavoring additives;

– Hipp (Austria). Hipp began production of baby food products in 1899. This is the only company that has its own raw material base and produces bioorganic products. Owned factories in 5 countries of the world. The company’s products have a very diverse assortment - from mixtures to tea and water and widely sold in European countries:

– Gerber (USA). – The company was founded in 1927, today it is the largest baby food manufacturer in the world, controlling 79% of the baby food market in the US. In 2007, joined the “Nestlé”;

– Beech-Nut Nutrition Corporation (USA). – A subsidiary of “Milnot”, the third-largest baby food manufacturer in the United States, after Gerber and Heinz. Founded in 1890, it remains the main force in the infant food industry through the introduction of innovative products, including the first to launch a baby nutrition line containing DHA and Arachidonic (ARA) fatty acids contained in breast milk and considered an important component in the development of the central nervous system of the child;

– Danone (France). – The company was founded in 1919. “Danone” is an association of companies producing exclusively “healthy” products: sour milk products, mineral water and drinks, children’s and medical nutrition. The portfolio of the company includes such brands as Danone, Activ, Fantasia, Danissimo, etc. Danone Group is represented in 120 countries (including Ukraine). It was Danone that distributed such a product as yogurt worldwide, and in 1953 it introduced a new kind of fruit yogurt to the market for the first time [6].

All listed companies have a good reputation in the world market as producers of high-quality baby food products. The leading players in the US market are Nestlé and Beech-Nut Nutrition Corporation, while

Danone is leading the market in Western Europe.

The development of the market for baby food is influenced by factors such as the program of state stimulation of fertility and family protection, the growth of welfare of citizens, social changes, the emerging baby nutrition culture, the impact of the environmental situation, legislative problems, high barriers to entry, as well as insufficient level of awareness of parents about rational and functional nutrition.

The logic of further development of the market for children's products should be subordinated to modern global trends in nutrition. The most important of them is related to the growing understanding of the role of nutrition in the management of development processes and the formation of health. Within the framework of modern nutritionology topics that were not previously discussed were discussed. These include, in particular, the study of nutrition from the standpoint of information exchange of the organism with the environment and the ability of macro- and micro-nutrients to control the activity of genes. Already, on the basis of the ability of the biologically active substances of food, its macro- and micronutrients to actively activate or deactivate genes, they begin to develop programs for the prevention of cancer, obesity, type 2 diabetes and other diseases. These programs are dealt with by the working group on the problem of "Safe Food and Quality", created under the European Parliament.

In the global food market, the segment of sports nutrition is widely represented, with special attention being paid to the minds of both the mass sports and the sports of higher achievements (premium food).

The interest in sports nutrition is the result of an incredible rise in interest in a healthy lifestyle. In Germany, for example, 40% of the population cares about their physical development and is actively engaged in sports, and in the United States this figure is almost 60%. Thus, the United States has the largest market for sports nutrition.

The combined consumption expenditure for sports nutrition, beverages and nutritional supplements around the world amounted to 32 billion US dollars in 2006 and increased to 54 billion dollars by 2015. The highest growth is observed in Asian countries: from 2007 it is 8.5% per year.

The leaders in the world market of sports nutrition products are companies with extensive experience:

– Optimum Nutrition (the United States is the world leader in the production of sports nutrition products. The products of this company

are of high quality, good working properties, a wide range and a fairly reasonable price. Products of the company – proteins, amino acids, glutamine, gainers, vitamins and other products occupy the leading positions in their categories and enjoy the highest demand. Optimum Nutrition is consistently among the top five market leaders. The manufacturer boasts some of the world's best sellers, including 100% Whey Gold Standard Proteins, which many experts call the best fast (serum) protein, amino acids SuperiorAmino 2222 and others.

– BSN (USA) – the top producer of sports nutrition, in the BSN arsenal there are sales leaders in the category of proteins, gamers, amino acids. The “BSN” brand is very popular among professional sports bodybuilders in the United States. The company quickly develops and regularly replenishes the range of its products. Since 2001 has been released a large number of decent high-quality and efficient sports nutrition products have been produced, using the latest developments in the field of biotechnology. The Syntha-6 protein has become a true legend among bodybuilders, and the Nitrix product made a real revolution in its time.

– “Universal Nutrition” (USA) – the food from this company is quite expensive, high quality, originality of its components, it is possible to mention separately the world famous Animal series (AnimalPak, AnimalTest).

– Gaspari Nutrition (USA) is the author's project of the world-renowned bodybuilder Rich Gaspari, who using his personal experiences and bodybuilder practices has created his own production of sports nutrition. “Gaspari Nutrition” products are average for the price of goods and at the same time are of high quality as products for athletes with a large assortment. An excellent combination of price, quantity and quality in the aggregate generates a high demand for the goods of this company. An enormous success is the amino acid complex of this brand Amino Mach 8000, as well as ANVITE vitamins.

– Dymatize Nutrition (The United States has been producing sports nutrition since 1994 and seeks to provide the necessary sports supplements for athletes of all categories, offering them at an affordable price, while not producing quality products. Today, Dymatize Nutrition is particularly popular, as specialists The company launches new and new products that deserve attention on the market.

– Cellucor (USA) is considered an innovative brand, as it produces sports nutrition on the latest scientific technology. Products “Cellucor” – high-quality products for athletes with the most efficient working

properties. Efficiency is the main goal in the creation of sports nutrition products by Cellucor [7].

Sports nutrition today is organic, healthy foods, therapeutic and prophylactic and restorative nutrition that has a balanced and / or directed functional composition; this nutrition, enriched with biologically active and mineral components, is aimed at influencing the body of the athlete, depending on the task posed to him, taking into account his individual condition, that is, based on the identification of the individual characteristics of the body of this person for physical activity / overload, stressful situations, adaptive possibilities through useful nutritional ingredients.

In the commodity turnover only the products of sports nutrition passed, which was checked at the level of state expert organizations.

Taking into account the fact that the number of consumers is steadily increasing.

The main factors influencing the decision to buy a product are as follows: price, consultations seller and trainer [8].

The most popular in sports nutrition due to availability and low price are dry mixes. At the same time, there is a clear tendency towards an annual increase in the share of consumption of bars, gels and beverages [9]. Regarding the chemical composition of goods that consumers choose on the market for sports nutrition, the advantage belongs to proteins (59% of the total volume of goods in this segment). Vitamins, macro- and micronutrients, amino acids are selected by 50% and 48% of consumers.

At present, the market is presenting a series of herodietic food products on a milk basis: low-fat cottage cheese with buckwheat or semolina, with an extract from sprouted seed of buckwheat and millet; Sour-milk bioproducts enriched with probiotics (bifidobacteria and lactobacilli) – kefir and yogurts “Bifidok”, “Bifilife”, “Bifilan”, “Biooghurt”, “Activia”, sour milk and vegetable yogurt product enriched with ether of plant sterols “Danakor” lowers cholesterol levels; milk, cream, cheese, ice cream with split lactose; dairy products enriched with Calcium; fruit and milk cocktails from the series “Biomax”, juices and juice drinks, berries “Miracle-Yagoda”, 100% Gold Premium and others.

The modern market has a wide range of bakery products of the hero-orientation (enriched with food fibers, iodinated and fortified bread), cereal products (porridges) with various additives and phyto-components. Among confectionery products are products on natural sugar substitutes, which are diabetic in nature with vitamin supplements.

Certain hero-orientation is noted in the meat processing industry. For example, in the market are boiled sausages, sausages, ham with the addition of cumin, thistle oil, lactulose [10].

Theoretical and practical researches of leading world and domestic scientists have proved the effectiveness of the approach to accelerated improvement of the population through alimentary correction. Thus, the organization of a fully-fledged balanced diet became the most important social task and a priority direction of the modern food industry. Today, the most up-to-date direction in nutrition is the medical (clinical) diet, which includes the feeding of sick people and certain groups of healthy people who are under medical supervision, such as pregnant women and athletes. Medical nutrition plays a prominent role in the complex treatment of cancer, severe infectious and neurological diseases, acute exogenous poisoning, diseases of the gastrointestinal tract. It is also used in post-stool states, lack of body weight, protein deficiency, in the pre- and postoperative periods, etc. [11].

Medical nutrition in many countries has become an integral part of complex therapy for many diseases, the problem with the provision of quality nutritional support and today does not lose its relevance. The analysis conducted by the European Association of Enteral and Parenteral Nutrition (ESPEN) states that patients suffer from a trophic disorder: in surgery – 27-48%, therapy – 46-59%, geriatrics – 26-57%, orthopedics – 39-45%, oncology – 46-88%, pulmonology – 33-63%, gastroenterology – 46-60%, among infectious patients – 42-59%, with chronic renal insufficiency – 31-59% [12].

Against this backdrop, the role of medical nutrition significantly increases, which affects the growth of the market, which experts describe as dynamic and very promising. This segment of the food market in 2013 was estimated at \$ 10.7 billion and is expected to grow by an average of 4.1% from 2014 to 2020. In place of leaders of the growth of the past years – Europe, Japan and the United States are coming to dynamic countries – China, India and Brazil.

The global market for clinical nutrition is highly concentrated: the four players account for about 69% of the market. Nestlé SA has been leading the market since 2013. The management of the company decided that medical nutrition can become an effective and economical means of preventing and treating acute and chronic diseases in the XXI century, and in 2010 a new unit for the production of medical nutrition for the prevention and treatment of diabetes mellitus, obesity, cardiovascular diseases was created and Alzheimer's Diseases – “Nestle

Health Science SA". In addition, the company announced the opening of its own Institute of Public Health at the Ecole Polytechnique Fédérale de Lausanne (EPFL), which invests 5 billion francs annually [13, 14].

The general qualities of modern preparations for enteral nutrition are the balanced ratio of different substances, taking into account the daily human need in each of them, the presence of mixtures of proteins of high biological value (optimal set of amino acids), lack of lactose, sucrose, gluten and cholesterol.

Constantly developing new nutrient mixtures, especially directed action, to correct not only inferiority of nutrition, but also metabolic disorders in specific diseases and pathological conditions.

The segment of the market of medical nutrition in the world will continue its growth, which will contribute to an increase in real costs of the population, extending the age limits and improving consumer literacy. The main competition will be on the regional markets, due to which the growth of the segment will continue to be ensured in light of the intensification of mergers and acquisitions in the industry. Experts expect an increase in investment activity by foreign companies in the segment of nutritional support of developed countries.

Currently, in all countries of the developed world there is a significant change in the attitude of people, and especially social assets of the population, to Functional nutrition. It becomes increasingly clear that functional nutrition determines the ability to work and competitiveness of a person in a modern society and, accordingly, the standard of living and well-being, is the most convenient, intensely form of providing the human body with the necessary nutrients.

According to analysts' forecasts, by 2025 the probes will spend no more than 30 minutes per day for the purchase of food, and therefore, the release of functional foods ready for consumption or with a minimum cooking time is required. "Healthy food on the go" gradually turns into a trend of the 21st century.

The Japanese government recognizes functional nutrition as an alternative to drug therapy and defines it as a Food Specific Health Use (FOSHU).

Thus, a review of the global market for functional food products suggests that it is confidently developing. Dominant in this market are the USA, Europe and Japan, which accounts for about 90% of the total volume of sales of functional food products. The ratio of consumers to functional nutrition is positive therefore this segment of the food market is promising enough.

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**THE ROLE OF ECO-
INNOVATIONS IN THE
RURAL AREAS
DEVELOPMENT**

Problem Statement. In the modern conditions, the new global trends as well as innovations are influence on the economics all over the world. Most scientists are agreed that innovation and innovative technologies is the key to the economic growth and success. At the time, the development of the economy is depending from the producing of goods and recourses usage as well as from the ecology and nature save technologies. Thus, it is the necessity for the eco-innovations development as the foundation organic producing, healthy diet and save live conditions for society.

Analysis of research and publications. The research in the field of eco-innovation development has been provided by the numerous of the national scientists such as: Andreeva N. [1], Pisarenko T., Rebryna N. [8], Musina L. [6], Savchuk O., Yavorskaya N. Furthermore, the definition of the eco-innovation has been analysed in the scientific researches, provided by: Charter M. [2], Clark T. [2], Triguero A. [12], Moreno-Mondéjar L.[12], Davia M. [12] and other.

For example, Charter M. and Clark T. are analysing the sustainable innovation as a process where sustainability considerations are integrated into company systems from idea generation through to research and development and commercialisation. Other group of scientists (Triguero A. at al.) argues that eco-innovation can be identified by its favourable impact on the environment. It applies to goods, services, manufacturing processes or business models [2].

However, taking into consideration the contribution of the scientists to the eco-innovation development it is need to be underline that implementation of the eco-innovations into Ukrainian economy as well as its influence for the rural areas development is not investigated enough. It is justifies the aim of the research and its main tasks.

The aim of the research is developing of the classification of eco-innovations, analysing the types and evaluating of the influence of the

eco-innovation on the agricultural sector and rural areas development.

Results of the research. The development of the eco-innovations in Ukraine is connected with the innovations in general. The state of the innovation technologies and its expansion can be presented through the Global innovative index. According to The Global Innovation Index 2017 Report the leaders of the innovation implementation are Switzerland and Sweden. The third position is occupied by Netherlands. Also, in the ten most innovative countries are included: USA, Great Britain, Denmark, Singapore, Finland, Germany and Ireland. The report includes 127 countries and the measure them by 82 indexes [11].

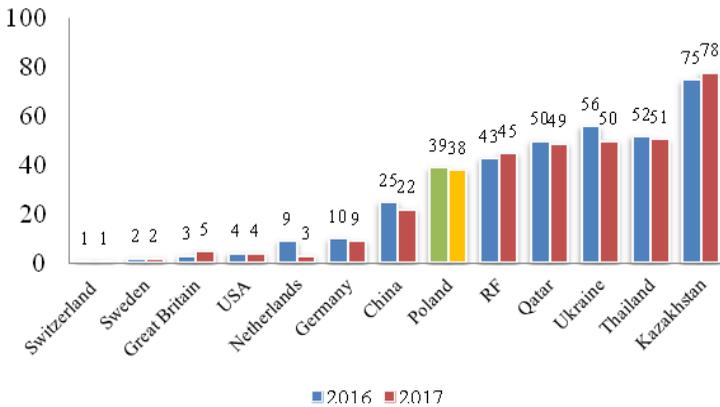


Figure 2.3 The rank of Ukraine in the Global Innovation Index in 2016 and 2017

Source: developed by authors, based on [11]

As the Figure 2.3 presents Ukraine is occupied 50th place between 127 countries. The strengths in the innovation sphere are presented by the subindexes “Human capital and research”, “Education”, “Creating knowledge” etc.

The innovation development as well as the eco-innovation expansion is the important for Ukraine as far as it is a key for producing ecologically save goods in general and in agricultural sector. Eco-innovation is a broad concept that encompasses a large range of innovations in different areas of human activity to maintain the capacity to use resources while creating products, services and technologies while minimizing the negative effects of human activities on the environment.

As Urbaniec M. mentioned that eco-innovations are not only an important component of sustainable development, owing to their multifaceted nature they are contributing to significant cost savings and increasing resource efficiency both in the manufacturing and services sectors [13].

Moreover, Musina L. underline that eco-innovation in general is similar to other types of innovations, but they have two important differences. Firstly, the result of their introduction is the reduction of the environmental impact, regardless of whether such impact was anticipated or not. Secondly, the scale of influence can go beyond the usual boundaries of innovative organizations, allowing for significant changes in socio-cultural norms and institutional structures [6].

According to the aim the eco-innovation can be classified on the types:

- products, including goods, services, equipment;
 - processes;
 - marketing methods and other market-oriented strategies;
 - organizations such as the management structure and division of responsibilities;
 - institutions that include broad social areas greater than one organization's control, such as institutional mechanisms, social norms and cultural values [8].
- The typology of eco-innovations can be seen on Figure 2.4.

The structure of eco-innovations can be presented as the multilevel dependence. On the top of it we can see the eco-innovations of the product, eco-innovation of the process and system eco-innovation.

Innovation process includes organizational innovation, integrated environmental management of production, experiments with existing processes, marketing innovations. Product innovation – product eco-innovations include new or significantly improved products / services that are designed to minimize overall environmental impact. System innovations concern not only technological systems, radical and advanced technologies that change market conditions, but also all kinds of systemic changes – industrial, social or in the behaviour.

To implement these types of eco-innovations it is necessary to create the appropriate conditions. First of all, the formation of a favorable climate to stimulate ecological innovation and investment processes as well as introduction of an effective mechanism for attracting domestic and foreign investments for ecologization of innovation activity, investment insurance, protection of investors' rights. Secondly, to

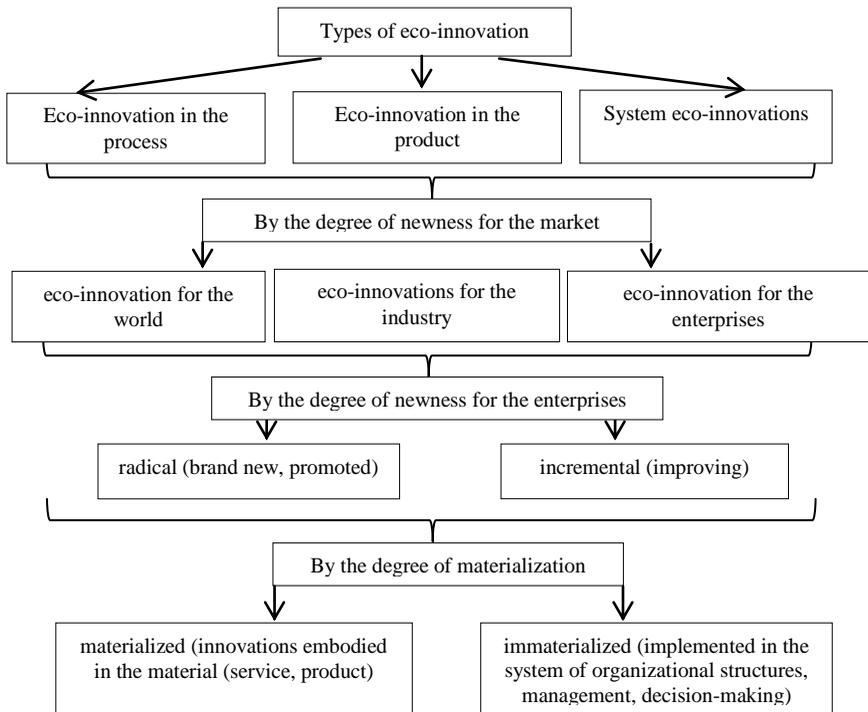


Figure 2.4 Types of eco-innovation

Source: developed by authors based on sources [5, 9]

promote the priority of the development of energy, resource-saving, environmentally sounds technologies that are implemented in the governmental policy. Thirdly, to develop the basic industries and technologies through the combination of the industrial and financial assets as well as the provision of tax, credit, depreciation incentives for domestic enterprises and institutions introducing eco-innovations. Fourthly, to rebuild the infrastructure of innovation activity (innovation exchanges, consulting centres, certification firms that carry out scientific, technical and innovative activities) and as the result ensuring the formation on a competitive basis and financing of state scientific and technical programs on the priority areas of science and technology development [6].

The integration of the eco-innovations in the agricultural sphere is important factor of the economic growth in Ukraine as far as agricultural

sector is of the donors of the national economy. Moreover, eco-innovation can be a platform for the social wellbeing as well as for the rural areas development.

The main vectors of the eco-innovation implementation in agricultural sphere and on the rural areas are:

- manufacturing, installation and operation of environmental protection (cleaning) facilities;
- development and implementation of environmentally friendly technologies;
- production of environmentally friendly products;
- life cycle management of goods;
- processing, transport and burial of waste, elimination of toxic waste;
- trade in environmental technologies, products and waste; energy saving;
- conservation of land resources;
- water, air control;
- eco-audits and eco-expertise;
- environmental lending and insurance;
- environmental advocacy and education;
- ecotourism;
- environmental medicine and occupational safety;
- Information Technology;
- life-saving systems;
- maintenance of equilibrium of ecosystems [1].

As the result, to implement the eco-innovations into the national agricultural the 5 stages have to be done (Figure 2.5).

In general, in order to identify trends and assess the achievements of countries in the field of environmental innovations and the transition to a green economy it is necessary to evaluate five groups of indicators, which covering the following areas:

1) eco-innovation investments (including indicators such as government allocations and research and development costs in the environment and energy sector, the total number of employed and researchers as a percentage of total employment, the total cost of green investments at an early stage);

2) eco-innovation activity (firms that have implemented innovations aimed at reducing the material and energy intensity per unit of output, the percentage of the total number of firms, organizations registered in ISO 14001);

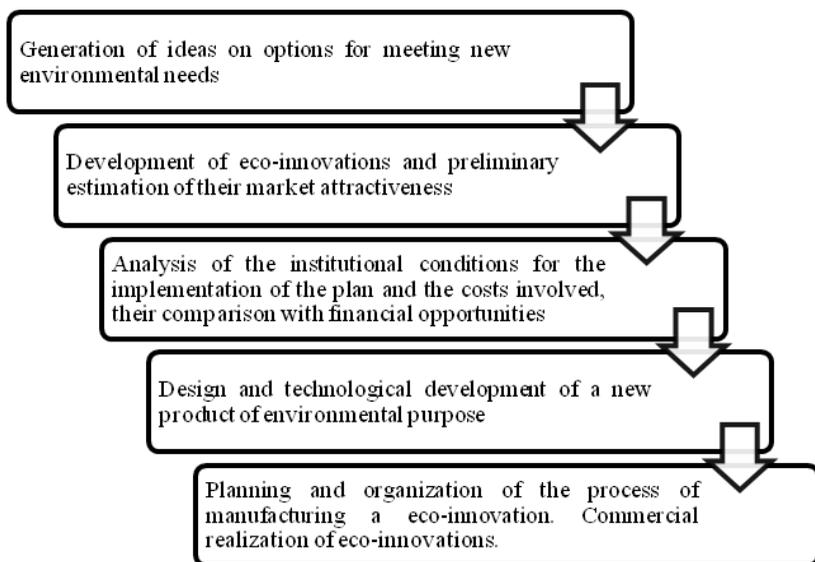


Figure 2.5 Main stages of the eco-innovation implementation in the national agricultural sector

Source: developed by authors

3) eco-innovation results (number of eco-patents in the field of reducing environmental pollution, waste management and energy efficiency, number of academic publications in the area of eco-innovation);

4) consequences for the environment (productivity of raw materials use, efficiency of water resources use, energy, intensity of greenhouse gas emissions);

5) socio-economic consequences (employment, commodity turnover, export of products of ecologically oriented industries) [5].

Thus, to identify trends and assess the achievements of Ukraine in the field of eco-innovation development the number of certificates ISO 14001 can be measure (Figure 2.6).

We are witnessing a leap-like dynamics of changes in the number of ISO 14001 certificates in Ukraine, their maximum number recorded in 2016, when the warehouse is 442, at the same time in 2017 the number of certificates decreased slightly to 223 units. Among these enterprises, food industry enterprises (14.3%), electrical engineering, precision mechanics, optics (14.3%) [15].

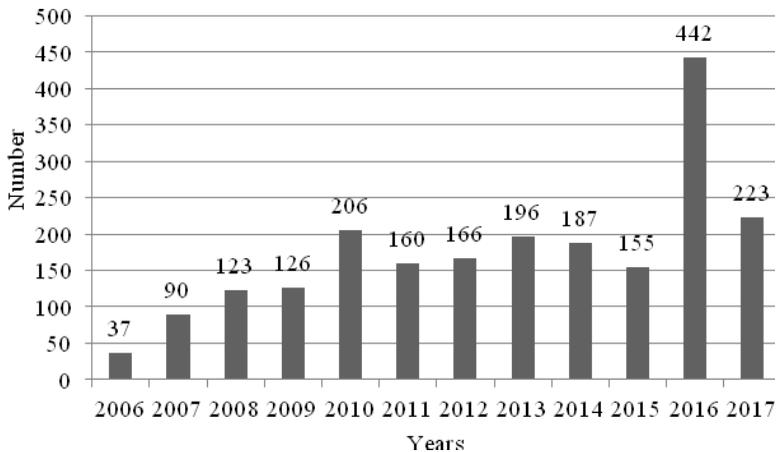


Figure 2.6 Dynamics of the number of the series ISO 14001 certificates in Ukraine, 2006-2017 years

Source: developed by authors based on [14]

Thus, management of rural development should include the active use of eco-innovations. The interdependence of eco-innovation and rural development will be reflected in Fig. 2.7.

Conclusions and the perspectives of the future researches. The result of the investigation underline that implementation of the eco-innovations has a direct positive impact on the development of economy as well as development of the rural areas as far as it helps to promote environmental friendly. Moreover, the types of eco-innovations have been classified into the groups according to the influence on the market and enterprises. Future researches have to be based on the enterprises example and connected with the mechanism of implementation of the eco-innovations in the agricultural firms.

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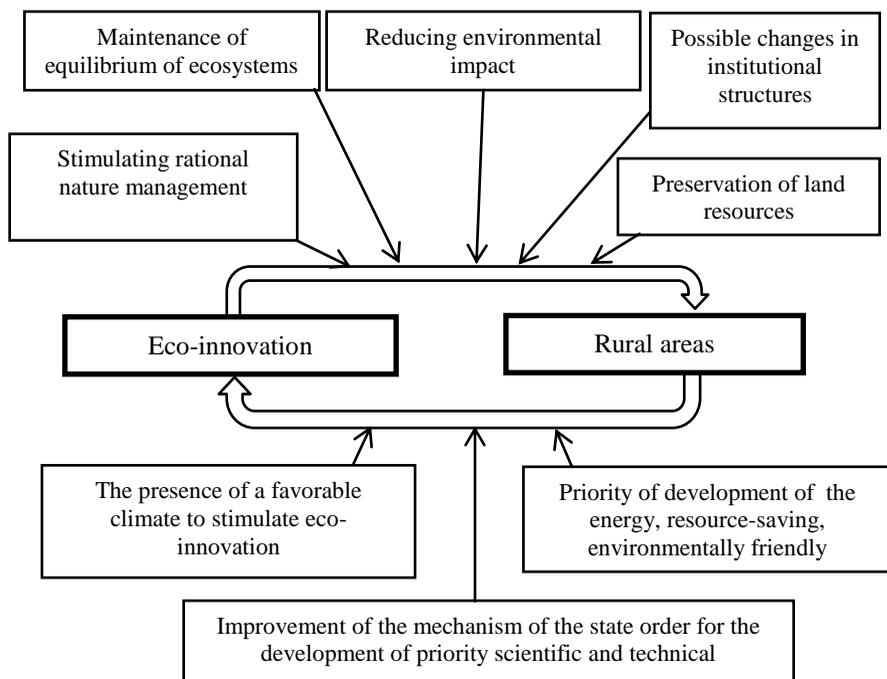


Figure 2.7 The influence of the eco-innovations on the rural areas development

Source: developed by authors

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**THE QUALITY
MANAGEMENT
SYSTEM IN THE
BANQUET
SERVICE AS ONE
OF THE
ELEMENTS OF
INNOVATIVE
DEVELOPMENT
OF THE HOTEL-
RESTAURANT
INDUSTRY**

Introduction. Today one of the main problems of the hotel-restaurant industry is the development and implementation of a quality management system (Kuzmin O. et al, 2018) [1]. The existence of a quality management system remains an important tool (Kuzmin O. et al, 2018) [2] in competition in the market (Levytska S. et al 2018; Pozdniakov S. et al, 2018) [3-5].

The complexity of the evaluation of hotel-restaurant services is due to the difficulties of formalization, generalization, analysis of evaluation criteria, determination of measurement methods. Qualimetric methods are often used to establish quality service parameters (Kuzmin O. et al 2016; 2017; Dietrich I. et al 2017; Niemirich O. et al 2018) [6-9].

The development of elements of the quality management system is necessary to increase the technical level and quality of services by the hotel-restaurant establishment (Kuzmin O. et al, 2018) [2]. The quality management system should lead to further reduction of costs and saving of material and labor resources (Niemirich O. et al, 2018) [9].

Implementation of the quality management system and standardization of the work of the hotel-restaurant business banquet service are relevant. This will allow the most efficient work of each participant in the process and simplify the control over the quality of the work performed. Therefore, the purpose of the article is to develop elements of a quality management system for banquet services to enhance the innovative development of hotel-restaurant business.

Results and discussions. The banquet service is organized and held by banquets, receptions, diplomatic receptions, etc. The banquet service is a structural unit of the hotel and restaurant institution and submits directly to the director of the restaurant.

The activity of the banquet service is based on current and future planning. In his work, the banquet service combines unity in the decision of issues of official activity, collegiality in their discussion, personal responsibility for the proper performance of official duties and orders.

Qualification requirements, functional duties, rights, and responsibility of banquet service workers are regulated by job descriptions.

In its activities, the banquet service is governed by current legislation, regulations and methodological materials on the organization of the restaurant industry, organizational and administrative documents of the organization itself, provisions, etc.:

- regulations, orders, orders, other leading and normative documents of the higher bodies concerning the organization of economic provision;
- documentation on management of the banquet service;
- advanced domestic and foreign experience in organizing banquets;
- mode of service;
- applications for banquets;
- documents certifying the safety of chemical agents used by banquet staff;
- a book of reviews and suggestions;
- information about services;
- organization of payment and stimulation of labor;
- methods of effective use of office equipment and other technical means of management work;
- rules of internal labor regulations;
- labor safety rules and norms.

The banquet service performs the following tasks:

- holding and organizing banquets, receptions, diplomatic means, etc.;
- provision of high quality of services, service culture, introduction of new technology and technologies, advanced forms of service and organization of work, including through the use of modern information technologies;
- organization of work with products that corresponds or does not meet the requirements of normative documentation;

- ensuring the functioning of the compliance management system with the standards of service provision at all stages of its creation;
- development and submission to the management of proposals for improving the production, economic and service activities of the banquet service.

1. Management structure of the banquet service. The structure and staff of the banquet service are approved by the restaurant director in accordance with the standards of the number of workers and specialists, taking into account the volumes of work and features of the provision of services. The structure of the administrative subordination of the banquet service is shown in Figure 2.8.

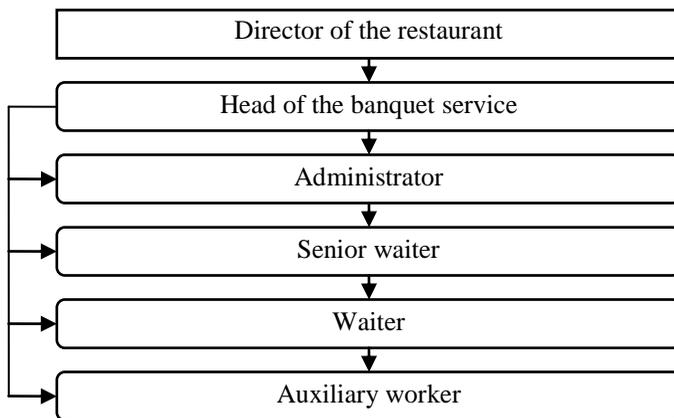


Figure 2.8 The management structure of the banquet service

The management of the banquet service carries out the head of the banquet service. Obligations between the employees of the banquet service are distributed on the basis of job descriptions. All orders at the banquet service are given up as subordination.

In accordance with the assigned tasks the banquet service carries out the following functions:

- production, business and service activities of the restaurant at the hotel, providing high quality and a high culture of service to visitors;
- timely provision of banquet services to the goods necessary for the maintenance process;
- introduction of new technology and technology, progressive forms of service and organization of work;
- studying the demand for market management methods;

- rational division of labor in the service activities of the banquet service;
- accounting and timely submission of reports on servicing and economic activities of the banquet service;
- application of existing forms and systems of payment and stimulation of labor;
- compliance with the rules of service organization;
- organization of conducting normative reference information related to the functions of banquet service.

The assignment to the service of banquets of functions that are not within its competence is not allowed.

The banquet service for solving its tasks is entitled to:

- to invite according to the established procedure from the structural units of the hotel-restaurant institution information on issues falling within the competence of the banquet service;
- to use funds allocated for financing banquet services for the purchase of products, equipment, materials and tools;
- to make suggestions on questions that fall within the competence of the banquet service.

In the process of production activity, the banquet service interacts with all structural units of the hotel and restaurant institution:

- with the director of the restaurant – provides reports on the implementation of the daily task;
- with accounting – sends documents on the account of working hours of banquet service workers;
- with the labor protection engineer – receives a list of persons who need to undergo regular periodic training on occupational safety and health, periodic medical examination, etc.

Full responsibility for the quality and timeliness of the implementation of the provisions laid down by these regulations for the service of banquets of tasks and functions is carried by the head of the banquet service. Responsibility of the employees of the service is established by the current legislation and official instructions. The manager and other employees are personally responsible for the compliance of the documents drawn up by them and the transactions in accordance with the legislation of Ukraine.

The criteria for assessing the activity of the banquet service are timely and qualitative performance of the set goals and objectives, as well as qualitative performance of functional duties.

2. Quality management system. The development and

implementation of a quality management system for banquet services involves a set of organizational structures, techniques, processes and resources necessary for the overall management of the quality of the banquet service. The processes needed to develop a quality management system should cover areas related to management activities as well as resource delivery.

At the first stage, a decision is made to establish a quality management system, a quality policy is defined, a quality service is formed, the main stages, executors, terms of development and implementation are established. Preparatory work is under way to create the organizational structure of the quality management system at the main stages of creation and development of a complex of documentation of the quality management system.

Documentation of the quality management system for banquet services involves the availability of documentation necessary for the proper functioning of the quality management system and the quality assurance of products and services. The most typical types of quality documents are standards, procedures, techniques, instructions, quality assurance programs, and current documentation.

The positions and professions of employees involved in the processes performed at the banquet service (Figure 2.9):

- head of the banquet service – carries out general management of production and economic activity (job description JD-4.7.1-0/18);
- administrator – employee of banquet service, performing administrative functions (JD-4.7.2-0/18);
- senior waiter – the employee of the banquet service, which carries out business activities, manages the waiters (JD-4.7.3-0/18);
- waiter – a banquet service worker who carries out business activities, deals with the service of guests (JD-4.7.4-0/18);
- auxiliary worker – a banquet service worker, helping waiters (JD-4.7.5-0/18).

Responsibilities and authorities of the staff working in the banquet service, henceforth, and responsibility for the performance of the stated duties, are reflected in the “About the service of banquets” (P-1-1/0-18), official and working instructions.

The production task is formed by the manager of the banquet service on the basis of the number of consumers and ordered dishes. The production task is corrected and approved by the head of the banquet service and controlled by the restaurant director, if necessary.

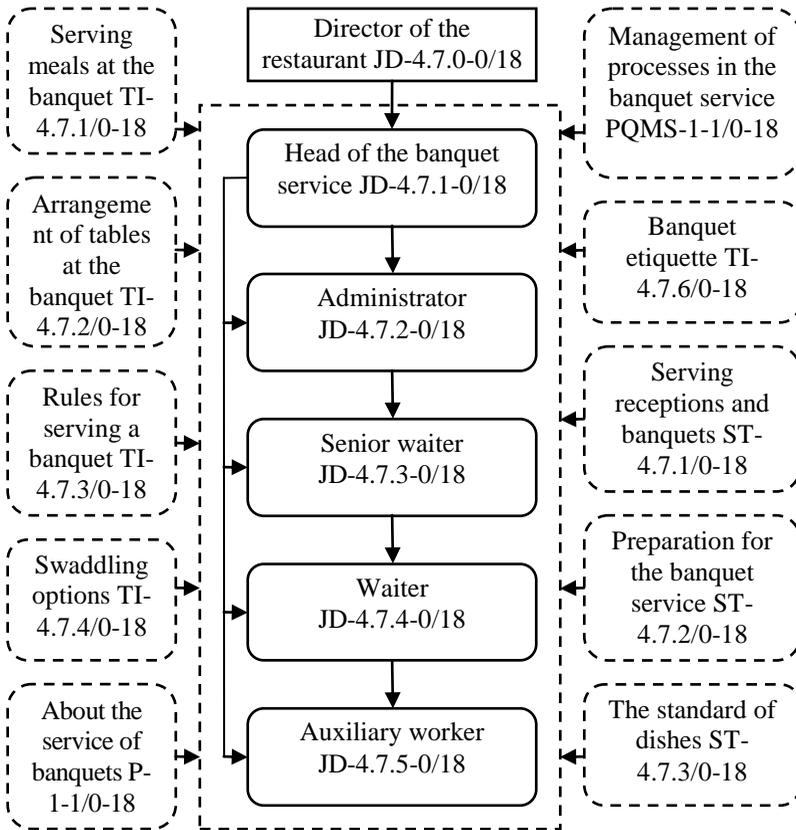


Figure 2.9 The structure of the quality management system in the banquet service

The banquet service is equipped with the equipment necessary for carrying out scheduled tasks in due time, in accordance with the requirements of normative documentation. The head of the banquet service is responsible for the correct operation of the equipment. For the maintenance of timely maintenance of equipment and its repair is the responsibility of the chief engineer's service.

The staff of the banquet service is prepared technically and technologically to perform all the necessary work. Training of new employees is carried out directly at the workplace of the corresponding profession, under the guidance of qualified personnel. Supervises the training process by the head of the banquet service. After graduation, the

worker prepares a qualification examination of a permanent qualification commission in the enterprise, according to the results of the examination, the corresponding level of his qualification, grade is assigned to the worker. The conclusions of the qualification commission are reflected in the forms of personnel accounting.

The staff of the banquet service is trained and certified for knowledge of the requirements of occupational safety. The results of the attestation are displayed in the safety training log, which is in the labor protection engineer. Fire safety awareness and registration are displayed in the fire safety guides magazine.

External management in the banquet service is carried out by the director of the restaurant. The director, in accordance with his job description JD-4.7.0-0/18, monitors compliance by workers of production sites with the requirements of normative documentation, providing workers with means of protection, and observing the requirements of industrial sanitation. The director is subordinated to the head of the banquet service.

The manager of the banquet service, in accordance with its job description JD-4.7.1-0/18, ensures the interaction of production areas of the banquet service, monitors the execution of variable production tasks, regulates the relationship between production sites, observes mutual claims, ensures compliance with the requirements of normative documentation at all stages, compliance with the requirements of industrial sanitation, controls the technically correct operation of the equipment.

The internal management of the banquet service is carried out by the head of the banquet service on the basis of the provision P-1-1/0-18 “On the service of banquets”.

All technological processes are carried out by banquet staff under the direction of the head of the banquet service, on the basis of approved technological instructions: TI-4.7.1/0-18 “Catering to the banquet”; TI-4.7.2/0-18 “Arrangement of tables for a banquet”; TI-4.7.3/0-18 “Rules for serving a banquet”; TI-4.7.4/0-18 “Options for making napkins”; TI-4.7.5/0-18 “Tableware, devices for a banquet”; TI-4.7.6/0-18 “Banquet etiquette”; and standards: ST-4.7.1/0-18 “Service of receptions and banquets”; ST-4.7.2/0-18 “Preparation for serving a banquet”; ST-4.7.3/0-18 “Standard of serving dishes”.

Responsibility for compliance with all technological operations is assigned to the manager. Each employee at his / her place of work is responsible for the qualitative performance of work and technological

instructions, observance of the established standards at the relevant technological stages of service creation.

All technological processes in the banquet service take place in accordance with the requirements of the normative documentation specified in PQMS-1-1/0-18 “Management of processes in the service of banquets”.

Services that do not meet the requirements of the normative documentation to PQMS-1-1/0-18 “Management of processes in the service of banquets”, need to be corrected, completed thoroughly.

Inappropriate services in the banquet service may occur due to violation of the conditions of execution, and negligent actions of banquet service staff.

In case of detection of imperfections, the administrator informs the head of the banquet service in writing about this, which makes a corresponding entry in the journal “Magazine of inconsistencies, corrective and precautionary actions” (J-1-1/1-18).

For the correct implementation of technological processes at all stages of creation in the service of banquets introduced control parameters – critical points of control. Critical control points are determined by the critical criterion – a criterion that separates the permissible and inadmissible values of the monitored indicator. The scheme and description of control parameters are given in PQMS-1-1/0-18 «Management of processes in the service of banquets».

In the event of non-compliance with the requirements in the service of banquets, an analysis of the causes of inconsistencies is made, measures are taken to prevent their recurrence, and measures are taken to eliminate these inconsistencies.

Detected discrepancies, which are conducted in order to eliminate their causes, are open inconsistencies. Closed inconsistencies are detected inconsistencies, which resulted in corrective and preventive actions, which gave a positive result. The magazine “Magazine of discrepancies, corrective and precautionary actions” (J-1-1/1-18) shall be marked with appropriate marks.

The results of the corrective and preventive actions carried out are recorded in the journal “Magazine of non-conformities, corrective and precautionary actions” (J-1-1/1-18). If a discrepancy is found that is related to another subdivision, after the registration in the “Description of reasons” column, a record is made: “Incompatibility is transferred to the unit” and the name of the unit is indicated. After that, it is reported that a discrepancy is detected in a particular department of the director.

In the development of corrective and preventive actions in the service of banquets involved: manager, administrator, senior waiter. In case of need, other specialists of the enterprise can be attracted to the development of corrective and preventive actions. The manager of the banquet service is responsible for registering the results of corrective and preventive actions.

At all stages of the technological process occurring in the service of banquets, identification is carried out.

On the basis of the data entered in the information database, the reports necessary for the continuous or periodic control of processes, scheduled or unscheduled inventory in the banquet service are prepared.

In the service of banquets, production processes, the results of which can not be checked by further control or measurement are absent.

Conclusions. It can be concluded that the implementation of the quality management system at the banquet service allows continuous improvement and optimization of the department's work, as well as to provide conditions for the formation of competitive services and to increase their efficiency. Ability to provide services that not only satisfy the requirements of the consumer, but also exceed their expectations – this is the most important indicator of the competitiveness of any organization.

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**IMPLEMENTATION
OF INFORMATION
TECHNOLOGIES IN
THE ACTIVITIES OF
TRADE
ENTERPRISES AS A
PRIMARY
DEVELOPMENT OF
THE MARKET OF
ELECTRONIC TRADE**

According to experts, electronic trade is the most dynamic area of the modern economy. The rapid development of such trade, in turn, is due to the accelerated development of information systems in all spheres of public life. The activation of information technology, the

transformation in the field of Internet technologies and the steady desire to communication has opened to mankind new opportunities for realization economic activity. These listed processes led to radical changes of the traditional ways of doing business, contributed to the emergence of new types of economic activity – electronic business and e-commerce, and on the basis of it – electronic trade.

About global scale electronic trade to a certain extent this fact is said that by the end of 2018, the total sales of online stores around the world are expected to reach 2 trillion dollars USA. The growth compared with 2017 will be 6% [1]. By 2019 global sales of online sales are expected to grow by 15%, while the growth in sales of traditional retailers is around 5% [2, p. 71].

Electronic trade is currently considered one of the most promising directions of business in modern Ukraine. Every year, more and more trade enterprises of the national economy are turning to e-commerce benefits that improve indicators of profitability, enhance image in the eyes of potential and key buyers and business partners, and quickly move to new, previously unattainable markets. The share of online sales in Ukraine in recent years is increasing by 20-30% annually and in 2017 it amounted to 3.2% of the total retail (in the developed world markets, for example, in the EU, the share sales of online reached 15%) [3]. According to some estimates, the turnover on the market of electronic trade in Ukraine in the beginning of 2017 amounted to about 50 billion UAH, and in 2018 it is forecast to grow to 65 billion UAH [4].

General theoretical and methodological issues of electronic trade in Ukraine, in particular electronic trade management of enterprises, development of e-commerce enterprises, were researched and researched by leading foreign and domestic scientists, whose work is made up of quite a considerable number of recent publications. However, there is an objective need of further research on the conditions of functioning enterprises that conduct electronic trade, as well as the main trends that determine the development of electronic trade in the national economy.

Among modern researchers electronic trade there is no consensus on the definition of the essence of this concept. One of the reasons for this is the lack of a single approach to the interpretation of the concept of “trade”, the use of synonyms for the terms “trade” and “trade activity”. Another reason is the lack of clarity of definition, and sometimes the identification of the concepts of “electronic commerce”, “electronic trade” and “electronic business” (which also leads to the use of these

terms as synonyms). At the same time, the concept “electronic trade” in the specialized literature corresponds to synonyms such as “virtual trade”, “Internet trade”, “it-trade”, “online trade”. At the same time, the most commonly used term is “electronic trade” (e-commerce).

The systematization of different points of view of domestic and foreign scientists regarding the definition of the essence and the ratio between the concepts of “e-commerce” and “electronic trade” allows saying the following. The concept of “e-commerce” in its content is wider than the concept of “electronic trade”. In understanding the essence of the concept of “e-commerce” the authors of this article join the minds of those scientists and experts who believe that e-commerce covers not only trade operations, but also various types of commercial activity. In particular, the subject of e-commerce may be trade, distribution agreements, commercial representation and agency relations, factoring, leasing, building of industrial facilities, advisory services, engineering, purchase or sale of licenses, investments, financing, banking services, insurance and other forms of industrial or entrepreneurial cooperation, market research, search of a commercial partner, payment transactions [5, p. 29]. Interpretation of the concept of “electronic trade”, which is divided by the authors, is to understand it as a type of economic activity, where the object of action is the exchange of goods, the purchase-sale of goods, as well as customer service via the Internet, and where after the completion of the electronic action happens the transfer of property rights or the right to use the product or service to the buyer. Electronic trade is only one of the components of e-commerce and studies the implementation of purchases with using computer networks [6, p. 201].

In the Law of Ukraine No. 675-VIII on 3 September 2015 “On electronic commerce” term “electronic commerce” is used to mean “relations aimed at receiving profit, arising in the course of making acquisitions transactions, change or termination of civil rights and obligations, carried out remotely with the use of information-telecommunication systems, resulting in the participants in such relations, there are rights and obligations of property character” [7]. Also the said law defines the concept of “electronic trade” as “economic activity in the field of electronic purchase-sale, sale of goods in a distance way by the buyer through the commission of electronic transactions with using information-telecommunication systems” [ibid]. In the Order of the Cabinet of Ministers of Ukraine No. 386-r on 15 May 2013 “On Approval of the Strategy for the Development of the

Information Society in Ukraine” [8], electronic commerce (e-commerce) is defined as a form of trade goods and services through information-communication technologies, which includes all financial and trade transactions that carried out with using information-communication technologies, and business processes associated with such transactions. The same document also defines the essence of the concept of “electronic economy” (e-economy) as a form of economic relations in the field of production, distribution, exchange and consumption of goods, works and services provided in electronically through information-communication technologies. Despite the wide range of legislative acts that regulating the activities of enterprises of the market information services and electronic trade, according to domestic experts, today’s legislation in this area is scattered, fragmented, unsystematic character.

As already mentioned, the global market of electronic trade is growing steadily. In a global scale, this niche market in 2017 showed a dramatic increase (by 16%), while reaching a level of 1.5 trillion dollars USA. [4]. According to analysts of the PayOnline Center, the growth of the e-commerce market is at the expense of countries such as China, USA, Great Britain, Japan, Germany [9]. Analytical studies of the dynamics global market of electronic trade have revealed the following pattern: the more developed the economy of country, the greater the volume of its online trading market. This is especially well seen in the example of the West counties, and in recent years – in Ukraine. In Table 2.3 represented the top-10 national markets of electronic trade (as of early 2016). In addition already mentioned above developed economies, to dozens of countries-leaders in volume of the studied market entered France, South Korea, Canada, Russia and Brazil. The world leaders on the market are China (the volume market of e-commerce – 562.66 billion dollars USA) and the USA (349.06 billion dollars USA): the volumes markets of e-commerce of economies these countries several times exceed the volumes markets of other countries in the first ten the world. Thus, the volume market of e-commerce of China and USA exceeds the volume market of the Brazil by almost 30 and 20 times respectively. Even the Great Britain, ranked third in the list of leaders, has the volume market of 6 times and almost 4 times less than in China and USA respectively.

In Table 2.3 also features are displayed the structure of national markets of electronic trade depending on the type of devices used for purchases. Most of the purchases on the market come from stationary

Table 2.3

Top 10 national markets of electronic trade [9]

Country in the ranking (market volume, billion dollars USA)	Features of the market
1. China (562.66)	33% of purchases come from mobile devices (tablets and smartphones), 67% – from stationary computers. The average age of an online buyer is 25 years. Shopping is the most dynamic online activity
2. USA (349.06)	13% of purchases come from tablets, 15% – from smartphones, 72% – from stationary computers. 72% of small and medium enterprises do not trade online
3. Great Britain (93.89)	12.1% of purchases come from tablets, 16.5% – from smartphones, 71.4% – from stationary computers. 33% of online sales occur after 6 p.m. Online trading is 30% of the country's economy
4. Japan (79,33)	6% of purchases come from tablets, 46% – from smartphones, 48% – from stationary computers. 97% of Internet users make online purchases. The favorite online activity among the country's residents is e-mail reading
5. Germany (74.46)	11.5% of purchases come from tablets, 16.2% – from smartphones, 72.3% – from stationary computers. Most open the e-mail often in the morning. Half of online sales come from Amazon and Otto
6. France (42.62)	8.1% of purchases come from tablets, 11.1% –from smartphones, 80.8% – from stationary computers. Only 68% of French people use the Internet. 19% of purchases are made on foreign sites
7. South Korea (36.76)	1% of purchases come from tablets, 50% – from smartphones, 49% – from stationary computers. The fastest Internet speed in the world. Most people make purchases from 10 to 12 p.m.
8. Canada (28.77)	7.5% of purchases come from tablets, 8.7% – from smartphones, 83.8% – from stationary computers. 45% of purchases are made on foreign sites. About 70% of smartphone users buy through mobile devices
9. Russia (20.30)	12% of purchases come from tablets, 8% – from smartphones, 80% – from stationary computers. 13% of customers buy online. The most popular payment method is cash in delivery
10. Brazil (18.80)	4% of purchases come from tablets, 8% – from smartphones, 88% – from stationary computers. 18% of all online stores sell clothes and accessories. Only 8% of purchases are made through smartphones

computers: in China – 67% of total purchases, in the USA and Great Britain – up to 72%, in France and Canada – more than 80%. Japan and South Korea are leaders in purchasing smartphones – up 49%. The average age of an online buyer in the world is 25 years. Shopping is the online activity, which is fastest growing among modern Internet users.

Ukraine is not yet among the top leaders of electronic trade in Europe and the world. But leading experts believe that the market for such trade in Ukraine, in the context of growth and prospects, is one of the most attractive. The dynamics of the volume market of electronic trade in Ukraine for the period 2014-2017 is presented on Figure 2.10. During this period the volume of the investigated market increased from 19 to 46 billion UAH, that is, almost 2.5 times. The growth of the market in 2017 relative to 2016 is almost 35%, which far exceeds the percentage increase of online sales in a global scale, that is, on the world market level and national markets of e-commerce of developed countries (17-18%).

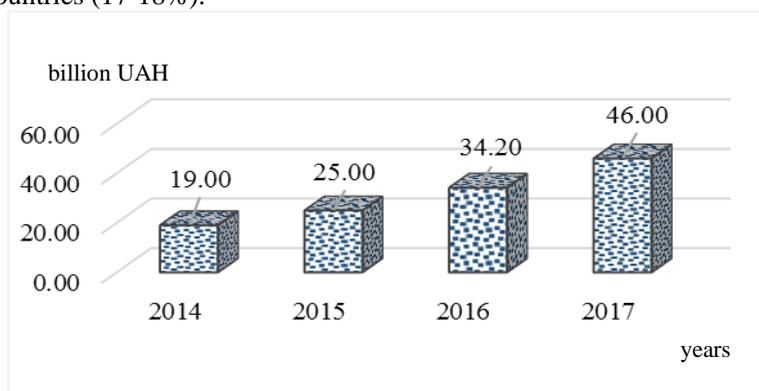


Figure 2.10 Dynamics of the volume market of electronic trade in Ukraine, 2014-2017, billion UAH. [10, p. 33]

According to experts, 60% residents of Ukraine use the Internet, but only 34% of them make online purchases (for comparison: in the USA such purchases make 70% of Internet users). In total, almost 20% of Ukrainians regularly buy through Internet. The top-10 categories and groups of goods that most people of our country buy online: clothes – 45% of the total number of all buyers in the Internet, electronics – 52%, cosmetics and perfumes – 34% [11].

It is estimated that in the near future on the Ukrainian market of electronic trade will also have a high demand on the purchase through

Internet of so-called FMCG-products, including foodstuffs (fast-moving consumer goods – goods of everyday demand, which include food, household chemicals, beer and cigarettes, pet food). Also, is expected the growth of demand for electrical equipment – electric tools, generators, electric motors. Approximately 45% of all online buyers in Ukraine at least once a year make purchases in social networks. At the same time, the popularity of Facebook as an online shopping network is growing, and VKontakte and Odnoklassniki, on the contrary, are decreasing. The presence of the Internet in the actions of buyers experts estimate at 80%, which means: before going to the store, in 8 out of 10 consumer’s search of information, compare characteristics and prices in the Internet [11].

According to the Factum Group in July 2017 the list of Top-10 most visited Ukrainian Internet stores was headed (by the number of unique users who at least once a month visited the e-store): “Rozetka” (66.7 million visits), “Citrus” (15.5 million), “ALLO” (13 million) [12]. The top-10 online stores for traffic are presented on Figure 2.11.

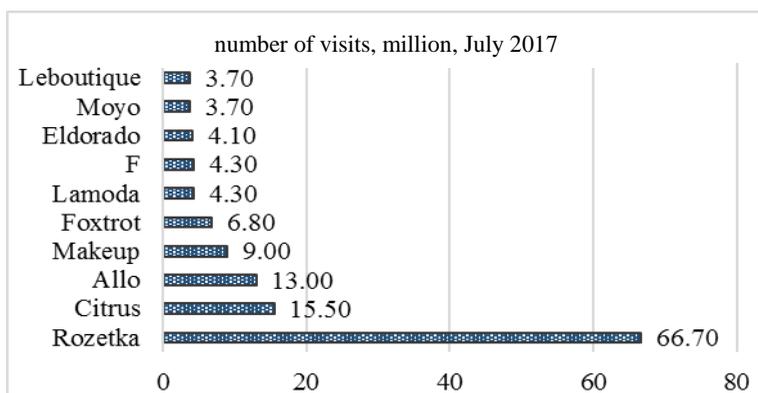


Figure 2.11 Top-10 online stores for traffic [12]

In general, experts distinguish four categories of major players on the national market of electronic trade: Internet stores, price aggregators (price comparison sites), marketplaces (intermediaries between sellers and buyers in e-commerce), and classifieds (sites for ads). These categories are grouped by 20 major players market of e-commerce, which share each other the attention of the Ukrainian audience of consumers and customers (Table 2.4).

Table 2.4

Distribution of the main “players” (sellers) of the Ukrainian market of electronic trade (electronic sales) by categories [3]

Comfy.ua Allo.ua Foxtrot.com.ua Citrus.ua F.ua Moyo.ua Stylus.ua Eldorado.ua Mobilluck.com.ua Elmir.ua	Hotline.ua Ek.ua M.ua Pn.com.ua Sravni.ua Price.ua	Prom.ua Rozetka.ua Bigl.ua Privatmarket.ua	Olx.ua Besplatka.ua
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It should be added that a considerable part of Ukrainian consumers and customers goes to foreign sites: Aliexpress.com, Ebay.com, Amazon.com. On audience of Ukrainian online buyers also claim social networking, information platforms, Youtube and a large number of small new players.

It should be noted that currently on the market of electronic trade, trade enterprises successfully apply four types of strategies:

1) maximum coverage. This is a marketplace with commodity positions that are presented “comprehensively”, a wide range of prices, sellers and sales regions. Most typical representatives: Prom.ua, Bigl.ua, Rozetka.ua, Privatmarket.ua;

2) expansion structure. Bulletin boards and price-navigators are characterized by the maximum coverage of regional queries, a very rapid response to the change on user demand, constant search of new keyword ties. These include Olx.ua and Besplatka.ua;

3) the target for leaders in the category: selected a limited number of goods and all efforts are directed towards them. Example: Apple, Samsung, Xiaomi etc. Stylus.ua, Citrus.ua, Rozetka.ua, Allo.ua;

4) mixed model: combination of priorities and expansion of structure with moderate expansion identifiers of product positions [3].

In recent years in Ukraine have emerged quite favorable conditions for the development of electronic trade, however, there are a number of factors that hinder its development: insufficient development of the network and electronic payment system, the impossibility of providing a high level of security of data exchange between participants of electronic trade, issues protection rights intellectual property,

undeveloped legal framework of regulation electronic trade, lack and insufficient number of specialists capable of working in the system electronic trade, etc. [13].

The conducted research makes the following conclusions. The current stage of the rapid development of trade enterprises is due to the accelerated deployment of information systems in all spheres of public life, fundamental changes of the traditional ways of doing business, the emergence of electronic commerce and electronic trade. The absolute leaders for the scales development of national markets of electronic trade are China and the USA. Ukraine is currently not applies to countries-leader the electronic trade in Europe and the world. But the market of such trade in Ukraine in the context of growth and prospects is one of the most attractive. On the market of electronic trade closely cooperate and compete the following groups of major players: Internet stores, price-aggregators, marketplaces and classifieds.

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**INVESTMENT IMAGE
OF UKRAINE:
CURRENT TRENDS**

Ukraine is on the way of integration, which requires the use of foreign approaches and priorities for the development of national investment policy of a new generation. Consequently, the investigation of ways to attract foreign capital within the context of present-day trends is urgent.

The following foreign scholars investigated the problems concerning international investment activity: R. Borsuk, Ye. Brigham, A. Razin, P. Fisher, I. Blank, Z. Body. The analysis of measures to attract foreign investments has been made by the next national scholars: Ye. Boyko, V. Voloshyna, Yu. Kovalenko, D. Lukyanenko, O. Mozhovyi, A. Peresada, A. Filipenko. Not so many scientifically grounded practical recommendations are presented nowadays to increase the stimulation and regulation of investment activity within the context of attraction of

foreign investments directed to the development of innovative processes in Ukraine.

The term “investment” is connected with the Latin word “invest”, which means “to put into”. The term “investment” is considered by modern scientific literature as the putting of capital into with the aim of further enrichment. In 60-s of the 20th century, the theory of direct foreign investments was developed as a separate sphere of investigation owing to Canadian economist Stephen Hymer, who differentiated direct and portfolio investments. He noted that business management and long-term period are key features, according to which direct and portfolio investments are differentiated [1].

Having analyzed scientific sources, we have summarized approaches to the definition of the essence of “direct foreign investments” (Table 2.5).

Table 2.5

Polysemy of definitions of “direct foreign investments”

Author	Concept content
1	2
The Law of Ukraine “Regime of Foreign Investments” [2]	It is all types of values put into objects of investment activity by foreign investors.
S. Hymer [3]	Direct foreign investments is the term that describes the operation of receiving physical assets abroad where a current control is made by multinational company in its native country.
MCF and OECD [4]	Investments are considered direct if they are made abroad to widen the production of goods and services, buy of goods for import to the country of base or for export to the Third Countries.
WTO [5]	It is the type of investments, where the resident, investor of a country (host country) allocates its assets in another country (country-recipient) under conditions they receive (keep) control over these assets.
United Nations Industrial Development Organization [4]	Net flow of investments to have impact on company management for a long time (10% from stocks and shares having the right of vote), which is located in another country comparatively with country-investor. They are sum of investments into shares, reinvestment of income, other long-term and some short-term capital flows.

Table 2.5 (the end)

1	2
J. Dunning [6]	Investments are made abroad but in country-investor. Control over resources, which are transferred, is under investor. They consist of the set of assets and intermediate products such as capital, technology, skills and knowledge in the sphere of management, access to markets and entrepreneurship.
A. Peresada [7]	Direct investments are made as a rule without financial mediators into productive funds in order to have income and manage a company. Sometimes, investor increases direct investments to have a control packet of shares.
O. Rohach [8]	Real investments into companies, lands, equipment, technology and services, which make resource base for business expansion abroad.
S. Teslya [4]	It is tangible and intangible capital, which is invested by country, company or entrepreneurs into foreign companies abroad to get income for a long period and have the right to take part in managerial decisions.

Source: developed by authors according to data [1-8;]

Having examined definitions we should note that direct foreign investments is capital put into a company abroad that supports economic interest for a long period of time owing to investor's control over an object of investment and provides getting income. We should state that in Ukraine, minimal share of a foreign investor is statute capital is not less than 20% [3], in the USA, it is 10%, in EU countries – 20-25%, in Canada, Australia and New Zealand – 50% [4].

Nowadays, new industrial economy of East Asia and Latin America is a striking example. In four countries-members of Association of South East Asian Nations (ACEAH) – Malaysia, Philippines, Indonesia and Thailand – foreign capital flow into some industrial spheres (electronics automobile industry) supported the transformation of the structure of national economy and their specialization from exporters of agricultural products and mineral raw materials to great producers and exporters of final industrial products.

The effect of impact of direct foreign investments on economic development is very important that depends on the level of qualification of human resources in host country. There is a close interconnection between foreign investments and the level of education of busy persons. We can take Samsung Corporation for a sample, which invested US \$

830 mln. into creating a new production, which is specialized in producing mobile phones and electronic components in 2012 and US \$ 1 bln. in June/2013. It created more than 2000 new places of work and supported getting new knowledge and technologies for host country [9].

We should state that forms and objects of investment do not limit foreign investors. Investments can be made in the form of participation in companies (including their creating), obtaining shares of acting companies, creating subsidiary companies or other separate divisions of foreign legal persons, buying real estate or personal property, funds, right for land and the use of natural resources on the territory of Ukraine, obtaining another property rights, keeping economic activity on the base of agreement about allocation of production, in other forms, which are not forbidden by the Law of Ukraine [10].

Scientists state that the national image supports forming conditions where economy becomes favorable for investments, supports protection of investor from investment risks, stimulates to solve social problems, supports a high level of employment of population, allows renewing of production, modernizing and increasing of the main funds of a company implementing new technology etc. However, unfavorable investment climate depresses economic development, deepens economic, social, institutional and other problems [1].

Ukraine can be a leading European country with direct foreign investments. The following competitive advantages show this [11, 33]:

- a big territory (603 628 km²);
- favorable geographical location (between Europe and Asia, the North and South of Europe) and a border with European Union;
- agricultural prospects (a high fertility, according to it Ukraine has a leading position in the world);
- rich natural resources (coal, iron and manganese, sulphur, mercury, titanium, uranium, granite, marble, mineral salts, gypsum, alabaster etc);
- favorable climate for all business (absence of tornado, tsunami, droughts, dangerous insects, disasters);
- a high level of scientific investigations in many scientific and technological spheres and availability a considerable scientific and technical potential;
- cheap qualified labor force;
- well developed infrastructure – pipelines, transit terminals, railways and automobile roads, electric nets, seaports.

Table 2.6

Factors forming investment attractiveness at micro level (countries)

Factors		
Institutional	Economic	Social
<ul style="list-style-type: none"> – national and foreign political stability; – guarantee of rights and freedom of a person; – the level of national impact on economy of a country; – trade policy of the country; – the level of integration of national legislature into the world legal field; – stability of economic and fiscal law; – protection of intellectual property of the country; – custom policy and participation in world organizations; – protection of rights of national and foreign investors. 	<ul style="list-style-type: none"> – common economic assessment and stability of national currency; – rates of increase of GDP; – taxes, tariffs, privileges; – possibility of capital repatriation; – characteristics of banking system and its services in economy of the country; – ecological surrounding: requirements of standardization, quotas and penalties in economy of the country; – currency and financial risks. 	<ul style="list-style-type: none"> – the level of social public development, social conditions and life of population of the country; – tolerance of society concerning other religions and nationalities of the country; – e level of political activity of the population of the country; – the level of crime-pregnant situation in the country; – e level of the development of trade union movement in the country.

Source: developed by the authors according to the data [12]

However, the majority of competitive advantages stated above, unfortunately caused by achievement of Ukrainian economy and natural possibilities.

We chose the methods developed by European Business Association to make objective assessment of investment attractiveness of the country (Figure 2.12). The given methods allow defining index of investment attractiveness – integral indication based on characteristics of investment climate as integral political, economic, legislative, regulatory and other reasons that define the level of risk of capital investment and the possibility of their effective use [13].

38% of businesspersons are not satisfied with investment climate. Investors suggest that business surrounding of Ukraine was not changed considerably. The main reasons, which do not satisfy investors are the next: a high level of corruption (46.1%), absence of trust to juridical system (40.6%), absence of land reform (39.5%) and technical barriers

in trade (8.6%). Nevertheless, 28% of experts consider investment climate of Ukraine as attractive and that it has the following positive changes [15]:

- considerable development of electronic services;
- digitalization of economy.

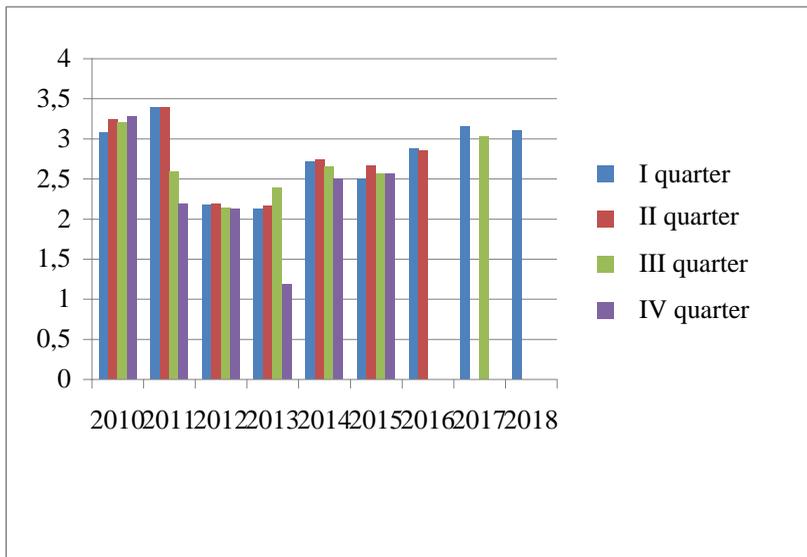


Figure 2.12 The index of investment attractiveness of Ukraine during 2010-2018 (by the quarter) according to the data of European Business Association

Source: developed by the authors according to the data [14]

In Figure 2.12, we can see that the lowest level of the index of investment attractiveness is observed in the 4th quarter in 2013 – 1.81, and the highest is observed in the 1st quarter in 2011 – 3.43. In the first quarter in 2017, the index left a negative place for the first time since 2011 and achieved 3.15 points. In the end of 2017, the index again fell to 3.03 points according to 5-points scale. According to the last data in the 1st quarter in 2018, the index of investment attractiveness is 3.10 points. According to the methods developed by European Business Association, the index of investment attractiveness has different characteristics depending on the data shown in Table 2.7

- on the base of expert inquiry of 128 leaders of companies-members of European Business Association, it was defined

Table 2.7

The characteristic of the meanings of the index of investment attractiveness according to the methods developed by European Business Association

Meaning	Characteristic
0-3	Negative
3	Neutral
5	Positive

Source: developed by the authors according to the data [14]

- adoption of the Law “On Currency and Currency Operations”;
- adoption of the Law “On anticorruption Law”;
- automatic compensation VAT.

The following main risks prevent capital investment: law rates of reforms, insufficient protection of rights of foreign investors in Ukraine, imperfect legislative base, corruption [15].

The scholars from the Razumkov’s Center made an expert investigation about positive and negative features of image of Ukraine, which have the considerable influence on investment attractiveness (Table 2.8).

Table 2.8

Characteristic of national image of Ukraine

Positive features	Negative features
<ul style="list-style-type: none"> – steady national character; – high level of ethnic culture; – absence of chauvinism and big national ambitions; – prospects of tourist development; – high potential of agro industrial complex; – geopolitical location of the country. 	<ul style="list-style-type: none"> – corruption, irresponsibility, incompetence of national officials; – close nature of state body; – unstable legislature; – delays of making reforms, their discrepancy; – unfavorable investment climate, – advantage of declarations above practical actions; – absence of own policy concerning forming international image.

Source: developed by the authors according to the data [12]

We should analyze investment climate of Ukraine during the last three years investigating positions of the country in international ratings (Table 2.9).

In the rating of the countries according to investment attractiveness

Table 2.9

Position of Ukraine in the world ratings

Rating	2015	2016	2017
International Business Compass	79	130	130
Doing Business	96	81	80
The Global Competitiveness Index	79	85	85
Index of Economic Freedom	162	162	166
FDI Index	0.120	0.124	0.124

Source: formed by the authors according to the data [16; 17; 18; 19]

BDO International Business Compass (IBC), formed by Hamburg Institute of the World Economy (HWWI) together with German auditor company BDO AG, in 2016, Ukraine fell to 41 positions comparatively with the position in 2015 and it has 130 position among 174 countries. In 2017, Ukraine is still at 130, which is explained by its political unstable situation, corruption, unsatisfied state of authority and ineffective regulatory politics [16].

According to the rating of the World Bank Doing Business 2017, Ukraine is on the 80 position among 190 countries of the world according to business performing, it rose in 1 position. Comparing 2015 and 2016, Ukraine improved its positions according to the next indications: registration of a company (from 24 to 20 position), protection of minoritarian stakeholders (from 101 to 70 position), support of fulfillment of agreements (from 93 to 81 position), electric networking (from 140 to 130 position). However, in some spheres indications became worse, in particular: international trade (from 110 to 115 position), permissions for building (from 137 to 140 position), solution of problems with solvency (from 148 to 150 position), taxation (from 83 to 84 position), registration of property (from 62 to 63 position), access to credits (from 19 to 20 position) [17].

According to the Global Competitiveness Index 2017 calculated by using the methods of the World Economic Forum, Ukraine is on the 85 position among 138 countries for two years and it lost 6 positions in 2015. The World Economic Forum stated the next problems in Ukraine: business operations, corruption, political instability, ineffective government bureaucracy, inflation, access to finance, unstable authority position, taxation, currency regulation etc [18].

According to the Index of Economic Freedom 2017, composed by cooperation between The Heritage Foundation and The Wall Street Journal, Ukraine fell in 4 steps comparatively with those in 2016 and in 2015, and it is on the 166 position among 178 ones and it belongs to the

group of countries where economic freedom is depressed. The authors of the rating state that even where there are some changes, Ukraine demonstrates the lowest position in economic freedom in Europe during seven years.

According to the Foreign Direct Investment Index, Ukraine improved its positions from 0.120 in 2015 to 0.124 during 2016-2017, but the economy of the country is insufficient open for direct foreign investments [19].

Law positions of Ukraine in examined ratings show unfavorable investment climate and it is the result of worsening of macroeconomic indications. Therefore, extensive complex measures directed to improving of conditions for investors' activity, widening of mechanisms and instruments of investments and realization of investment projects should be preferable for forming favorable investment climate in Ukraine. We suggest that the following steps should be made to intensify investment climate:

1. Decrease administrative barriers by liquidation bureaucracy and clear system of business regulation;
2. Support of stable legislature in investment sphere;
3. Creating modern system of national guarantees to protect foreign investments and regulating commercial disputes between subjects of investment process;
4. Implementation of economic mechanisms of risk insurance for foreign investors;
5. Stabilization of banking system, prevention of further bankruptcy of financial institutions;
6. Reforming of taxation system in Ukraine;
7. Support of competitive surrounding.

Consequently, implementation of the stated above measures promotes increasing the level of investment climate, which influences foreign investments and as a result, it supports forming positive investment image of Ukraine at the world field.

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**SCIENTIFIC BASES
OF INTEGRATED
ENTERPRISE
DEVELOPMENT
STRATEGY
FORMATION**

Despite the fact that the basis of the national economy is the activity of individual economic agents, the need to combine economic resources and potential, improve the sectoral structure of the economy actualize the need to improve the efficiency of the operation of both individual enterprises and production-economic systems, technical and implementation special economic zones, trade and industrial zones, oriented towards the use of regional or local competitive advantages.

Integration as an economic category began to be explored at the beginning of the XX century in the process of intensifying the study of international integration processes and subsequently evolved in scope of organizational theories, transaction costs, logistics management, agency relations, information value, social exchange, etc. The generalization and the critical analysis of the interpretations of the category "integration" allow us to systematize the views of scientists in the main directions (integration as a scientific abstraction, integration as a process of organizational transformations, integration as a system aggregate of subjects, integration as a characteristic of the state of the subject (system)) and specify definition of the integration of business entities as a process of their organizational transformations and the creation of a complete economic mechanism with the aim of achieving a common strategic goal through the association of activities, strengthening the interaction and coordination of business processes, streamlining of competencies and responsibility, coordination of the use of resource potential.

Particular attention is paid to local integrated systems, formed as a result of a combination of different types of economic activity and individual parts of the technological process. Their creation and development are connected with the availability of local resource potential, which determines the prospects of management in agriculture

and forestry, hunting, processing industry, including trade and restaurant industry. Significant potential of the economy lies in the spatial development of production and trading systems. It is about solving the problems of equalizing socioeconomic imbalances in small towns and rural settlements in comparison with regional centers and large cities, which needs to stimulate the growth of production capacities and will promote increase of employment, improvement of purchasing power of the population, development of the domestic market.

As the experience of the economically developed countries of the EU shows (this refers to the integrated forms of business and the tendency to increase their activities in the areas of trade, tourism, banking, their significant market share and an important place in the national economy, the increase in the number of members of cooperatives and persons served by them; reduction of the number of cooperatives through their association into powerful cooperative unions, associations, diversification and deepening of international cooperation of integrated business forms), as well as effective functioning of the economic system, the function of realizing these tasks may be entrusted to consumer cooperation. The objectivity of this conclusion is due to the peculiarities of this form of management: - attraction of local raw material, labor and financial resources; - high level of motivation and control of efficiency of activity due to the fact that the members of the cooperative are both the owners of the company; - savings in production and consumption costs through the use of volunteering benefits; - solving social needs of less developed territories and separate sections of the population; - experience in servicing, cooperating with the rural population and functioning in rural areas; - orientation of cooperative enterprises and organizations for realization of the social mission of the system; - experience in creation and management of local production and consumer systems; - expansion of internal integration both between the subjects of consumer cooperation in one sphere of activity, and between cooperative enterprises of different industries.

Currently, consumer cooperation of Ukraine unites more than 150 thousand members and 1888 consumer societies, 182 district consumer associations and 177 regional consumer associations. The system of consumer cooperation as a multidisciplinary business entity for more than 160 years of existence has occupied a significant place in the country's economy. It carries out traditional activities (harvesting of agricultural products and their storage, primary industrial processing of agricultural and wildlife raw materials, production of goods, wholesale

and retail trade, restaurant industry) and other activities not prohibited by the current legislation of Ukraine (provision of services for markets, domestic, transport, educational services, etc.), organizes activities of cooperative objects mainly in rural areas and promotes social and cultural development of rural territories, takes part in the international cooperative movement. As N. Parkhomenko notes, all kinds of activities essentially represent a diversified economic complex of enterprises of consumer cooperation, with signs of certain integration processes, which have developed historically and embody the post-agricultural sector [5, p. 14].

The Ukrainian scientists emphasize the necessity and expediency of using historical experience and potential of enterprises of consumer cooperation in the processes of agrarian-industrial integration. M. Malik [4, p. 107] notes that an extensive network of objects of consumer cooperation can effectively interact with agrarian cooperation; ...on the basis of trade, procurement and processing facilities of consumer cooperatives it is possible to create a model of integrated cooperation in the agrarian sector; A. Drabovskyy [2, p. 66, 184] considers it objectively necessary to deepen the integration of cooperative enterprises in order to adapt to the market and distinguishes the content of mutual obligations of participants of the cooperative integrated system; G. Cherevko [1, p. 28] emphasizes the attractiveness of the prospect of the integration of Ukraine's consumer cooperatives into integration structures, given the fairly even dispersion of cooperative enterprises in the regions of the country and the long-term experience of integration cooperation in the agro-industrial complex; G. Sklyar [7, p. 12] notes the formation of conditions for the use of existing infrastructure of consumer cooperatives on the basis of a social partnership for the sale of products of rural households and farmers, and offers an integrated model for the development of consumer cooperatives.

At the same time, the researchers of the development of consumer cooperatives do not focus on the reasons for the disruption of integration links both within and outside the system, limited to the identification of the causes of crisis phenomena in the cooperative economy as a whole as a consequence of the overall financial and economic crisis in Ukraine. Currently, consumer cooperative enterprises are in difficult conditions as a result of objective macroeconomic (lower real solvent demand of the population, inflation processes, corruption and the shadow sector of the economy, increased competition on the market, significant tax

burden, lack of state support, limited availability of credit resources, etc.) and microeconomic (lack of effective development mechanisms, difficulties with the modernization of the material and technical base and technological processes, low p and the introduction of innovations, the lack of own current assets, etc.) factors, are reducing the volume of activities in the rural market, are losing competitive positions. At the same time, there are significant integration motifs from enterprises and organizations of consumer co-operation to participate in the formation of local integrated systems (Figure 2.13).

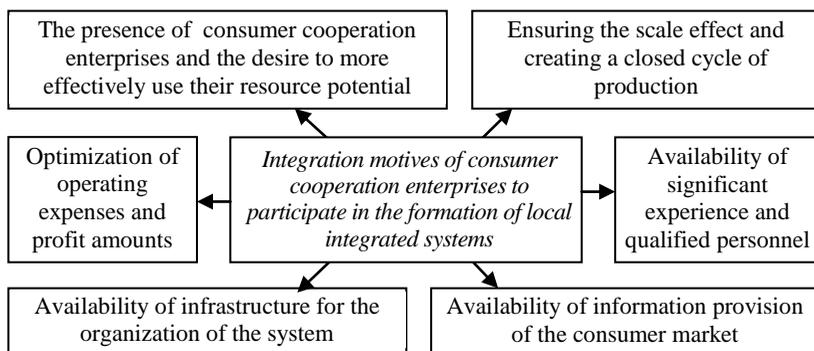


Figure 2.13 Integration motives of participation of consumer cooperation enterprises in creation of local integrated systems

The importance of strategic orientation towards the integrated development of consumer cooperative enterprises also confirms the activation of scientific researches of their peculiarities in this sphere of economy, which are related to: 1) the problems of demarcation and use of cooperative property; 2) the multisector nature of the cooperative economy; 3) substantiation of effective directions and organizational forms of integration; 4) the specifics of the environment of cooperative enterprises functioning (territorial dispersion of economic entities, serviced contingents of consumers, low capacity of the rural consumer market, etc.); 5) insufficient state support and difficult economic conditions for the activities of the cooperative economy entities.

S. Itkulov proposed the strategy of integrated development of the cooperative sector of the economy. According to the scientist, the association in the cooperative sector is carried out in two ways: the intra-system integration of cooperative entities and the creation of a national cooperative sector of the economy [3, p. 17]. At the same time, the following aspects of the strategy are considered as the main ones:

economic (improving the efficiency of the cooperative sector, increasing competitiveness, increasing the contribution to solving socio-economic problems of the development of territories and the country as a whole), information (improvement of information provision of integrated development of the cooperative sector), legal (improvement normative legal basis), organizational (development of organizational forms of integration cooperation of cooperatives), social (implementation method in social cooperatives, enhancing their social responsibility).

Some scholars see integration in consumer cooperation as a component of flexible development along with restructuring. Let's emphasize the difference in the goals, means and direction of these processes: if the restructuring is carried out in order to increase the efficiency of the enterprise or to avoid the threat of bankruptcy by changing the composition of property, rebuilding cost centers and centers of responsibility, improving the management system, then integration, as a rule, is aimed at expansion market presence, increased competitiveness, product upgrades and technological processes, and is accompanied by the creation of a new integrated structure by uniting and the mutually agreeing activities of participants of consumer cooperative and noncooperative sectors. In addition, it is necessary to consider integration with the participation of consumer cooperatives as a process and as a result. In the first case, we see the unification of the previously united participants, the interpenetration of their resource potential, the mutual coordination of business processes, the formation of a common policy on the market and, as a result, mutual enrichment and obtaining new competitive advantages. In the second case, we see the state of integrity, the unity of the economic mechanism of the integrated structure, combined with the complex interconnections between its participants, structural elements, processes, flows. Therefore, integration with the participation of consumer cooperatives is an association of consumer cooperation enterprises with other actors of the agro-industrial complex on the basis of processes of specialization and concentration and creation of a holistic economic mechanism by coordinating economic interests, coordinating business processes and relationships, optimizing the sizes and joint effective use of resource potential, exchange of competences and knowledge for the achievement of a single integration goal.

From the position of the microlevel, the local integrated system involving the enterprises of consumer cooperation "procurement – processing – realization" acts in the form of integration of actors – its

participants. Therefore, an important aspect of creating and developing local integrated systems is to identify the initiators of this process. Stakeholders are both individual enterprises and decision makers at higher levels. The former gain from this competitive advantage, which is largely based on the synergy effect, cost savings resulting from increased scaling and increased innovation. Others - solving many economic and social problems. A prerequisite for the formation of integrated structures is the definition of the system of principles on which their economic activity is based (Table 2.10).

Table 2.10

Principles of creating local integrated systems

Principles	Characteristics of the principles
Priority	Ensuring the implementation of the strategic integration goal, taking into account the factors of the internal and external environment.
Innovation	Involves the use of the results of scientific research and own scientific and technical developments in the economic activities of participants in local integrated systems.
Efficiency	Based on the timely implementation of the socio-economic and organizational functions of the integrated system and ensuring its effectiveness.
Information support	Provides establishment of information links between participants of local integrated systems for the fulfillment of the main functions.

Given the need to specify the theoretical foundations of both the construction and management of the strategic development of local integrated systems, we note that the characteristics of each system are: elements; processes of their transformation, which turn input elements into the output; destination and functions; signs; goals and objectives; programs and solutions; structure.

Taking into account that the local integrated system of type “procurement – processing – realization” is an organized set of instruments of production, labor and provisioning infrastructure, which combines in the space and time procurement, processing and trade operations for quantitative and qualitative provision of queries. market, the multivariant model of the local integrated system with the participation of consumer cooperatives was proposed, in which participants of the integration processes (as subjects of the agro-industrial complex, and enterprises of consumer cooperation) and the interconnections between them; possible variants of newly created

integrated structures; combining the vertical technological process “procurement – processing – realization”; system and management mechanism (income and expenses, resources, functional processes, organizational and economic structures); resource integration potential and integration platform information integration.

Local integrated system of type “procurement – processing – realization” is economical, however, its social nature is urgent, first of all, given the connection with the location and the obvious impact on the socio-economic development in the area of management, the involvement of local raw materials and labor resources, their efficient use, development of human capital, strengthening of spatial and structural characteristics of social security, improvement of the quality of life of staff and their families.

The local integrated production and trade system does not correspond to a certain type of one, and for each of the classification features combines certain varieties. So, in the nature of the system, it is socio-economic, material, stochastic, artificial and microscale; by the level of construction – multielement, open, coordination-hierarchical, organized, complex and mixed; by the level of functioning – multifunctional, equilibrium, multipurpose, effective and efficient; according to the level of development – adaptive, dynamic and stable.

Conceptual characteristics of the organization of consumer cooperation as an open system are described by S. Safronov, who from the standpoint of the general theory of systems, based on the theoretical multi-approach, determines the model of the system of consumer cooperation as: a set of uncontrolled input parameters; set of factors of influence of the environment; set of internal states, system characteristics and control signals; set of initial results [6, p. 24]. Thus, consumer cooperation as a type of association of economic entities, their interests and resources is an independent system, the subsystems of which, in turn, are local integrated systems, including “procurement – processing – realization”. The latter is formed by a set of interconnected subsystems and elements; its main features are a larger hierarchy and a higher level of complexity of construction, a significant social role, diversified, however, a clear functional orientation. The main parameters that allow the description of the system are: subsystems, elements, structure, inputs and outputs, state of the system, model of functioning, conditions of its equilibrium and stability, species characteristics (Figure 2.14). The first level is formed with the subsystem of procurement, processing, implementation. The

second – subsystems, limited by directions of activity, structural units, management functions (analysis, planning, organization, motivation, control), stages of the technological process of production-economic and commercial-marketing activities.

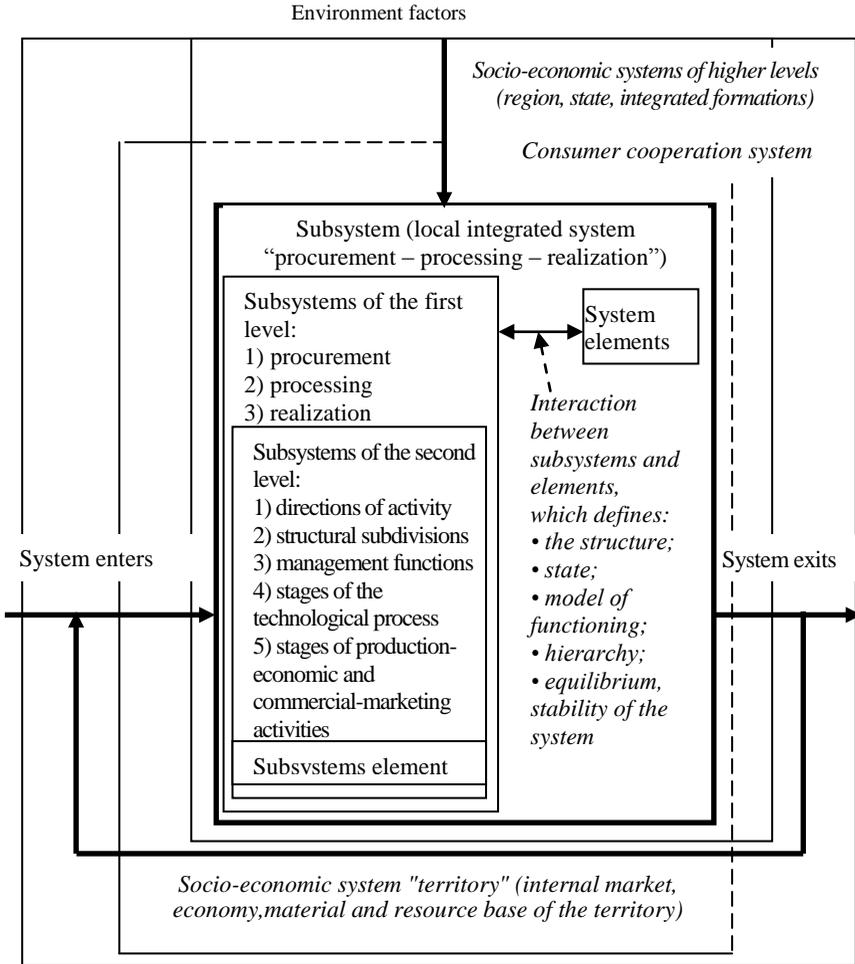


Figure 2.14 The place of the local integrated system “procurement – processing – realization” in higher-level systems

Creation of local integrated systems with the participation of consumer cooperatives should be carried out on the following principles:

- voluntary participation of potential participants in the integrated structure and coordination of functions, relationships and responsibilities between them;

- the basis for creating a local integrated system should be the cooperation, complementarity and interaction of participants;

- balancing the interests of the participants of the local integrated system - ensuring equal economic conditions for all participants;

- forming a local management system integrated system based on a combination of administrative functions of analysis, monitoring, planning, management and coordination;

- formation of a unified technological chain, uniting participants of local integrated systems for business processes of procurement, processing and marketing of products;

- ensuring the competitiveness of participants in local integrated systems through their adaptation to the conditions of the economic environment;

- the affinity of participants of local integrated systems with the simultaneous preservation of their own autonomy;

- public-private partnership – support for integration initiatives, cooperation between state structures and local integrated systems;

- conducting socially responsible activities and promoting the development of territories;

- expansion and increase of efficiency of use of technical and technological base of production;

- the availability of the local integrated system of labor resources necessary for functioning and the formation of a mechanism for managing labor productivity;

- the interests of participants in the local integrated system can be represented in the form of share participation, etc.

Formation of local integrated production and trade systems is promising, but requires strategic unity of the organizational model of their construction, planning of activities and development – the integration aspect of strategic accounting, so the assessment of the efficiency of the operation is evolving from the analysis of the state of financial and economic activity of the individual enterprise to the need of balanced system indicators usage.

Thus, the development of local integrated systems is able to strengthen the social function of consumer cooperation through solving public problems in rural areas. On the other hand, it is conditioned by economic realities and the weakening of the position of cooperative

enterprises in the domestic market. In this context, the strategy of integrated development of cooperative enterprises is aimed at significantly strengthening their competitive advantages, improving the efficiency of management, realization of existing economic potential.

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**INFORMATION-
ANALYTICAL ENSURING
OF STATISTICAL
MONITORING SYSTEM OF
DEVELOPMENT
AGRIBUSINESS OF
UKRAINE**

New approaches to producing management require the creation of an appropriate data array and the use of complex methodical and information processing programs.

The success of agrarian enterprises taking leadership positions on the

market is due not only to the efficiency and timeliness of making management decisions, but also opportunity to get timely, accurate and complete data on all the company's resources. In modern agriculture, for obtaining and processing such information are used integrated systems management of land assets, agrarian technology management and machinery monitoring systems.

In this context the problem of operational ensuring of managerial personnel reliable information is one of the main on the ways to improve the efficiency and competitiveness of agribusiness.

Efficient functioning of the modern accounting-analytical system on enterprises involves the creation of a system of managerial accounting, reporting and budgeting that takes into account functional-fundamental their features and allows to use the accounting information resources for the purpose of analysis, estimation and forecasting of the results of activity the agricultural enterprise and its structural departments [1].

The methodological and organizational-methodical aspects of the managerial accounting system, reporting and budgeting, which operate under the current conditions, do not fully reflect the sectoral peculiarities of economic entities, which in turn does not contribute to conducting qualitative accounting, analysis and formation and distribution of costs and incomes [2].

Managerial reporting is intended for use in the management of financial-economic activities of business entities, while its content, frequency, timing, form and procedure of compilation are determined independently by the enterprise. This is the main difference between the formations of managerial reporting from financial, the composition of which is clearly regulated [3].

In the study found that the most effective and productive is the construction of managerial reporting, in which the content and the procedure for its compilation is based on the principles formation of financial reporting. The methodical of compiling managerial reporting for an agricultural enterprise should focus on the fundamental principles that are determined by the sector specificity of activities the enterprise, as well as the specifics of the work a particular structural unit, the center of responsibility or the segment of activity. In this case, it is important to adhere the principle of isolation, since in determining the places of occurrence costs, distribution of production and financial resources separately considered not only the agricultural enterprise as a whole, but also its centers responsibility.

The structure of managerial reporting of agribusiness enterprises can

be represented as follows: 1) reporting on the financial position of enterprise includes managerial balance, managerial report on financial results, managerial statement of cash flows, drawn up either directly or indirectly; 2) reporting on the main indicators of activity the enterprise, each structural department, the center of responsibility, the segment of activity taking into account the specifics of crop and livestock sector (indicators of efficiency procurement of material resources, storage, production of agricultural products, sales, etc.); 3) reporting on budget execution in the context the “plan-fact” analysis.

The process of implementation the managerial reporting in an agricultural enterprise is characterized by the emergence of numerous situations when it is necessary to make decisions on standardization and unification of accounting procedures, financing of implemented projects that requiring an operational response group. If an enterprise has a complex structure then needed is additional staff that provides develop and support in the current state of accounting managerial standards.

The main thing in such a system is the introduction of a system of managerial accounting, reporting and budgeting of material costs in agricultural enterprises, which contributes to the comparison of actual costs with standards, as well as the proper organization of control over their availability, movement and evaluation, and is of paramount importance.

The system of managerial accounting, reporting and budgeting of material costs in agricultural production enterprises should be organized as follows: accounting-information ensuring the receipt of labor items (materials, seeds, agrochemicals, fertilizers, fuel, fodder, etc.), accounting-information ensuring of warehouse storage, accounting-information ensuring for the release of labor objects into production, consolidated accounting-information ensuring within the framework of synthetic and analytical accounting, formation procurement budget and managerial reporting (Figure 2.15).

Accounting and analysis of expenditures on costs and segments of produced agricultural products allow us to formulate a managerial report. Models of managerial reports on segments activity of agricultural enterprises will allow to conduct quality accounting and analysis of the cost price of agricultural products, control over the expedient and economical use of production and financial resources by types of agricultural products, and also to form operating and financial budgets.

In addition, we have substantiated the algorithm of construction of managerial reporting in an agricultural enterprise, which covers the

following stages: 1) definition of cost centers responsible for performing a certain amount of work; 2) distribution of cost items for each center of responsibility on the principle of controllability costs; 3) ensuring the congruence of the indicators of managerial reports with budget plans; 4) appointment of responsible employees for the provision of managerial reporting; 5) analysis of deviations actual indicators from the planned in order to identify unreasonable costs, identifying possible ways of preventing deviations that negatively affect on the financial result of an agricultural enterprise [2].

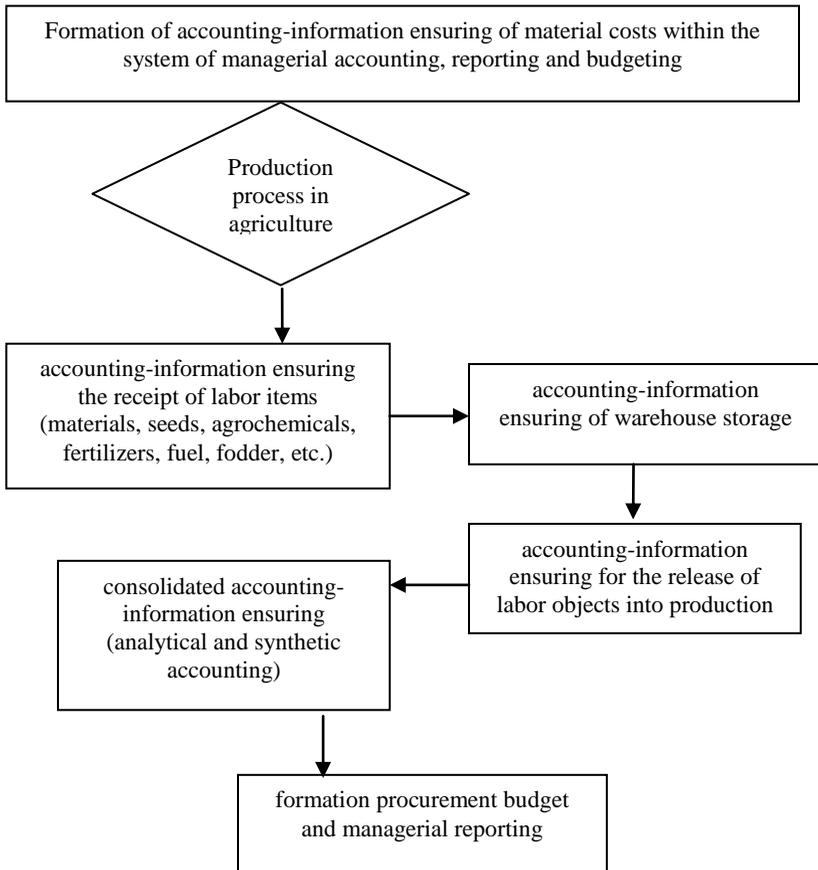


Figure 2.15 Formation of accounting-information ensuring of material costs within the system of managerial accounting, reporting and budgeting

Source: compiled by the authors

Managerial reporting of the centers responsibility costs of the agricultural enterprise, formed on the proposed algorithm, will allow meeting the information needs of farm management, operating control the costs at different levels of management, evaluating the activities of the divisions by the results of analysis reporting forms.

On the basis these data is possible develop and a higher level of analytical forms of managerial reporting depending on the requirements of managers. In order to ensuring management of information on the level of actual costs, as well as to determine the amount of coverage for individual business-processes it is proposed within the framework of managerial reporting to prepare a report that reflects the contribution of each center responsibility in the formation of financial result of activity the agricultural enterprise.

This report will determine the contribution of each center responsibility to the total profit an agricultural enterprise, establish lower bounds of prices, effectively evaluate the activities employees of specific structural departments as a criterion for their material incentives.

The budgeting system for agribusiness is considered as an innovative approach to management of agricultural production, the application of which contributes to more correctly define the goals of development the economic entity in the short and long term, to coordinate the interests of entities agroindustrial integration and to adopt on these basis quality management decisions [4].

The mechanism of implementation the budgeting system for agribusiness enterprises involves the definition of objects budgeting, the develop of operational (budget implementation, production, inventory, direct costs of materials, seeds, fertilizers, feed, direct labor costs, general production, marketing, general economic costs, budget profits and losses) and financial (investment budget, plan of cash flows, forecast balance) budgets on the basis of created accounting-information ensuring, calculation and analysis the respective indicators of activity the each structural departments, the center responsibility, the segment of activity the each budget, definition of amount the financial resources that provide financial stability and solvency of the enterprise, identifying reserves for attracting domestic and external financing, forecasting income, costs and capital. Thus, introduction into the practice of activity the agricultural enterprises of the system budgeting allows solving problems of optimizing financial flows, as well as balancing the receipt of funds and their use.

Formation a specific segments of activity the agrarian enterprises is based on the following requirements: 1) the segments of the enterprise must be in a single integrated complex within the specific territory of the enterprise itself or its structural divisions; 2) the segments will carry out specific by content and purpose agricultural and other works that are distinct from one another, use different agricultural and other equipment with different costs per unit of produced products; 3) provides for personal responsibility for the activity of a specific segment the enterprise, while it is necessary to determine the degree of differentiation responsibility for costs in each structural unit; 4) applied the uniform methods of distribution costs on all segments of activity the enterprise and produced agricultural products. This requirement will be implemented within the framework function of the system managerial accounting, reporting and budgeting implemented in a particular agrarian enterprise.

The generalization of costs, which are formed in each segment of activity the enterprise, should be based on the accounting and analysis of all costs during the reporting period. Each segment of activity the agrarian enterprise, formed within the framework of the system managerial accounting, reporting and budgeting, should not only maintain quality make managerial accounting, but also form the forms of managerial reporting and form operational and financial budgets. This process is proposed by us on the technologies big data [5], because in recent years domestic agribusiness enough quickly mastered modern IT solutions in the field of information technology and application of the CVP analysis method: the model “cost-amount-profit”, since this method allows the optimal distribution of production and financial resources by types of agricultural products and make decisions on their production.

Due to the volatility of many socio-economic indicators, the presence of numerous imbalances in the economy and need to assess the effectiveness of government policy in the field of agribusiness development it is necessary to ensure continuous monitoring and analysis of ongoing processes. It should be noted that today the statistical survey covered (as of 2017) 4535 units of economic entities in this field, of which 2612 are enterprises of agriculture, forestry and fisheries, which have the status of legal entities, or 59.9% of their total quantity that does not give a comprehensive picture the state of development agriculture in Ukraine.

To solve existing problems of information-analytical ensuring of

effective management of agribusiness development it is necessary to develop a new direction in the system of agricultural statistics in the form of monitoring, which, on the one hand, will allow the most accurate and prompt tracking of situational moments, and on the other hand, it will be the basis for qualitative analysis, modeling and forecasting the development of agriculture. Statistical monitoring of effective agricultural development, as a permanent monitoring system for the dynamics of indicators, should provide a comprehensive assessment of resources, sources and results of agricultural development at all levels of management. On its basis should be developed and applied in the management of mechanism influence on agribusiness factors [6].

The need to ensure a reliable assessment the efficiency of agricultural production management, as well as the bringing of accounting mechanisms in conformity with integration processes in the industry, which require the improvement of the organizational and informational-methodical basis of management, requires the use of modern statistical methods. The develop of information-logic model of primary statistical data involves the creation of an integrative element in the form a single list of units observation – producers of agricultural products on the basis of Unified State Register of Legal Entities, individual entrepreneurs, personal peasant farms and formation of a general set of objects observation.

Currently are used various local directories of economic entities – objects observation for various statistical observations. Therefore, their further integration in purpose to integrate primary data is not appropriate.

Such an approach to conducting statistical observations is based on existing methods of organizing public statistical research oriented on decentralized approaches to organization database. The primary reason for the location of information funds is develop of a specific form and complex of electronic data processing for each statistical observation, which also causes duplication of statistical indicators in various forms [7].

Thus, the system of statistical monitoring is a complete cycle of statistical research on agricultural development as an object observation, including an integrated set of statistical-analytical tools for monitoring and reporting information based on common methodological principles and information-technological decisions. The subject of study is the socio-economic processes in agriculture, the research method –

observation and quantitative assessment of the relationships between statistical indicators that characterize the trends of these processes, as well as the calculation of new quantitative characteristics and identification of qualitative aspects the business processes that occurring in agriculture. The purpose and tasks of statistical monitoring of agribusiness development are consolidation of information based on statistical indicators. The main content is the timely detection of disproportions in socio-economic processes and definition of perspective directions of agricultural development in a particular region, taking into account its specificity. Statistical monitoring in agriculture should become an effective method of information-analytical research, which combines elements of statistical observation and economic-statistical analysis.

The proposed approach to formation of statistical monitoring for observation changes of parameters in agricultural development can be presented in the form of a conceptual model, which includes: a set of objects observation, a list of problem-oriented directions and indicators; means of aggregation, formation of indicative estimation and presentation of information in the form of analytical substantiation of decisions perspective development.

The methodological aspect of creating a system statistical monitoring of agricultural development involves: determining the unit of statistical reporting and developing the structure of general population these units, as well as formalizing the criteria for selecting entities from the general population for make monitoring. Agriculture, as a problem-oriented direction of the economy, implies continuous objective observation of enterprises in a single scheme and database. As practice shows, the grouping of objects and the differentiation of the methods for collecting information in the context of large, medium, small and micro enterprises with qualitatively different characteristics and volume of indicators for each set causes loss of data and, accordingly, low completeness and representativeness of all information; definition the unit of type statistical observation, their typing, as well as the formalization of their relations with the units of statistical reporting; determination of the maximum possible degree of detail of the provided information; creation of program-methodical tools for ensuring the representativeness of information to management bodies (classifiers, schemes of compilation, preservation of ranges dynamics and possibilities of building forecast models).

The organizational aspect of realization statistical monitoring as a

method of monitoring for agriculture development of involves the creation of a tool through which an economic entity in due time would provide the necessary information in a specific list of statistical indicators in electronic form. The realization of this approach requires the integration of statistical accounting with primary accounting (formation of the so-called integrated collection of primary information), which will allow to give up the forms of statistical observation in the present appearance and introduce an electronic form of reporting. This eliminates inconsistency and duplication of primary statistics data, as well as maximum automates and unifies the process of collecting primary data. Integration of operational primary information into a single statistical base will allow refuse from numerous local electronic processing complexes and eliminating the incompatibility of information resources. As a result, will be simplified the regulatory part of government statistics, it will be possible to maximize expend the range of information services, and management bodies of agriculture will apply modern methods and technologies for analyzing and grouping primary data for solving situational issues.

Since one the directions of optimization the statistical information collection process involves the collection of data in electronic form directly from enterprises, from this point of view, this approach corresponds to the basic concepts of informatization and computerization of processes for the collection of primary statistical information. In the process of make monitoring analytically processed huge arrays of information, so it is advisable to use modern information technology data processing, in particular, intellectual analysis. In this case, the accumulated information contained in the data repositories realized on the basis of concepts of OLAP and Data Mining, is the information basis for the work of analysts. OLAP technologies allow providing quick access to data organized in the form of a multidimensional database.

The transition from a decentralized scheme of organizing collection primary data to centralize and further to electronic forms reporting creates opportunities in the part monitoring the process of collection the data and evaluation of their quality.

In order to objectively evaluate the completeness of collection primary data it is proposed to use the appropriate coefficient as the ratio of the number entities which of reported to the total of objects in the Register. To assess the quality of information that transmitted from the level of collection to the level of processing, introduced the concept

coefficient of quality, which is equal to the number indicators of monitoring, corrected at the data processing level, based on 10 thousand indicators. The coefficient of quality is calculated automatically, and therefore, it is objective nature. At the end of statistical observation carried out analysis the coefficient of quality and clarified the causes of its deviation from the normalized values.

Based on the results of survey, which covered 241 head of agribusiness enterprises were determined the main sources of information receipt (Table 2.11).

Table 2.11

Sources of information received by head of agricultural enterprises

The main sources of information	Voices	
	number	%
Mass media and printed matter	174	72,29
Electronic editions	123	51,04
Competitors and partners	101	41,9
Central and local authorities	98	40,66
Fairs, exhibitions-sales	52	21,58
Seminars, conferences	41	17,01
Meetings	39	16,18
Consulting firms, information centers	25	10,37
Confidential information	11	4,56

Source: own research

The above data is shown in Table 2.11 that the main sources of information for their significance to the heads of economic entities of the industry are: mass media and print and electronic editions, competitors and partners. Significant lag in information service is observed in positions: consulting firms, information centers, meetings, seminars and conferences.

As for the distribution of needs in commercial information of heads the economic entities, the most in demand is following information: information about sales channels of agricultural product and prices for it (81.4%), information about competitors (64.7%), energy prices and agricultural machinery (60.6%). To a lesser extent the heads of units' agrarian business are interested information about lessors (19.8%), information technologies and mass media (7.9%). Also in demand is information about promising varieties of agricultural crops and breeds of agricultural animals and poultry (51.2%), suppliers and buyers (49.1%), advanced technologies and partners for cooperation in production (36.4%).

All heads are unanimous in the fact that for effective management of an agrarian enterprise in modern conditions is required information that comprehensively characterizes the object of management, namely: financial condition; assessment of the state management; assessment of resource availability; assessment of needs in investment; auditor's conclusions; assessment of quality financial and statistical reporting.

A survey conducted showed that 81.3% of respondent-heads the agricultural enterprises recognize information as an independent production factor. However, only 39.7% of respondents noted the need the formation and use in the enterprise of an automated system management and information processing.

Conclusions

The developed statistical tool for determining the priority directions and assessing the effectiveness management of agribusiness development based on the indicators of statistical monitoring will create an opportunity the public authorities to timely correct plans and measures for the implementation programs of its development.

The practical application of the developed recommendations will provide a comprehensive system approach to the formation of information ensuring justification of managerial decisions on the development of agribusiness in Ukraine.

Consequently, at the market will receive maximum economic benefits and competitive advantages for the most part of the agrarian who will apply for needs the management of modern technologies analysis and structuring, for example, such as big data with purpose to receive timely the reliable relevant information about their own operating costs and production processes.

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EFFECTIVENESS OF IMPLEMENTATION OF INNOVATIVE PROJECTS OF THE ENTERPRISE

The growth of competition both on the domestic and international markets leads to the activation of innovation activity of business entities, since its results allow to create products that would meet the constantly growing and changing requirements of the market and provide them with high profits.

Realization of innovative activity of the enterprise requires the appropriate resource support. The volume of investments directed to financing innovative projects depends, first of all, on many factors: the size of the enterprise (the larger it is, the larger amount of investment in its innovation activities should be under equal conditions); the expected profitability and riskiness of investing in alternative to innovative activities of the enterprise (in particular, in increasing the production capacities of the enterprise for the purpose of production of traditional types of products); expected profitability and riskiness of investing in this innovative project; existing and those that by the need of the enterprise can attract; the volumes of investment resources. Consideration of these factors will enable a comprehensive approach to evaluating the effectiveness of investments in innovation activity of enterprises.

The works of many domestic and foreign scientists have been devoted to the problems of investment and innovation development of

enterprises, in particular, the evaluation of the efficiency of investing innovative projects: M. Denisenko [1], V. Kozik [2], A. Kuznetsova [3], I. Skvortsova [4], M. Khuchek [5], J. Schumpeter [6] and others.

The synthesis of literary sources suggests that there are a number of scientific approaches to determining the effectiveness of investment and innovation projects [1-6], the overwhelming majority of which makes it possible to evaluate the effectiveness of the project only after its implementation. In addition, most of the techniques involve the processing of significant amounts of analytical information, which is virtually impossible to gather in terms of unpredictable market of new innovative product.

In a dynamic market environment, a variety of information plays an important role in improving the efficiency of management of industrial enterprises innovative activities, which should give an answer to the choice of the best solutions for further investing in innovative projects.

The solution to this problem is possible through the establishment of a monitoring system as a management function, which involves the collection of information, its integrated assessment and prediction based on a certain system of mutually agreed and balanced indicators.

According to the author [7], monitoring should be considered as a complex process aimed at collecting information about the object being studied, with a view to further diagnose the situation. The authors of the economic dictionaries [8, 9], considering monitoring as an integral part of management, suggest conducting it for the purpose of research, in addition to monitoring and diagnostics, and also analysis of the object being studied. In the work of Y. Poburko [10] a universal definition of monitoring has been set out, which is defined as “continuous observation of the state of the object in order to prevent unfavorable deviations from the most important parameters. The systematic monitoring of the results of the activity, their correction – it is the essence of the monitoring”. Thus, monitoring is one of the methods for controlling the process of activity, identifying the trends in the dynamics of its development.

Ensuring of innovative development of domestic business entities, above all, depends on availability and accessibility of various sources of investment resources. The presence of limited investment in industrial enterprises necessitates an effective redistribution of them in different innovative directions and projects both before and during the implementation process. The development of innovative activity of industrial enterprises of Ukraine requires the allocation of a number of

basic parameters and properties, management influence on which will increase their level of innovation activity. The specificity of innovation activity, in particular, the high level of riskiness of its implementation, requires the creation of appropriate mechanisms and organizational structures for its implementation. These mechanisms and structures should ensure the fulfillment of the following main tasks:

- to create the appropriate level of informational support for the process of managing innovation activity at the enterprise, which will allow owners and managers to receive timely, complete and accurate information on the progress of implementation of innovative projects implemented by the enterprise and the expected indicators of those innovative projects to be implemented in the future;
- to optimize the amount of innovative resources that the enterprise uses (or plans to use), in particular the volume of investments directed towards the implementation of innovation projects;
- to organize the processes of accounting and control of innovation costs of the enterprise, its profits and revenue from innovation;
- to create opportunities for the operational regulation of the processes of implementation of innovative projects of the enterprise both at the stage of conducting research works, and during subsequent stages of the life cycle of the relevant innovations.

Execution of the above-mentioned tasks should promote the level of innovation activity of domestic industrial enterprises.

One of the main directions of improving the functions of accounting and control of innovation activity as part of the overall system of innovation management of the enterprise is to improve the registration of innovation costs. Grouping of investment resources of the company in terms of financing innovative costs is a prerequisite for assessing the effectiveness of investment support for its innovation activities. Obviously, such an assessment should include comparison of the amount of innovation costs with the amount of financial results that a particular enterprise receives from innovation. In this case, it is necessary to solve several tasks, the main of which are:

1. Determination of the length of the time period during which the comparison is performed. This period of time should be sufficiently large, taking into account the specificity of innovation activity. If for a certain year the value of innovative costs exceeds the financial results of the company's innovation activity, then in general this does not indicate that the innovative activity of the company is ineffective. Indeed, such activities are characterized by a significant level of risk, and the

presence of a time lag between the moment of investing and obtaining a result from its investment. Consequently, the duration of the time period during which the comparison of innovation costs with the results from the implementation of innovation activities should be several years (on average, not less than 5-10).

2. Determination of the value of financial results from the implementation of innovation activities. The conducted research shows that in the process of comparing the innovative costs of an enterprise with the size of financial results from the implementation of innovation activity as the latter it is expedient to accept the amount of discounted at the present moment of net cash flow (the amount of profits and depreciation) from investing in a particular direction of innovation activity of the enterprise.

3. Determination of the duration of the investment lag, that is the time interval from the start of investment in the development of new (improved) products until the beginning of receipt of income from their production. The duration of such a period of time at the stage of the preliminary assessment of the efficiency of investing in the innovation activity of the enterprise may be taken at the average level on the retrospective data on similar innovative projects that were implemented earlier by the given enterprise and (or) other enterprises of the industry.

4. Selection of integral indicators for assessing the effectiveness of investment support for enterprise innovation. As such indicators, it is advisable to adopt the most generalized indicators for evaluating the effectiveness of investment (in particular, innovative) projects, namely, the net present value of the expected return on the project and the index of return on the project.

Taking into account the foregoing, it is possible to propose indicators for assessing the economic effect of investing in innovative activities of the enterprise, which include:

- the indicator of the current effect of innovation, which characterizes the net current value of those innovative projects that began to generate income in a given period (year);
- the indicator of the retrospective effect of innovation, which characterizes the accumulated amount of net present value of those innovative projects that began to generate income in a certain prior period (in a year);
- the indicator of the predictive effect from the implementation of innovation activity, which characterizes the present (discounted) value of the net present value of those innovative projects that, according to

the prediction, will start to generate income in a certain subsequent period (in a year);

- the indicator of the cumulative current effect of innovation, which characterizes the net present value of those innovative projects that began to generate income over several consecutive periods (years);

- the indicator of the cumulative retrospective effect of the innovation activity that characterizes the amount of net present value of those innovative projects that have started to generate income for several successive previous periods (years) accumulated at the moment;

- the indicator of the cumulative predictive effect of the innovation activity, which characterizes the discounted value of the net present value of those innovative projects that, according to predicted estimates, will begin to generate income over several consecutive previous periods (years);

- the indicator of the cumulative effect of the innovation activity, which represents the sum of the values of the indicator of the aggregate retrospective effect and the cumulative predictive effect of the innovation activity of the enterprise.

The above-mentioned indicators of estimation of the economic effect of investing in innovation activities should be one of the important elements of the overall system for monitoring the investment support of innovation activities of the industrial enterprise.

The role of these indicators in the proposed monitoring system can be described as follows:

- the indicator of the cumulative current effect from the implementation of innovation activity for a certain retrospective period gives an opportunity to provide averaged over this period information on the effectiveness of investment in innovative projects implemented by the enterprise. If the value of this indicator is greater than zero, then it is possible to draw a preliminary conclusion that in general investment of investment resources into the innovative activity of the company was successful;

- the indicator of the cumulative retrospective effect from the implementation of innovation activity makes it possible to take into account the time factor in assessing the efficiency of the company's innovative costs incurred. In general, the more successful innovative projects were implemented in the first half of the retrospective segment, the higher value of the total retrospective effect of the implementation of innovation activities would be. Thus, the indicator of the total retrospective effect enables to assess the effect of the company's

innovation costs taking into account the time distribution of both these costs and financial results from the implementation of enterprise innovation projects. At the same time, the value of the cumulative retrospective effect is not a direct basis for making future investment decisions regarding further investment of the innovation activity of this enterprise;

- the indicator of the cumulative predictive effect of the implementation of innovation activity makes it possible, with a certain level of probability, to estimate the volumes of further investment of the innovation activity of the enterprise. If the value of this indicator is greater than zero, then it can be concluded that it is advisable to continue investing in the implementation of innovative projects by the enterprise;

- the indicator of the cumulative effect of the implementation of innovation activity makes it possible to carry out an integrated assessment of the efficiency of investment support for the innovation activity of the enterprise both in the past and in the future. It should be noted a somewhat paradoxical phenomenon, namely, in other equal conditions, the growth of the magnitude of the total retrospective effect (and this is possible, first of all, when the effectiveness of innovation activity at recent intervals is relatively low compared with earlier periods of time) may indicate deterioration of predictive indicators the cumulative effect of the implementation of innovation activity (if the trend of the level of efficiency of the innovation activity of the enterprise will last in the next predictive periods). Therefore, the indicator of the cumulative effect of the implementation of innovation activity makes it possible to provide a comprehensive assessment of its efficiency over the entire period during which the enterprise (or its specific owner) will innovate.

It is expedient to determine the duration of the retrospective period within a period of time during which the owner of an enterprise finances innovation activity and, accordingly, assess the amount of innovative costs and results from its implementation, depending on its share in the authorized capital of the enterprise. In other words, if a certain investor, a co-owner of an enterprise, invests in its innovative activities for several previous years and plans to invest in the next several years (the predicted period), then he must get a final assessment of how much such investment will generally be expedient and effective. For the solution of this problem the application of the indicator of the cumulative effect of the innovation activity implementation has been proposed.

If the total retrospective effect at the given moment will turn out to

be negative, it is generally a negative signal for the owner of the company, since it is not known in advance whether he will be able to foreclose this negative value in the future at the expense of revenues from future innovation projects. At the same time, there are three main reasons for the negative significance of the cumulative retrospective effect of the implementation of innovation activity, namely:

1) the presence of fluctuations in innovation costs and outcomes – it is possible that in recent years, not very successful innovation projects have been implemented (as was observed in some prior periods), but overall, the prospects for innovation of the enterprise are positive. It is obvious that in this terminology the fluctuations of innovation costs and results are the direct result of the increased riskiness of innovation activity, that is, the phenomenon which is inherent to it;

2) the presence of some ineffective areas of innovation activity by the enterprise. Under such conditions, the owners of an enterprise should review the content of their program of innovation by reducing (or terminating) funding of those areas that are currently unpredictable and, possibly, increasing the volume of investment in more effective areas of development and implementation of innovations;

3) the absence of perspective directions of innovation activity at the enterprise. It is possible that at this stage of the life cycle of the company it is expedient to completely freeze the implementation of its innovation program.

The answer to choosing the best solutions for further investing in the innovation activity of an industrial enterprise should be provided by a permanent monitoring system. This system should contain the following components (Figure 2.16):

- information about the composition and structure of the innovative development fund of the enterprise. This information should include information on the movement of investment resources directed at financing the innovation activity of the enterprise, in all areas throughout all periods of the retrospective period;

- information about the financial results of the innovation activity of the enterprise, which contains the net cash flow figures from the implementation of each innovation project, initiated at the beginning of its implementation, in terms of each period of time during the retrospective period;

- comparison of information about the composition and structure of the innovative development fund of the enterprise and the financial results of its innovation activity;

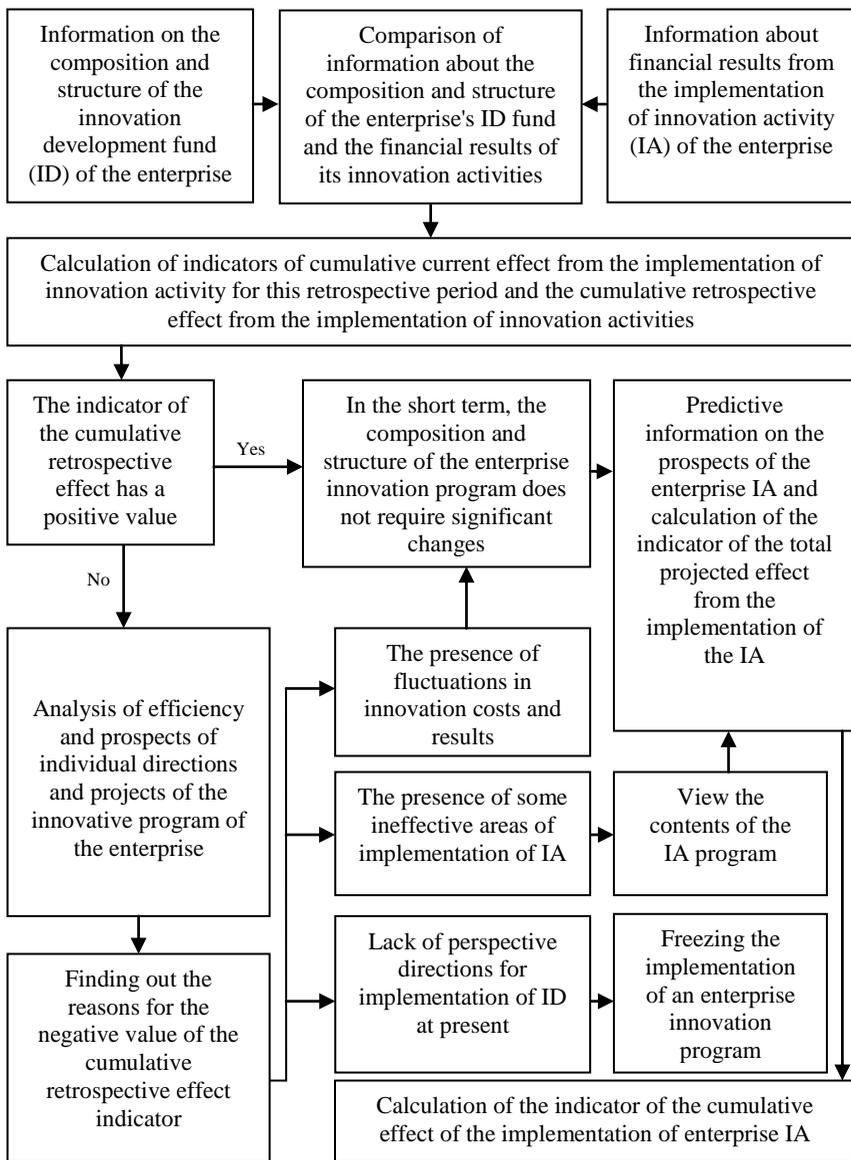


Figure 2.16 System of monitoring of investment support of innovative activity of the enterprise

- calculation of the indicators of the cumulative current effect from the implementation of innovation activity for this retrospective period and the cumulative retrospective effect from the implementation of innovation activities. The values of these indicators are obtained on the basis of information containing the previous component of the monitoring system of investment support for the innovation activity of the enterprise;

- prognostic information about the prospects of innovation activity of the enterprise and calculation of the indicator of the combined predictive effect from the implementation of innovation activity;

- analysis of the efficiency and prospects of separate areas and projects of the enterprise's innovation program. This component involves the identification of the directions and projects of innovative activity of the enterprise, the further realization of which is inappropriate, as well as the selection of the most promising innovative projects of the enterprise;

- making a decision about further development of the innovation activity of the enterprise in the context of individual projects and areas. This component contains the procedure and results of calculation of the rational allocation of investment resources between innovative projects and directions of innovative activity of the enterprise at future intervals;

- calculation of the indicator of the cumulative effect of the innovation activity of the enterprise. The value of this indicator is an integrated assessment of the efficiency of investment support of the innovative activity of the enterprise, taking into account both retrospective and predictive estimates.

Thus, the use of the given system of monitoring of investment support of innovative activity of industrial enterprises will allow to increase the level of efficiency of investments invested in the implementation of innovative projects, due to timely detection of changes in their efficiency indicators, to find out the reasons for these changes and to respond promptly through redistribution of investment resources between separate directions and projects of the industrial enterprise innovation program.

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Chapter 3

MANAGEMENT OF SOCIO- DEMOGRAPHIC PROCESSES AND FORMATION OF MOTIVATIONAL MECHANISMS IN THE CONDITIONS OF INSTITUTIONAL CHANGES

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LABOR MARKET OF UKRAINE: TRENDS OF DEVELOPMENT

One of the important factors of social production is labor. On the labor market the demand and supply of labor are formed, the division of the latter and the definition of prices for various types of labor activity are ensured. As labor is a unique product, the labor market is rather specific. But it should be kept in mind that it sells not a worker, but his ability to work. Right on the labor market the seller and buyer of the work force interact; they reach agreement on the basis of legal and economic levers and conclude the relevant agreements [2].

For the first time since 2013, the growth of employment in Ukraine has been observed: in the first quarter of 2018, the number of working people increased by 149 thousand. If during the same period in 2017 the share of the employed population was 55.2%, now it is 55.9%.

However, the unemployment rate in Ukraine is still high: according to the International Labor Organization's methodology, unemployment in Ukraine is 9.7%, whereas in the EU countries it is 7.4% [6].

The development of the labor market in rural areas is significantly influenced by a set of factors of economic and social orientation, as well as the effect of objective and subjective laws of human development. On the one hand, the agro-industrial complex feels a shortage of skilled personnel; on the other hand, there is the excess of supply of rural labor over demand. The irreversible process of aging and reduction of skilled specialists of agricultural enterprises of all forms of ownership

continues. The insufficient level of development of new productions in the village and non-agricultural activities leads to an increase in the migration of rural population to cities and beyond the country. The existing educational and qualification potential of peasants is not fully realized, which negatively affects the main production indicators and the results of economic activity of enterprises of various forms of ownership and the development of social infrastructure [4].

The dynamics of the average number of workers employed in agriculture is analyzed below (Table 3.1).

Table 3.1

The dynamics of the number of workers employed in the agriculture, forestry and fish farming of Ukraine, 2012 - 2016, thousand of people

Years	Indexes	
	Agriculture, forestry and fish farming	Share of employed in agriculture, %
2012	3308,5	17,18
2013	3389	17,55
2014	3091,4	17,10
2015	2870,6	17,46
2016	2866,5	17,61
Absolute deviation (+;-) of 2016 from 2012	-442	0,43
Relative deviation (%) of 2016 from 2012	86,64	X

Source: generalized by the authors according to [1]

The analysis of data in Table 3.1 shows that the average number of workers employed in agriculture, forestry and fish farming of Ukraine for 2012 – 2016 decreased by 13.4% and amounted to 2866.5 thousand people. The share of workers employed in agriculture in the total number of employees increased by 0.43% to 17.61%. In general, the share of workers employed in agriculture during the last 5 years, from 2012 to 2016, remained almost unchanged and fluctuated at the average level of 17.5%.

The structure of the employed population by type of economic activity is considered below (Figure 3.1).

Analyzing Figure 3.1 it should be noted that agriculture, forestry and fish farming take second place by the number of employed population with a specific weight of 17.6%. The first place is wholesale and retail trade – 21.6%.

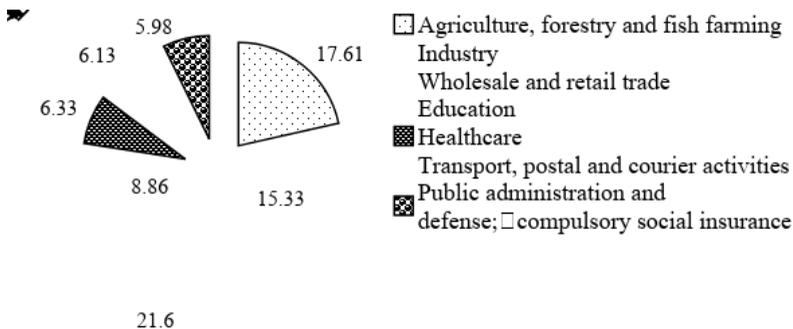


Figure 3.1 Sectoral structure of the employed population by types of economic activity in Ukraine, 2016

Source: generalized by the authors according to [1]

Economic growth creates the preconditions for increasing employment and incomes of population, increasing productivity of its labor. However, the objective features of the exit from the crisis of individual industries and enterprises, significant differences in the ratio of intensive and extensive factors determine the inevitable disproportions of the national labor market. First and foremost, there is a shortage of jobs and a high proportion of jobs with dangerous working conditions and low labor quality requirements.

Labor force often does not meet modern requirements regarding its vocational education, labor and executive discipline, mobility and economic activity in general. The consequence of imbalances in demand for labor supply is high unemployment [3].

As of July 27, 2018, the number of people who receive unemployment benefits from the state budget is 236 thousand, which is 8% less than a year ago. The maximum amount of such assistance is 7048 UAH, and 5% of the unemployed receive it. The minimum wage of 544 UAH is paid by the State Employment Service to those who are not insured, one in four among the registered unemployed [6].

The unemployment rate of the population by sex and place of residence is considered below (Figure 3.2).

Analyzing the data obtained, an increase in the unemployment rate in all of all the studied categories of the population is observed. In particular, among men, from 2012 to 2016 unemployment increased by 2.3%, as of 2016 it is 11.2%, among women – by 0.8% (it is 8.0%). With regard to urban settlements and rural areas, there is an increase in

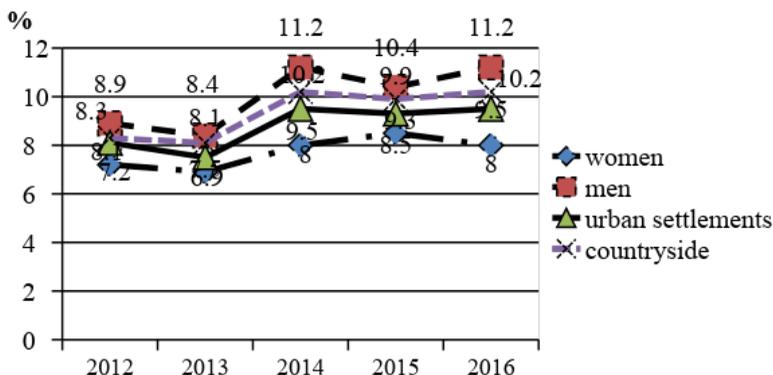


Figure 3.2 The unemployment rate of the population of Ukraine by sex and place of residence (according to the ILO methodology), 2012-2016.

Source: generalized by the authors according to [1]

both categories, however, the percentage of unemployment is higher in rural areas – 10.2% as of 2016. This indicator has a significant impact on the seasonal nature of production, spread in agriculture.

Since the beginning of 2018 in Kirovohrad, Mykolaiv, Poltava, Ternopil and Kherson regions, the number of vacancies has increased by 20% from the beginning of the year. The most significant decrease (20-30%) of the number of vacancies was observed in the Rivne and Sumy regions of Ukraine [6].

The amount of registered unemployed per 10 vacancies is examined below (Figure 3.3).

Analyzing the data of Figure 3.3, we observe the fluctuations of the amount due to the seasonal nature of the production occurring in the spring and autumn period, and the increase in the number of unemployed in winter.

The dynamics of the employed and unemployed population of able-bodied age in Ukraine is considered below (Figure 3.4).

Analyzing the data obtained, we note that the level of employment from 2012 to 2017 decreased by 2.6%, while the unemployment rate, in turn, increased by 1.8%. Having forecasted for 2018-2019 we have a tendency to increase the employment rate, which in 2018 will amount to 71.24%, in 2019 – 71.51%. Also, the unemployment rate will increase to 10.17% in 2018 and to 10.35% in 2019.

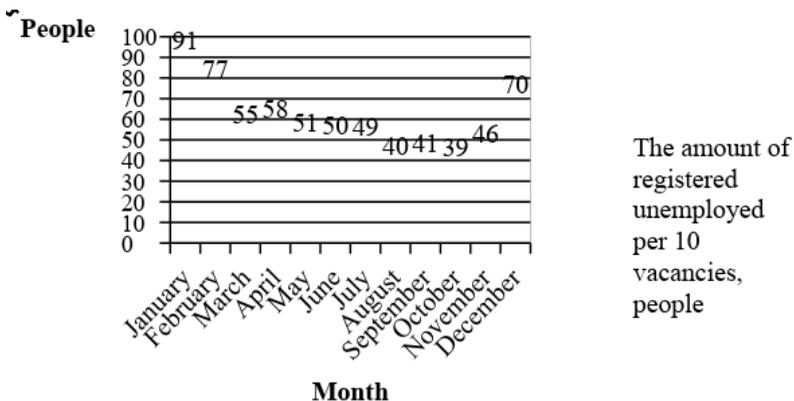


Figure 3.3 The amount of registered unemployed in Ukraine per 10 vacancies (vacant posts), 2017

Source: generalized by the authors according to [1]

According to the ILO methodology, an economically inactive population is people aged 15-70, who cannot be classified as either employed or unemployed, i.e. that is a part of the population which is not a part of the labor resources [5].

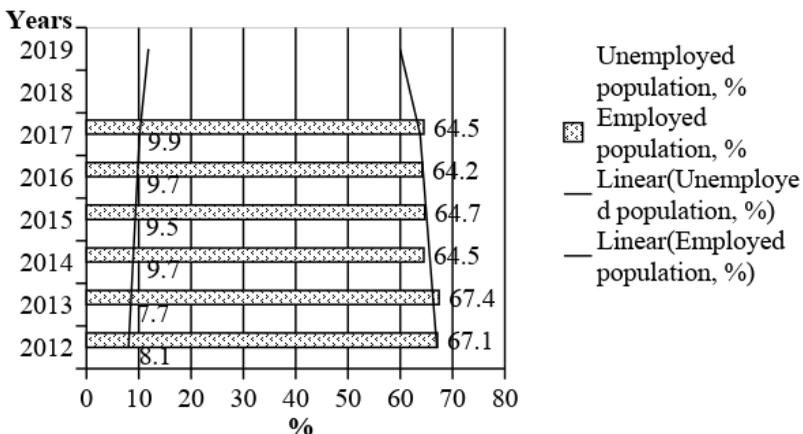


Figure 3.4 The dynamics of the employed and unemployed population of able-bodied Ukraine, 2012-2017

Source: generalized by the authors according to [1]

The structure of economically inactive population of Ukraine in 2017 is considered below (Figure 3.5).

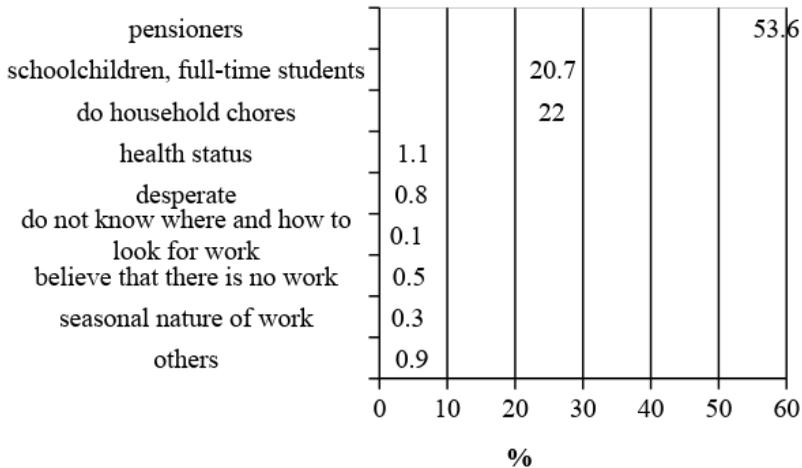


Figure 3.5 Economically inactive population of Ukraine, 2017, %

Source: generalized by the authors according to [1]

The data of Figure 3.5 indicate that the most part of the economically inactive population is occupied by 53.6% of pensioners, 22% of those who do household chores and 20.7% of schoolchildren and full-time students. The lowest rate of 0.1% falls on those who do not know where and how to look for a job.

The average employees' salary for a month (quarter, year) as a whole in an enterprise, institution, organization is calculated by dividing the sums accrued from the employee remuneration fund both in cash and in natural forms, to the average number of employees, which is taken to calculate the average salary and other averages (the average total number of staff in full-time equivalent) over the relevant period [7].

The dynamics of the average monthly salary of employees in Ukraine in 2018 is examined below (Figure 3.6).

Analyzing the data of Figure 3.6 we note that there is a tendency to increase nominal salary for the period from January to October 2018 by 1507 UAH.

The forecast of monthly salary growth for November 2018 shows that it will grow to 9334 UAH, and in December 2018 – up to 9405 UAH.

The situation on the Latvian labor market is significantly different from the situation in Ukraine. Thus, the number of unemployed in 2009-2018 has decreased almost threefold: in August 2009, there were 203

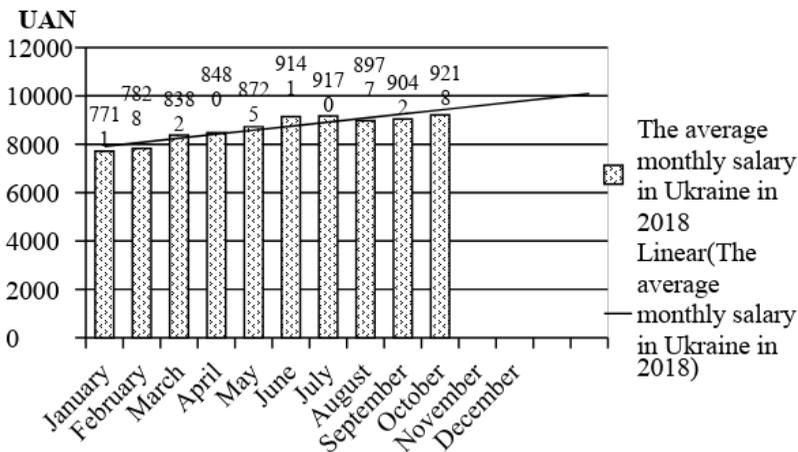


Figure 3.6 The dynamics of the average monthly salary in Ukraine per month, 2018, UAH

Source: generalized by the authors according to [1]

thousand people without work and in May 2018 – 71 thousand (7.3%). The number of vacancies registered with the State Employment Service has increased by 10 times. In August 2009, 1875 vacancies were vacant, in May 2018 – 19421. Employees find difficult due to labor migration from Latvia, despite the fact that salaries are increasing: in March 2010 the average salary was 449 EUR, in March 2018 – 733 EUR (according to the Central Statistical Office). There are not very many migrants in Latvia: at the beginning of 2018, there were 4006 registered workers from third countries, more than half (2155) from Ukraine. In Latvia, labor migration from the country is already the second decade, which creates its problems in the development of the labor market [8].

The main directions of increasing the employment rate of the rural population in Ukraine are, first of all, the following: the intensification of the development of labor-intensive agricultural sectors, processing and other industrial enterprises; raising the level of employment in private peasant farms; proper development of the social infrastructure of agro-industrial units. Considering the development of labor-intensive branches of agrarian enterprises (livestock, horticulture, horticulture, viticulture, etc.), it should be noted that they contribute not only to the increase in the number of people employed there in general for the year, but also to reduce the seasonal use of labor during the year. At the same time, it is advisable to diversify the employment of rural population by

developing small and medium-sized businesses in the social sphere, processing agricultural raw materials, and also stimulating self-employment and development of agro-tourism. Positive changes should also take place in the regulatory framework on labor and rural employment and education [2].

In order to stimulate the development of the labor market in Ukraine, it is necessary to create a favorable legal field of entrepreneurial activity, to improve the taxation system, to provide favorable conditions for the producers to obtain loans, to develop the system of information provision, to increase the level of scientific and educational provision of producers. It is precisely these measures at the macro level that will help to overcome the negative tendencies of the mismatch of supply and demand in the labor market.

It is also worth noting that efficient management of labor resources at all levels plays an important role in ensuring the high results of economic activity and ensuring the competitiveness of economic entities, which in turn will contribute to raising the standard of living of the population.

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**IMPROVING THE
MOTIVATION
MECHANISM OF
MEDICAL STAFF IN
UKRAINE**

1. General issues of medical staff's remuneration in Ukraine

Modern Ukrainian society is characterized by the transformation processes in economics, revitalization of political processes, and also reformation of the social sphere, one of the most important components of which is the national healthcare system. Nowadays healthcare reform, and in fact creation of the new healthcare system, takes place in Ukraine. It must take the lead among the main priorities of the state policy. In our view, healthcare politics must be a core element underpinning the state policy and the country's development strategy, because the individual and nation's health state is one of the important and defining criteria of the national human capital's formation and development.

Nowadays health indicators of Ukrainian nation, namely the life expectancy, physical and mental health, fertility and so on, are precariously low, and mortality, on the contrary, is extremely high. This represents the urgent need for rethinking the foundations of society's development. That's why understanding of the value of human life and health should form the basis of the whole social governance system, humanistic policies and the national healthcare system's transformation.

Development of national economics has a significant impact on the forms and methods of state regulation and public administration of country's healthcare sector, and Ukraine is no exception. From the other hand, the contribution of the health care into the economic development of any country is obvious. Medical services volume, provided to the population and expressed in value terms, positively impacts on the GDP. As more resources are used in the medical services provision and as higher is the medical staff's qualification, the bigger is the amount of national income, generated by the economic sector. Employees of the healthcare sector are "producers" of medical services, and therefore they by preventing diseases and treating sick people, improve the social and demographic conditions and increase country's labour potential and human capital. Thus, the issues of improving motivation mechanism of

medical staff in Ukraine are those of great interest for the public administration in healthcare field.

As it was said above, the medical staff is the healthcare system's core element, because they are the medical services "producers". Thus, they create the quality of the medical services and provide the highly qualified medical aid. Therefore, the medical and social effectiveness of the whole healthcare system depends on them. And their outputs depend on the qualitative motivation mechanism and remuneration system, existing in the healthcare field.

Unfortunately, medical staff in Ukraine is the most underappreciated category of workers. Thus, according to the data, provided by State Statistic Service of Ukraine, average monthly wage of medical staff is the lowest among the employees of budget sphere (Figure 3.7) and in 2018 it is 66,5 % of the average monthly wage for the whole country.

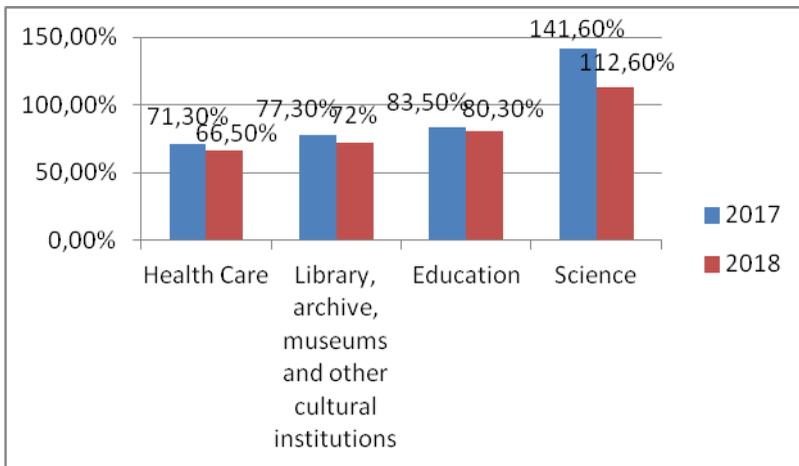


Figure 3.7 Average monthly wage of employees of the budget sphere in Ukraine

Source: [1]

Such situation, firstly, is caused by factors of the macro-environment, among which are:

1. *Profound disequilibrium between cost-of-living and actual cost of labour*: This, in turn, is due to the fact that in recent years in Ukraine: (a) there is the false wage policy and governance implements a commodity-based economy, consequently, this leads to labour depreciation, declining employees' competence, provoking worsened levels of

poverty and mass labour migration; (b) in Ukraine the reformation of remuneration system is merely simulated, thus it does not results in the final adequate ratio between a wage, labour productiveness and improvement of the quality of services; (c) the right to work and receive the decent wage is not effectively ensured; (d) measures to ensure the right to receive the decent remuneration for work are not implemented; (e) the poverty among employees increases, thereby, in 2018, more than 25 % of employees has received the wage lower, then the actual subsistence level (according to State Statistic Service of Ukraine).

2. *Low level of labour costs in GDP.* Payroll’s share in GDP is characterized by the following data, represented in Table 3.2.

Table 3.2

Share of payroll in GDP in Ukraine		
Criteria	2014	2017
GDP in actual prices, million UAH	1586900	2982900
Payroll, million UAH	374163	674350
Payroll’s share in GDP, %	23,6	22,6

Source: [1]

These data reflects the negative dynamics in payroll’s share in GDP, starting from 2014. The low level of added value, generated at Ukrainian enterprises is one of the reasons of such situation. This problem is particularly common for commodity-economics.

3. *Unreasonable low salary levels in economic branches in Ukraine by comparison with countries worldwide.* In 2018 average monthly salary in economic branches is characterized by the following data, presented in Figure 3.8.

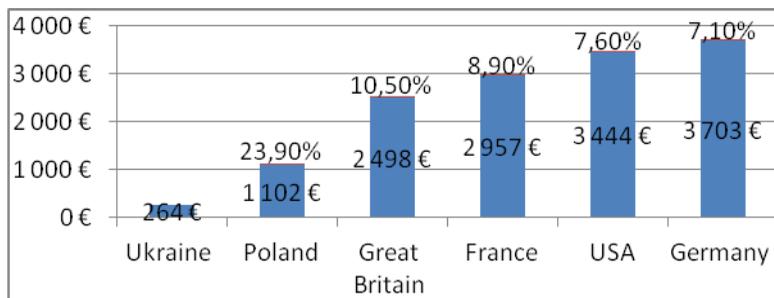


Figure 3.8 Ratio between Ukrainian average monthly salary and average monthly salary in other countries, 2018

Source: [1]

In Ukraine average nominal monthly wage during 2014-2018 has been doubled, but nevertheless average real monthly wage remains almost unchanged. Meanwhile, headline inflation is significantly higher, then increase in salary.

Salaries indicators remain too low, as evidenced by average hourly labour costs in European countries and in Ukraine (Table 3.3). Such indicators negatively affect on Ukrainian labour market's development, result underground labour market, and motivate population to labour emigration from Ukraine.

Table 3.3

Average hourly labour costs in EU and in Ukraine, 2014-2017

Country	Year			
	2014	2015	2016	2017
EU 28	25,2	25,7	26,2	26,8
EU 19	29,0	29,3	29,8	30,3
Ukraine	2,18	1,15	1,31	1,68
Germany	31,5	32,3	33,2	34,1
France	34,7	35,1	35,6	36,0
Bulgaria	3,8	4,1	4,4	4,9
Estonia	9,8	10,4	10,9	11,7
Latvia	6,6	7,1	7,5	8,1
Lithuania	6,5	6,8	7,3	8,0
Hungary	7,7	7,9	8,3	9,1
Poland	8,3	8,6	8,6	9,4

Source: [4]

In Ukraine low level of salaries forces qualified specialists emigrate to find jobs from Ukraine to other European and world countries. Therefore, migration activities become globalized in Ukraine. Mass migration of labour forces is an urgent socio-economic and political problem of modern Ukraine. Labour migration is resulted by composition of external factors on behalf of the recipient countries and inner negative factors of socio-economic development of Ukraine. Among the basic inner factors, resulting labour migration of Ukrainians, are the low level of salaries, the spread of poverty among working population, shortfalls in demand for the qualified workforce at the domestic labour market. External factors of labour migration are attractive and large labour market in developed countries with considerably high salary level, compared with Ukraine.

4. *In Ukraine there is imbalance between the salaries of highly*

qualified and unqualified employees and employees of private and budget sectors of economy.

5. *Disproportion of the salary.* In Ukraine the significant disproportion between the salaries level of employees of different economic branches and regions exists. Thus, according to the data, provided by State Statistic Service of Ukraine, salaries level in the economic branches is presented in Figure 3.9.

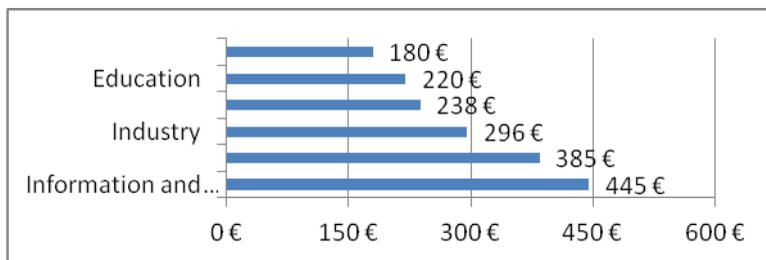


Figure 3.9 Salaries level of employees of different economic branches in Ukraine, 2018

Source: [1]

From Figure 3.9, we can see that in Ukraine over recent years the highest salaries level was in the financial sphere, rather than in industrial sector.

6. *Arrears in the payment of the salaries increase.* In recent years, despite undervalued salary, large number of entities, especially in budget sphere, increase arrears in the payment of the salaries in Ukraine. As at 1 October, 2018, the volume of unpaid salary arrears has increased to 2,7 billion UAH, in this, 70 % of these arrears occurs in economically active entities, most of which are industrial enterprises.

7. *Informal employment and salary payments.* For projected estimates, about 50 % of GDP is in underground or in offshore. Thus, if in 2018 GDP is 3332,3 billion UAH, in accordance to projection, accordingly the volume of underground economy will be about 1666,15 billion UAH. When the share of payroll at the underground economy is about 29,0 % and the average salary of the employees in underground is 9000 UAH, 4,5 million employees are informally employed in Ukraine.

Above mentioned factors are common to all economic branches in Ukraine, but nevertheless they also remain urgent for the healthcare sector. Thus, we can emphasize the following problems with medical staff remuneration in Ukraine:

1. Remuneration of medical staff is the lowest among the budget sphere and economy as a whole.

2. There is imbalance between highly qualified and unqualified employees.

3. There are significant arrears in the payment of the salaries.

4. Informal employment and salary payments remain in the healthcare sector.

5. The healthcare system works on the principles of hourly wage, which has several substantive shortcomings. The remuneration of the medical institutions is based on the single wage grid taking into account all co-payments. Such wage system is fixed, does not depend on the volume and quality of conducted activities. In accordance with hourly wage, to the medical staff must be paid the wage, even if they have not carried out the certain scope of work. Imagine the situation. Two physicians with the same experience and qualification work in the same conditions. One physician is highly qualified, to whom there is about 30-30 appointments of the patients per day. And the other one does not work hardly, he has about 10-15 patients per day. In accordance with the single wage grid both of them receive the same wage. Eventually, the first physician will rebuild new behaviour that it is not necessary to overstress at work, because it won't change his remuneration. That is, in the above shown situation one of the most important functions of remuneration system – stimulation – does not work, so the employer does not have the possibility either to encourage, or to sanction his / her employees. Consequently, the quality of the medical assistance declines, because the wish to give greater efforts to the treatment process disappears [6].

2. Issues, related to the shortage of medical specialists in Ukraine.

There is the significant shortage of specialists at the primary, secondary and tertiary levels of healthcare sector. In this, the specialists staffing is disproportionate at the rural and urban districts.

Thus, in the regional centers, where is the medical high school, the rate of the staff capacity and staffing rate accounts about 90-100 %.

In the cities, where is not the medical school, the rate of medical specialists in the central district hospitals, accounts about 70-90 %. However, there the stuffing problem is solved by the way of the holding by specialists of several positions. The shortage of endocrinologists, anesthetists, pediatricians, radiologists, infectious disease specialists tuberculosis specialists, pathologists, ophthalmologists, urologists and

other physicians is the common situation for the regions, where is not the medical school.

In rural areas, the staffing problem is more sufficient. The rate of medical specialists of general practice and other specialists is less, than 70 %.

Generally in Ukraine at the secondary level is the lack of medical personnel about 10 % of specialists of different directions, at the primary level the lack is about 30 % of general specialists.

In this, there is the significant share of medical staff, namely physicians, of retirement age. In some regions of Ukraine their rate accounts about 40 % of total staff. For example, according to the approximate calculations, in Vinnytska region there is 28 % of the physicians of retirement age at the primary level, 23 % is on the secondary level, and 19 % is at the tertiary level. And the most of the staff is the people more than 65 [5].

Such a process of ageing of the staff influences the quality and speed of the medical services provision, that is characterized by use of the out-date methodology, algorithms of medical services provision and technologies, lack of the interest to get new knowledge and to develop, so on.

The main reasons of the shortage of specialists in the healthcare sector are the following:

- 1) disproportionality and inadequacy of the medical staff's wage level in comparison with the volume and quality of provided medical assistance, on the one hand, and on the other, in accordance with the specialists from the industrial and other spheres of economy;
- 2) the lack of the state support for the young specialists in the healthcare sphere;
- 3) insufficient financial support of rural health care;
- 4) low level of the material and technical and normative bases of the medical institutions;
- 5) undeveloped infrastructure generally all over the country;
- 6) bad social and living conditions of the medical staff (for example, lack of accommodation) and lack of state interventions for their improvement;
- 7) problems with professional development of the medical staff;
- 8) ageing of the medical staff, i.e. the specialists of retirement age hold the posts, which could get the young physicians;
- 9) significant emigration of medical staff from Ukraine (roughly estimated, about 70 thousand medical staff, among which are 10

thousand of physicians, has emigrated [2]) to such countries as Poland, Hungary, Bulgaria, Czech Republic, Germany, Canada, Turkey and so on. The most intensive dynamics is directly after the graduation from the higher education institution [3].

So we see that the problem of staffing of medical institutions, formation of adequate payroll and effective system of the motivation and stimulation of medical personnel are the thorny issue. And the medical reform, conducted nowadays in Ukraine, confirms inability of the system to move to the European standards of medical assistance providing and healthcare administration, and even the problem of the shortage of the personnel worsen while this reform has been conducted. Before the beginning the reformation, staffing of the medical institutions was bloated, because stuffing structure was regulated by the norms in accordance to the number of population. In accordance with current reform, from 2020 the secondary and tertiary levels of healthcare will be financed accordingly the volume of actually provided medical services. That's why it's highly probable that the staff of medical institutions of these levels will be significantly reduced, because transition to the market relationships will lead to the specialists' cuts or their reassignment.

Problems mentioned above are very painful for the Ukrainian healthcare system and first of all are caused by the lack of the adequate personnel policy in the healthcare field. That's why it's quit natural that the stagnation of this economic field and social welfare area is going on.

Medical establishment, like any other enterprise, could bear significant losses because of inefficient wage bill administration, and labour productivity could reduce because of unfair or non-transparent system of compensations and incentives. Thus, all above mentioned problems cause the necessity of implementation of mechanisms of medical staff's motivation and stimulation.

3. System of grades in the healthcare sector.

We have to propose *the system of grades* as the most optimal system of remuneration. Its goal is the integration of the level of responsibility, uniqueness of the experience, knowledge and skills, results of activity of each representative of the medical staff. Such remuneration system allows to unify appropriately the motivation and stimulation instruments and to build the universal job hierarchy, based on flexible levels of salaries in accordance with the volume of conducted works and provided services by the medical staff, with their internal needs, skills and knowledge.

Thus, grading is a grouping of the positions for specific principles with a purpose of work standardization at the organization.

The main idea of this method is a creation of the basis for the effective managerial decision-making process concerning: (1) the employees' salaries; (2) employment benefits; (3) bonuses and extra-payments.

In this, the main advantages of this method's implementation is the principle of transparency of prospects for the medical establishment's employees [6]: the employee understands, what he / she must do, over what period, that his / her salary will increase. So, the grading allows the employees to overview about the possibility of changes of the salaries' level while different career moves. For the governing body of the medical enterprise it helps to decide about wage indexation and defining of the level of the extra-payments for new positions. For the personnel service of the medical establishment it allows to simplify the administration of the system of the financial incentives. Such a remuneration method allows encouraging the employees to the highly productive work.

Grading system evaluates the activities, which are conducted at the each position in the establishment, on the basis of three groups of factors:

1) Knowledge, qualification and experience, which is necessary for the works execution (i.e., practical procedures, use of up-to-date algorithms, technologies and protocols of medical assistance provision, special methods and approaches, vocational knowledge, communicational skills);

2) Skills, which are necessary for the problems solution in the medical sphere and related to the ability for the analytical and critical thinking and implementation of the innovative technologies of medical assistance provision, complexity of the provided medical services;

3) The level of responsibility, which includes the borders within which medical staff at this position is able to make decisions individually, frameworks of activities and the level of the individual input into the outcomes of the medical establishments' activity and the quality of work.

Simplified grading methodology is following: the position receives from the expert the certain amount of points by each factor, which is considered as the important and actual for the medical establishment. Multi-hazard assessment of the activity reflects the relative weight of each position. In accordance with received point the job positions are counted towards certain grade, which guarantees the certain wages or

employment benefits [6].

It means that employees, who hold the same position, can receive the different salary. Depending on the grade, more will earn that physician, who has the a particular experience, has attended the upgrading courses, got particular medical categories, abide the principle of patient-oriented activity, is able to work in the team, has a significant number of patients' appointments and the quality of his medical services is high. The employees with the same grade (and the same salary) can occupy different positions, for example cardiologist and the head of the department. So, it is possible the situation, when the subordinate is at the same high grade, as the chief, and consequently, he will get the higher salary. It means that he is a unique specialist, who is valuable for the medical establishment.

The algorithm of the grading system implementation consists of the following stages:

1. Training of the working group;
2. Documentation maintainer (concept, standards, etc.);
3. Analysis of the activities' context;
4. Assessment of the positions (questionnaire, interviewing, etc.);
5. Definition of requirements for the positions and the clarification of the factors;
6. Definition of the weight of the reference works with the use of the certain method of assessment of the works' complexity;
7. Allocation of the factors by the levels (ranking);
8. Assessment of the each level;
9. Assessment of the weight of each factor;
10. Calculation of the number of points for each position;
11. Allocation points by the grades;
12. Definition of salaries and calculation system of remuneration;
13. Analysis of the results and correction of the inconsistency.

Such system explains the hierarchy of positions by the context of the activities. Each position of the structure defines the requirements for each position, and allows the employees to define their subordination, degree of responsibility, the need of development [6].

Implementation of grading system is necessary for the big and medium-sized medical institutions and organizations, since it addresses shortcomings of the previous remuneration system of the single wage grid, such as bureaucracy, non-transparency of the inner logics of tariffs and grids construction, rigidity of hierarchical structure. Grading allows building flexibly the structure of the positions at the organization, taking

into account not only the qualification and experience, but also other very important factors, i.e. level of responsibility, level of works' complexity, quality of the conducted medical services, patients' satisfaction, etc. And for the medical staff it gives opportunity to understand, how their salary is formed, how can they change their salary, and what their career development will be.

For example, as a reference framework for wage determination of the physician at the primary level of healthcare sector we can use the following parameters:

1. Organizational work:
 - 1.1. Number of patients, assigned to the physician
 - 1.2. Number of patients, signed the declaration with the physician
 - 1.3. Active campaigning
 - 1.4. etc.
2. Quarterly indicators
 - 2.1. Planned performance
 - 2.2. Fund balance of the drugs, left in warehouse and medical establishment
 - 2.3. etc.
3. Organization of treatment and preventive process
 - 3.1. Total number of treated patients
 - 3.2. Share of treated patients in round-the-clock inpatient facility
 - 3.3. Share of treated patients in day hospital
 - 3.4. Share of treated patients in outpatient conditions
 - 3.5. Protocol's non-compliance
 - 3.6. Share of unreasonable spent funds because of protocol's non-compliance
 - 3.7. Reasonable and rational pharmaceutical order
 - 3.8. Number of pharmaceuticals, non-used more over 3 month
 - 3.9. etc.
4. Results of analysis of patient files and medication's charts
 - 4.1. Unreasonable cancelation of pharmaceuticals and medical items
 - 4.2. Compliance with recommendations on the choice of treatment conditions
 - 4.3. etc.
5. Other:
 - 5.1. Reasonable complaints about the quality of medical services and medical aid
 - 5.2. Out-of-scope work performance
 - 5.3. etc.

By using these indicators we can calculate total number of scores of each employee. Then calculate total wage taking into account this calculated indicator, and also coefficient of complexity of work, base salary, other premium and extra payments.

The presented framework for wage determination of the physician could be supplemented according to the work conditions in the medical institution and the will of the administrator of medical institution

From all of the foregoing it is clear that there is a need of the great changes into the process of wage bill and motivation mechanism formation at the medical establishments. By our opinion, it is necessary partially to learn from the foreign experience of the developed healthcare systems, taking into account our realities and opportunities (financial, human, innovative, etc.). Thus, the essential are the following measures:

- 1) implementation of the measures to curb corruption at all level;
- 2) implementation of the system of the quality appraisal of the medical services provision and creation of the special service, which goal is to implement in good faith assessment and analysis of the effectiveness and quality of conducted medical services;
- 3) constant and continuous development of the medical staff on the transparent and rating conditions;
- 4) creation of the conditions for organization and implementation of incentives and motives for the medical staff's encouragement, whereby the salary of medical staff must depend on the level of qualification, their input into the outcomes of medical establishment, quality of the medical services, patients' satisfaction by the conducted medical services and medical aid;
- 5) increasing of the wage bill;
- 6) implementation of the wild system of the extra-payments and premiums (benefits for obtaining accommodation, free vacation, free upgrading, etc.);
- 7) improvement of the material and technical basis of the medical establishment, purchase of the modern equipment and innovative technologies with the purpose of the specialists motivation;
- 8) formation of the system of financial and social support of the young specialists.

The measures proposed below are not finite and it is not a panacea, but nevertheless they must become a part of the state and local system of motivation with a purpose of the Ukrainian healthcare system development.

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NEW PARADIGM OF LABOR MOTIVATION IN THE SYSTEM OF DEVELOPMENT OF SOCIAL AND LABOR RELATIONS

Strengthening competitive struggle in world markets and the comprehensive globalization of economic development have put Ukraine at the heart of the need to choose one option for development: 1) to go further through extensive development, losing real economic independence, which threatens to transform the country into raw materials and the supplier of cheap labor; 2) to intensify the inclusion of internal sources of economic growth, primarily, due to the growth of competitiveness through the development of an innovative development model. The second option of development was proclaimed to be the

main task of long-term economic development of Ukraine and increase of the welfare of the nation. Its realization requires progressive changes in the development of productive forces of society, which is impossible without radical changes in the paradigm of human labor motivation, since the existing mechanism of motivation remains ineffective, which does not correspond to the goals of innovative development, increase of competitiveness of enterprises and the state.

Theoretical and applied questions of the problem of labor motivation attracted the attention of researchers at different times. An overview of the sources shows that over the past 10 years in Ukraine, the emphasis on the need to increase the role of labor motivation in the new system of social and labor relations is emphasized in scientific works by O. Amosha, S. Bandur, D. Bogdina, O. Grishnova, G. Dmitrenko, A. Kolot, G. Kulikov, V. Novikov, O. Novikova, I. Petrova, V. Onikienko, M. Semikina and others. However, the search for a new paradigm of labor motivation, the definition of acceptable methods for effective motivational regulation of the behavior of social partners in a competitive environment still applies to a number of insufficiently researched and unresolved problems.

The purpose of this publication is to determine the essence of the new paradigm of labor motivation in the context of the formation of a competitive environment in Ukraine and to substantiate the methodological foundations for the formation of a socio-economic motivational mechanism of work.

Analysis of world experience shows that in developed countries with a socially oriented market economy, competition not only serves as a regulator of demand and supply, salary, but also a means of transforming the socio-economic motives of the behavior of hired workers and employers in the labor market in the direction of increasing competitiveness. This is explained, first of all, by the fact that under the conditions of the competitive environment, the biggest demand is the living labor, which has qualitative and valuable advantages. At the beginning of the 21st century the world practice of motivating competitiveness in the field of labor develops towards the innovative strategy of enterprises, contains considerably enriched methods of socio-economic motivation that are complex, and, at the same time, more than ever, are aimed at investing in the development of human capital. The formation of long-term incentives for competitiveness in the workplace (as demonstrated by the experience of developed countries) is extremely rarely based on the “bare enthusiasm” of enterprise staff and almost

does not coexist with poverty.

Domestic practice of motivation of labor in the conditions of the formation of a competitive environment is fundamentally contrary to the world trends. The complexity of choosing and implementing a new paradigm of motivation is associated with many difficulties in the present day Ukraine: during the years of market transformations, the loss of manageable social development in the state has led to the spread of poverty, the aggravation of contradictions between the interests of employers and employees, the depreciation and destruction of motivation to the productive labor. One of the mistakes of market reforms was that the emphasis was placed on a purely economic paradigm of motivation that did not take the social component into account. Economic measures focused on restructuring of property relations, financial and credit sphere, but weakly affected transformations in the motivational mechanism in the workplace. It was assumed that the market itself would form a desire to increase productivity, increase its competitiveness. However, as practice has shown, this did not happen. Due to the lack of social and labor orientation of reforms among wage earners, the interest in increasing productivity, manifestation of labor and inovational activity, and a certain share of employers are not interested in satisfaction of consumer demand and the quality of their activity, personal income, products, but purely own economic interest – profit.

The processes of market reforms in Ukraine to a greater extent have proved themselves in the establishment of new forms of ownership and the creation of new forms of management, but to a lesser extent they have affected living labor, mechanisms for its motivation (material and non-material), working conditions, and quality of working life. From market transformations, the economic benefits were gained, first of all, by those who became owners of large and medium-sized businesses; most of the wage earners received poverty, social insecurity, uncontrolled exploitation of labor.

The paradigm of motivation must become part of the paradigm of socio-economic development, the “core” of which, as noted by A. Kolot, there is a social-labor relationship. [2 p. 3]. Its character and content define the measure of achieving the main goals of socio-economic development both at macro and micro levels. Within the framework of the functioning of social and labor relations, economic efficiency of production is ensured, as well as conditions for effective reproduction and improvement of the quality of all components of human capital:

health, knowledge, labor skills, abilities, motivations that are deliberately and purposefully used by the person in the process of work. In the realization of both goals, despite the differences and even the contradictory interests of their interests, all subjects of social and labor relations (employers, hired workers, the state) should be interested in objectively. Employers should be interested in ensuring that the worker fully and creatively performs the functions and production tasks assigned to him, and the worker should be interested in maintaining an adequate standard of living for their family, their own health and their competitiveness in the labor market, that is, in their own stable social dynamics through decent wages, safe working conditions, and opportunities for professional growth,. However, for today these goals are not provided.

The ineffectiveness of the existing mechanism of motivation primarily is associated with the fact that wages in Ukraine have lost all its functions, devaluing labor orientations on the growth of labor productivity, and increasing the competitiveness of the work force. Factors for reducing the effectiveness of labor motivation are: socially unfair wages, broad differentiation in income; arrears of wages; unsatisfactory working conditions; involuntary part-time employment; release of employees; unemployment; weak social protection, gradual alienation of workers from the management process; violation and neglect of the conditions of collective labor agreements by employers, total increase of distrust of employers, heads of enterprises, trade union leaders, etc.

Comparison of Ukraine's payment and labor productivity indicators with similar indicators of developed countries proves that our country's lag behind wages is much higher than in terms of productivity. Labor productivity in Ukraine is only 25% of EU labor productivity. At the same time, the average wage in Ukraine compared to the EU countries is not 30%, but about 4-12% depending on the country. Therefore, the average employee in Ukraine is underrepresented in wages compared to the existing level of labor productivity.

The policy of a "cheap worker" is extremely risky and destructive for acceleration of progress, manifestation of innovation activity of staff, positive perceptions of innovations, and prospects for increasing the competitiveness of the workforce.

Opportunities for achieving the desired competitiveness in the workplace are objectively reduced in a situation where the transition to a knowledge economy is accompanied by trends that are opposite of the worldwide ones – the processes of deintellectualization of labor, the

growth of the share of heavy physical labor, underestimation of knowledge and the manifestation of creativity in the labor process. The perspective tasks of building a competitive economy do not correspond to the current realities of the Ukrainian labor market, which reflect sustainable processes of eliminating jobs that require a high educational level. In demand structure, priority is given to jobs that do not require professional training. The demand for labor without professional training in 2017 compared to 2000 has increased by 4.4 times, which far exceeds the demand for the office staff. The human capital of high quality remains unclaimed, its dequalification is taking place. The motivation for comprehensive professional development, inherent in most highly skilled workers, with proper economic and social support, is gradually being destroyed.

The vast majority of employees of Ukrainian enterprises and organizations in the present conditions are massively focused on the implementation in the work of so-called “nearest motivation”, which in content is close to the motivation of use in today’s conditions and is not aimed at achieving the goals of “distant motivation” associated with creativity, constant investing in self-development, increasing competitiveness.

The lack of effective mechanisms for labor motivation leads to dissatisfaction with labor, loss of interest in its content, the manifestation of labor and innovation activity; leads to ineffective use and development of available labor potential. Social injustice in the assessment of labor and the distribution of labor income, the impossibility for the vast majority of workers to reach the standards of well-being of secured layers, the widespread poverty among working people not only reduces the belief in the ability to improve their well-being by their own work, but also accumulate conflicting potential in a society that opposes the processes of modernizing the economy, provokes the loss of the state’s competitive position in education, and the introduction of advanced technologies.

It is fair to emphasize that the formation of high motivation in the workplace is significantly obstructed by the crisis of moral values in society, corruption, lack of culture of social dialogue, as well as such typical features of Ukrainian mentality as the lack of social cohesion, unity, unwillingness to give up economic interests for the sake of social development of labor collectives, raising the quality of working life, total distrust of authorities at any level, inability to democratically negotiate and, at the same time, the ability of endless patience.

We believe that building a socially oriented market economy and increasing its competitiveness require adequate motivation of labor in Ukraine, with this economic and social impact on the labor behavior of social partners, directing their labor efforts to achieve competitive advantages of the work force, the results of work and ensuring on this basis a better meeting the needs of the population.

So, the long-overdue need to move away from the purely economic paradigm of motivation, which does not justify itself, and to elect in the future the socio-economic paradigm of motivation. In this case, the vector of joint efforts of social partners in the conditions of competition, globalization of world development should be not only a motivation to work, effective employment, but motivation for effective work, which results in the competitiveness of domestic and foreign markets. And this contributes to the emergence of socio-economic motivation for competitive labor, which, with the help of various social and economic levers and methods of influencing social partners, should ensure a new quality of human labor in accordance with market conditions on the basis of the functioning of the socio-economic motivational mechanism of competitive labor.

The systematization and synthesis of various scientific ideas about the forms and methods of work motivation over the past decades made it possible to distinguish in a concise way key methodological provisions that appear to be basic in building a strategy for the formation of a motivational mechanism for competitive living labor:

- the primary source of labor motivation is the social and economic needs of the individual;
- the process of motivation of labor should not exist outside the subject, since it is always a combination of interaction of internal (at the level of the individual) and external factors acting on the micro, meso, macroeconomic levels;
- the motives of labor behavior encourage, direct, regulate the work of the subject, reflecting the level of development of his needs, value orientations in the process of labor, especially the national mentality;
- in a competitive environment objectively increases the role of the motive of achievements, which forms the basis of motivation of the employee's competitiveness;
- the productivity of labor and the desire of the worker to increase the level of knowledge, professionalism, comprehensive harmonious development are directly related to the socio-economic motivation of labor, whose role is constantly increasing in the formation of a socially

oriented market economy and the transition to the post-industrial stage of development of society, turning into a system of stimulation qualitative human development. The creation of such a mechanism involves the formation of a network economy in the knowledge society.

The formation of a network economy in a knowledge society is characterized by general (global) tendencies: intellectualization; globalization; acceleration of progress; the growth of innovative capacity and gnoseo capacity of production and labor.

There are new requirements for the quality of human resources, the conditions for their inclusion in the reproduction process, the level of socialization and cooperation, since the competitiveness of the country in the global dimension depends on it. Accelerating the rates of the progress, the development and dissemination of information and communication technologies (especially Internet technologies) leads to the emergence of new forms of organization of economic activity, including the corrected, taking into account the current trends, theoretical and methodological substantiation, relations in the labor sphere.

For the majority of Ukrainians, labor remains the main source of livelihood. But in the conditions of the formation of a network economy there are noticeable changes in: the characteristics of the labor process; forms of employment and employment; labor organization; the nature of the relationship between the employer and the employee. These changes appeal to the new quality of social and labor relations. Therefore, it is obviously necessary to form a new concept of their development in the conditions of the formation of a network economy.

It should be noted that significant transformations in the labor sphere in Ukraine are determined not only by the global trends of intellectualization, informatization, computerization, etc., but also by the systemic-political crisis, which is accompanied by an increase in unemployment, violation of labor rights by weakening social guarantees. Such processes against the backdrop of poor performance of public administration in recent years and underestimation of the problems of the socially difficult sphere cause a slowdown in economic growth and deepen the problems of social and labor relations, the emergence of which is conditioned by the formation of a network economy and the transition to a network of information society knowledge.

Economic growth on the basis of state support for the development of innovative, intelligently large-scale production, the focus on the economy of “an expensive, highly professional employee on the society is an integrated common interest (both for each side of social and labor

relations, and for all of their participants) and an objective condition socialization of the economy and a civilized enterprise. In this, the social responsibility of subjects of social and labor relations should increase. At the macro level, the social responsibility of the employers will be manifested through the initiation and active development of entrepreneurship, compliance with the norms of civilized economic activity, participation in the implementation of social projects, readiness for social dialogue, and the social responsibility of employees at the level of society should be linked to their responsibility for the development of individual workforce, and a place in the labor market, adhering to the norms of legislation, the ability to social dialogue.

At the enterprise level, the organization of socially responsible behavior of employers will find its manifestation in the preservation and development of workplaces, established rates of payment not lower than the cost of labor and in accordance with the quantity and quality of work of hired workers, promotion of their professional development, participation in social partnership relations.

Based on the fact that the paradigm represents a combination of methods, approaches to certain skills and tools used by the scientific community within the limits of establishing scientific traditions over a certain period of time, we can propose a model for solving the problem of motivation for the competitiveness of live labor and ways of its solution. (Figure 3.10)

It should be noted that science develops not cumulatively (gradually – continuously), but certain leaps – by accumulation of knowledge (experience), which leads to a change in scientific views and approaches, which causes the replacement of one paradigm by another.

It should be noted that each of the indicated blocks has its own structure and its mechanisms (approaches) and, depending on their combination, the formation of a new paradigm is carried out.

However, special attention should be paid to the choice of the effectiveness of the proposed paradigm and the definition of criteria for competitiveness as a labor force, and the outcome of its work. In addition, it is important to find out, depending on the object of the study, the factors of motivational influence on the provision of competitive live labor dominate. The proposed model is not perfect because each model has certain disadvantages. But in our opinion, at this stage it allows purposefully to develop and solve the problem of motivation of competitive living labor, to find out its tendencies and patterns, which will gradually be manifested in the process of development of the

network economy.

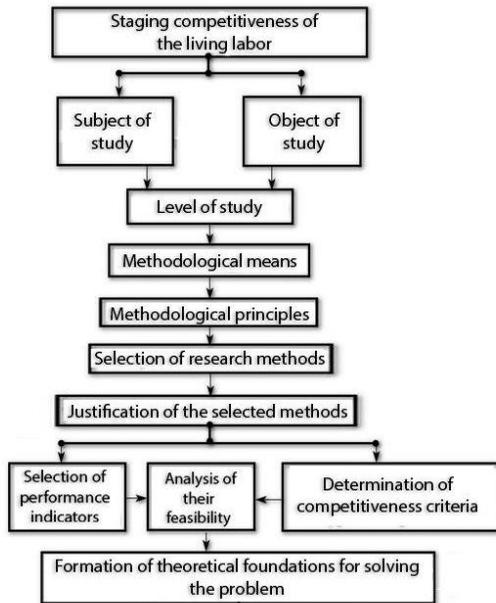


Figure 3.10 Methodological components of the management model of the problem of motivation of competitive living labor

Important in the process of developing a methodological approach to research and regulation of the competitiveness of living labor, in parallel with the widespread principles to apply and new, namely: the principle of motivation, the principle of competitiveness, the principle of adaptation, the principle of development, and others.

So the principle of motivation existed before, but it was not singled out separately. It is this principle that forms the preconditions for the work of the person, his attitude to work and the intensity and productivity of labor.

Based on the experience of studying the phenomenon of motivation, we are convinced that the use of this principle will contribute to solving many issues of activation of labor both in the theoretical and applied aspects.

The principle of competition concerns another aspect of labor activity, namely, the orientation of a person who chooses or carries out work in competitive conditions, to increase the competitiveness of their own work force, the use (under certain working conditions) of their own

labor potential to achieve the expected labor output in achieving certain competitive advantage in the market.

The principle of adaptation and development involves the adaptation of the worker's consciousness to a competitive environment, the formation and development of value orientations in the direction of the formation of competitiveness in the workplace. The implementation of this principle in the action of the motivational mechanism involves the corresponding socio-economic levers that are capable of shaping competitive behavior.

The principle of priority of social needs determines the subordination of the motivational process, the actions of the motivational mechanism, primarily the goals of human development, the satisfaction of the actual social needs of workers, the labor collective as a whole.

The principle of effectiveness involves realizing the requirements of social and economic efficiency of the motivational mechanism of competitive labor, which is formed according to the chosen strategy, the development of criteria and indicators of the effectiveness of social and economic motivation in the competitive environment and formation of a network economy.

Taking into account the methodological principles and known motivational theories, the practice of their application in market conditions, one can come to the conclusion that it is not enough to limit the creation of appropriate motives at the personal level for the formation of a functioning socio-economic mechanism of motivation of competitive labor; it is not enough to take into account the interaction of internal and external factors of motivation only at the level of organizations (enterprises). A comprehensive approach to solving this problem at the macro-, meso-economic levels is absolutely necessary, which will create appropriate flexible incentives for both employees and employers. This approach is illustrated by the methodological scheme of research and regulation of the effectiveness of the motivation of competitive labor, which should operate in conditions of the formation and development of a network economy.

The achievement of the motivational effect at each level of management requires an assessment of the choice of parameters, methods for assessing the competitiveness of labor, identifying factors of motivational influence on both employees and employers, assessing the effectiveness of short and long-term labor motivation by developing systems of criteria and indicators of efficiency for further adjustment of strategy and tactics of socio-economic development of motivation,

further optimization of the motivational provision of competitiveness of labor. The proposed approach may be the basis of the state strategy for the formation of a socio-economic mechanism for the motivation of competitive labor.

CONCLUSIONS

The cardinal changes experienced by the world show that gaining competitive advantages as separate actors and the country as a whole is becoming increasingly dependent on the choice of an appropriate paradigm, the management of labor motivation.

The realities of the present are associated with deep deformations in the mechanism of decent remuneration of labor and income, a manifestation of impoverishment even among the workers, a violation of human rights in the process of labor activity, contrary to progressive world trends, the achievement of the goals of human development. This is precisely due to the imperfection of the existing theoretical and methodological mechanism for the formation of labor motivation.

Domestic economic science needs to change the economic paradigm of labor motivation on the paradigm of socio-economic motivation for competitive labor.

The methodology of establishing a socio-economic motivation for competitive labor should reveal the peculiarities of the transformational period, take into account the national labor mentality, orient the world trends of innovation development at the level of competitiveness of labor, systematic multi-level assessment of the effectiveness of socio-economic motivation and the complex regulation of the behavior of social partners in the workplace.

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**GENDER EQUALITY
POLICY IN THE
MANAGEMENT OF
RURAL AREAS IN THE
CONTEXT OF
TRANSFORMATION OF
ECONOMIC
DEVELOPMENT**

Ukraine is guided by a system of institutional foundations, mechanisms and market approaches for the development of rural areas operating in the EU countries, and in the process of the initiated administrative-territorial reform, seeks to implement them. The initiated decentralization process is expected to lead to a wider involvement of all citizens in managing and participating in the distribution of income, and the formation of a local budget, taking into account the needs of local territorial communities. It is expected that the effectiveness of this reform will give chance to more than a third of the Ukrainian population living in rural areas to overcome poverty and ensure a decent quality of life. Obviously, such a policy can only be realized if the key components of the social component are comprehensively taken into account.

The United Nations Millennium Declaration, adopted in 2000 by the 189th countries of the world at the UN Millennium Summit, as well as the “Development Agenda after 2015”, adopted at the UN Summit in 2015, affirms that gender equality is not the key to achieving the goals of Sustainable Development only as a fundamental human right, but also as a necessary foundation for a peaceful, prosperous and sustainable world.

Ensuring gender equality in society is one of the biggest challenges for Ukraine. In 2005, the Law of Ukraine “On Equal Rights and Opportunities for Women and Men” was adopted, in 2012 the Presidential Decree in Ukraine approved the State Personnel Policy Strategy for 2012-2021, which provides for the provision of gender equality in the system of state management and recognized it as one of the priority areas for the development of gender democracy [1]. But the vast majority of ambitious tasks set by the country to achieve in 2015 have not been fully realized. The main indicators of gender development

remain extremely remote from the stated target indicators, despite the development of the relevant institutional environment and program environment.

The research of gender aspects of socio-economic processes in rural areas was devoted to the work of such scholars as D. Alarcon, J. Anker, G. Anrikese, S. Beauvoir, B. Bock, O. Dodgey, C. Delhi, M. Kimmel, J. Colinz, N.M. Kutsmus, J. Little, S. Razavi, C. Taylor, M. Hartl and others. However, many issues of gender equality policy, especially in the context of rural development, have not found a proper theoretical and methodological substantiation. The importance of gender equality in ensuring the social and economic growth of rural territories, the effective use of their endogenous potential, and the formation of strategic development prospects requires the search for directions, methods and tools for solving gender problems in rural areas.

Among the priorities that Ukraine has set for Ukraine on the goal of sustainable development “Ensuring gender equality” is to overcome the difference in the possibilities for self-realization in the public and private spheres for men and women both at the legislative level and in real life.

Guided by the results of the analysis of national reports, reports, monitoring, audits, one can confidently state that the implementation of the gender equality policy, the implementation of good governance on its basis, is unequivocally successful at the legislative level. However, the achievement of gender parity in the representative bodies was the most difficult task, although this aspect is a key to the success of further gender transformations and identifies the real opportunities for women to influence their own competences in all spheres of public life. Among the main obstacles, researchers include stereotypes, mental representations of role-playing interaction between men and women, recreated by practical actions, determined by the context of culture and the needs and interests of individual individuals, religious and ideological factors. The rationale for an innovative model of gender policy in public administration that is adequate to the needs of Ukrainian society should be correlated with the innovative idea of gender parity, taking into account the historical and cultural stereotypes inherent in the Ukrainian people regarding the social status, norms of behavior and the role of men and women in the private and public spheres of life.

First of all, one should turn to research in linguistics, because, as the analysis of literature shows, the key to gender biology (as an independent science, it was formed only in the early twentieth century.).

The notion of “gender” has taken over the content construct of the linguistic term “gender”, which originally denoted the grammatical category of the genus, and only subsequently became used by various social sciences in the sense of “sociocultural sex”. Philosophers, psychologists, culturologists and other scholars have convincingly proved that the biological aspects of the gender are of a social nature and can therefore be considered not as natural but as socially and culturally determined. As some scientists rightly point out, “state policy must be built on the principles of gender equality”. This means:

- observance of the constitutional principle of equal rights, freedoms, opportunities for men and women in all spheres of public life;
- elimination of discrimination against women and men in the workplace;
- coordinating the efforts of the state, civil society and business to introduce and strengthen control over the creation of a fair gender-based personnel policy;
- development of a balance of labor resources taking into account gender specifics of separate sectors of production;
- ensuring a gender balance in the management of any enterprise and in state / non-state management;
- equalization of wage levels between industries and reduction of the difference in the nature and wages of work between women and men, while complying with the requirements of equal pay for equal work;
- ensuring equal opportunities in the labor market and promoting women’s employment;
- introduction of a gender perspective in all current and future state plans and programs [2].

Sustainable development can not be achieved without removing the barriers affecting more than half of the population. According to the State Statistics Service on 01.01.2018 42.2 million people lived in Ukraine, including 46.3% men and 53.7% women [3]. The rural population is 31.2%, among which women – 53%. It is important to note that in the structure of rural population 18.9% are children under the age of 18, and 22.8% – people 60 years and older. In 2,5 thousand villages population over 60 is more than 50% of the population. The expected average life expectancy of rural women (75.2 years) exceeds the expected average life expectancy of men (64.6 years) for more than 10 years. Female pensioners living in the countryside make up 40.7%, while men are only 25%. For comparison, in the structure of the urban population, women of retirement age make up 31.1% and men – 21.2%,

respectively. The general demographic trend is that the rural population is aging and aging by increasing the number of single-parent elderly women. This gender gap identifies the specificities of gender issues in rural areas. They relate to the established established social norms and stereotypes over a long historical period. These problems are primarily related to health (usually men and especially rural men, women are much less likely to be involved in the prevention and treatment of diseases in the early stages), alcohol abuse, smoking, injuries and severe labor conditions, as well as in the vicinity other reasons.

The employment rate among women in Ukraine is 51.9%, and among men – 62.5%. The structure of women’s employment in the country as a whole is as follows: those who work for a job are 34.8%, self-employed – 1.4%, employers – only 0.4% [3]. Relevant indicators for rural women vary. So, the employed rural women make up 25.4%, self-employed – 1.1%, and employers – 0.3%. At the same time, the households in rural areas are almost 2 times more than among the urban population (11.5% vs. 6.8%). If we compare the self-employment of men and women, then among the urban population in men, it will be almost 2 times higher than that of women, but among the rural population, male self-employment is above the female’s almost 4-fold. And this is evidenced not so much less, as compared to urban women and rural men, the willingness of rural women to organize their own small business at least as much as the connection between such activities with considerably greater difficulties than the urban population (or rural men). These difficulties are largely due to the ability of rural women to combine work, servicing a personal auxiliary farm and performing domestic work.

In addition, the problems of rural women are deepened through living conditions. Thus, 48% of rural women are restricted in access not only to quality but in principle to any medical services due to the lack of medical facilities in the immediate vicinity of their place of residence (bad roads, low income, lack of affordable transport connections do not allow guaranteed use medical institutions located in large settlements and cities) [4]. Almost a quarter (23%) of households still use exclusively oven (wood or coal) heating. One third (32%) of rural women do not have access to drinking water in their homes (use external wells), more than half (58%) have no sewage and water supply in their homes. This is not just a testimony to the low quality of life – this is the absence of elementary living conditions and evidence of extreme poverty. In addition to the limited access to infrastructure, it is necessary

to note the problems of water pollution in the wells, interruptions in electrical supply and transport problems.

The absence of many villages in a network of hard-coated roads, transport links, poor street amenities are all conditions that complicate life in the countryside. Thus, more than a quarter of rural settlements do not have public transport stops, of which 484 rural settlements (with a population of 57.4 thousand people) are from the nearest stop at a distance of more than 10 km and 661 rural settlements (with a population of 451.6 thousand person) is from a hard coat at a distance of more than 10 km. Less than half (47.8%) of rural streets were provided with hard cover, and 442 rural settlements used imported water [4].

The female unemployment rate in the country as a whole is lower than that of men (correspondingly, 8.0% for women and 9.9% for men according to the ILO methodology), but the status of the unemployed is more often recorded by women (55.3%), which creates for them at least insignificant social guarantees.

The average wage of men in Ukraine is still almost one quarter higher than the corresponding salary of women (76.3%). And this tendency is typical of working in the city and in the countryside. Payroll in the agricultural sector is one of the lowest in the wage rating by sectors of the economy (72.9% to the average economy level). Consequently, taking into account the nationwide low wages of women, is an obvious model, according to which the pay of rural women is one of the lowest in the country. This statement is equivalent to the field of agriculture as a whole, as well as to other branches, if their activity is "tied" to the countryside.

It is important to note that lower wages are eventually converted into smaller pensions. The average size of women's pensions today is only 72.4% of the average size of men's pensions, which is more than a gap in wage levels. This important indicator determines the level of quality of life in the elderly and virtually confirms that elderly rural women are one of the most significant poverty risk groups.

Another vulnerable group is the young lonely women who bring up children. According to the results of the household survey, the number of women in 1.3 times exceeded the number of men among those who receive help for children, 1, 4 times – among recipients of social benefits and 2.3 times – among those receiving subsidies. Moreover, in percentage of villagers in these categories more than urban residents.

The very fact that among applicants apply for social assistance more (in percentage terms) of rural residents, is another confirmation of the

lower income of rural residents, and above all rural women. At the same time, the level of social security is determined by the capabilities that the state possesses and can provide to its citizens. Thus, in 2015, 16.0% of registered unemployed women and almost 30% of men were employed in the agriculture employment through the State Employment Service. This is also facilitated by the practice of the State Employment Service to provide once the entire amount due for unemployment benefits in the case of setting up its own business and providing an appropriate business plan. This payout is primarily used as starting capital by women to implement their business projects in rural areas: more than 42% of unemployed rural women have been employed in this way. Dozens of successful women's stories that began a poultry breeding business, flowering and seedlings, seed production and other activities are proof of this. This practice not only solves the issue of employment, but also numerous social problems, since women find themselves able to provide themselves and help their loved ones – because the lack of social support leads to an increase in the burden on women, whether they are caring for children, sick, elderly and other members of the family it's Women are particularly burdened with responsibility for securing their families in the absence of men (they refer to the family of fighters who are in the area of hostilities).

Increasing women's access to resources, material and intangible (whether decision-making, information, specialized knowledge, land, financial savings, loans, etc.) is one of the most reliable ways to solve social problems. In the context of the decentralization reform, which involves transferring the management and disposal of the bulk of the budget to the local level, rural women have access to real management of finance and resources. A conclusion on the positive impact of rural development reforms on gender balance can only be made over time.

According to a survey conducted within the framework of a study on the situation of women living in rural areas organized by UNDP, only 16% of rural women participate in the work of various public and vocationally oriented organizations. At the same time only 2% of rural women, public organizations – 5% are involved in the work of political organizations, and 64% of women who do not participate in the work of various organizations are not interested in this. At the same time, about a third was called different barriers for active actions: 15% indicated a lack of time, 14% lacked interesting or effective organizations, 2% – that it was difficult for them to get to the relevant organizations.

At the same time, 53% of the polled women consider the main form

of participation in solving the problems of their village and local community by participating in local elections. Gender stereotypes and excessive employment of rural women are the main barriers to rural women's social activity.

But the apparent increased interest of women in participating in management. According to the results of the local elections that took place in Ukraine in 2015, there was a slight increase in the representation of women: from oblast councils – from 11% to 15%; in rayon councils – from 23% to 24.8%; and at the level of village councils – from 46% to 46.6%. According to experts, some increase in the representation of women at the local level is due to the insignificance of the resources that the local administration can dispose of and manage.

One of the most complicated tasks of decentralization reform is the change in the consciousness of the population itself, its activation and involvement in solving local problems. Unlike nationwide elections or local elections in large cities, during local elections in villages, citizens choose people who are directly familiar with and directly interact with, and the reluctance of 44% of rural women to take part in this participation indicates a high level of their passivity. The main reasons for the refusal to participate in solving the problems of the village are disbelief in their own abilities, lack of relevant knowledge and experience, lack of faith in the results of changes, lack of authority, lack of free time.

It is important that among rural women there are no people who would feel the obstacles on the part of the husband to their participation in the public life of the village. According to the survey of the Ukrainian project of fruit and vegetable business development (UHBDP), 95 representatives of microbusiness from rural areas with production volumes from several hundred to several hectares, aged 20 to 60 + years, 8% of enterprises of agrarian business are headed by women, 82% of women interviewed have a home computer. However, only 3% of them use it to improve their knowledge of agribusiness, 67% do not have access to the home Internet, only 21% of rural women have bank accounts, that is, the level of informatization of women in relation to agribusiness is fairly low [5]. Most of the social problems in the village are extremely gender-sensitive, and their solution involves complexity, including gender policy tools.

The Government of Ukraine has proposed 7 steps towards gender equality in communities, which will strengthen the capacity of communities through the empowerment of women in local processes.

Thus, the introduction of Typical community profiles based on gender-based and human rights-based approaches (including vulnerable groups (gender accessibility audits) are used to analyze gender needs and incorporate them into local plans and budgets; implement gender-based budgeting, increase the number of gender-oriented projects by establishing at a legislative level a ban on the construction and commissioning of multi-apartment houses not provided with social infra including the kindergartens, educational and medical institutions, the introduction of a gender expertise of draft laws and regulations of the authorities, as well as decisions of local authorities, the creation of a sectoral gender platform for OTs, the creation of the “Women’s Empowerment Community” movement, the inclusion in the Regional Index As a result of these steps, women’s representation in local self-government should increase to 30%, gender -oriented regional development projects, increase of the index of regional human development – the main result of the decentralization reform expanding rural women’s opportunities for full participation in decision-making processes in households and communities leads to better prosperity and better prospects for their children and families, which contributes to further economic growth. Therefore, one of the priorities of the agrarian state policy of gender equality should be the development of women’s entrepreneurship.

Consequently, given the current gender situation in the countryside, it is important to introduce support for women’s employment in the agricultural and non-agricultural sectors: Priorities of such support should be: training on co-operation, promotion of the creation of cooperatives in rural areas and other associations of women – unions, associations, which will serve to increase the professional capacity of women through the expansion of communication between women, the exchange of experience.

Special programs for the development of women’s leadership, conducted by public organizations, have an unconditional positive effect. Equally important is the educational, informational work on gender issues that would be conducted both among women and men at the grassroots level, as well as at the level of officials, including those working in the field of agriculture and rural development. It should be aimed at overcoming stereotypes about the role of women and men and adapted to modern models of social, including family, relationships.

Thus, empowerment of women and girls in rural areas and respect for their human rights and gender equality is a factor not only in the

well-being of individuals, families and rural communities, but also in terms of overall economic efficiency, given the high percentage of women among agricultural workers in Ukraine.

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**MARKETING
PERSONNEL AS AN
EFFECTIVE METHOD
OF DEVELOPMENT
THE PERSONNEL
POLICY ENTERPRISE**

In modern conditions, when the stable economic development of enterprise largely depends from the interest of personnel in an active, efficient activity, when a person is an essential element of the production process, on the basis of which it is possible to achieve market success, increasing the role marketing personnel.

Marketing activity is one of the leading functions in activities of industrial enterprises, which ensures their steady, competitive conditions on the market, taking into account internal and external environments.

This activity involves realizing on the market and using the results for acceptance effective management decisions. At the same time, marketing personnel helps to ensure the leadership of the enterprise high-quality information. All this necessitates formation at the enterprise of effective marketing personnel, which, through the system of accumulation, exchange, analysis, processing and practical use of marketing information, will contribute to achievement the sustainable balanced development of socially significant results of personnel activities.

Today, not sufficiently investigated is the problem of combining in management of the enterprise marketing personnel and development strategies. The purpose of the work is theoretical substantiation and develops of methodical providing marketing personnel at the enterprise.

As an object of research select the industrial enterprise “Litma Ltd”, that produces high-quality products of wide range products Production facilities of the enterprise consist of high-tech equipment of foreign production, but loaded on 30%. It requires additional personnel. Unfortunately, the level of training employees of the enterprise does not always correspond to the goals and objectives of the enterprise, therefore it must be taken into account that the process of finding, selecting, training, adapting and improving the skills of the required personnel is a determining factor for effective management. In view of this, there was a need to evaluate the personnel policy of the enterprise through marketing personnel.

The experience of western firms shows that personnel are one of the main components of success in activity of the enterprise. Therefore, the enterprise needs to have reliable information not only about the state of technical, financial, economic resources, but also about the personnel in order to increase the efficiency of its work. In order to ensure the most complete and effective providing marketing personnel, it is necessary to identify its most important components and elements.

Relevance of assessment the personnel policy is connected with the fact that when recruiting new employees, when selecting candidates for a new post, when planning an official career, conducting the attestation there is a need to assess the impact of the most important components of it.

Such an assessment has an active orientation and provides an opportunity to orient the leadership to implement the optimal practices regarding the application of marketing methods to personnel. Identifying the abilities to learn modern technologies will enable managers to

implement the advancement of employees' professional activities, enhance their professionalism, and motivate them to increase the effectiveness activity of the personnel in the context of chosen strategy of the enterprise

Before the enterprise faces the task of creating such conditions that ensure the optimal use of personnel in the amount of balanced needs and interests of the enterprise and each employee. The achievement of this balance can be ensured through the introduction of marketing in management of personnel. This will allow us to reconcile market conditions, opportunities of the enterprise with the interests of each employee, track changes in the professional-qualification structure of personnel, identify trends in the development of labor force in the labor market and timely determine the qualitative and quantitative requirements for it. The use of marketing methods in management of the enterprise, in particular personnel, will contribute to the growth of the real impact and productivity of production without the use of additional resources [1, p. 4].

The functions of marketing personnel are: definition of personnel needs; study of personnel; search and hiring of personnel, selection and evaluation of personnel; training and development of personnel; preserving them and stimulating labor productivity, and, if necessary, dismissing workers. Types and ways of attracting personnel depend from numerous factors influencing on the active labor market. Marketing personnel also includes research in the field of personnel management directly at the enterprise, identification of the most influential factors of personnel on the efficiency of work.

In the paper proposes to consider the marketing personnel in bringing the system of training specialists in line with the demand for human resources on the labor market today, tomorrow and in the future.

In view of this, marketing personnel should coordinate the purposes of activity the enterprise with existing in time the quantity and quality of human resources and focus on:

- research of the labor market, correspondence of trends its change in the paradigm development of the enterprise, society and forecasting its conjuncture;

- studying requests, labor needs and the most complete and most effective of their satisfaction through interconnection with external sources that provided of the enterprise by staff;

- analysis of personnel potential of the enterprise and the quality of its use;

- forecasting and planning of needs in personnel;
- develop and implementation of strategies the management personnel;
- organization of communication activities;
- expert examination of personnel.

The broad interpretation marketing personnel is to refer to one of elements the personnel policy organization, implemented through the solution of a set of tasks of the department of personnel management (develop of target system, planning needs, business assessment, career management, motivation) [2, p. 170].

In determining the criteria for selecting indicators to conduct an assessment the personnel policy enterprise, it should be taken into account that there can not be any unified criteria or evaluation systems, so when selecting indicators it is necessary to take into account the conditionality of the existing constituents. Thus, for make evaluation of the professional-qualification component can be defined the following groups of criteria (assessment indicators) such as: professional, business, moral-psychological, integral.

Thus, the content of each group of criteria of the indicators depends from the presence of identified component and each of them can have its own set of criteria that need to be established and evaluated.

The identification of these key indicators for assessment the personnel policy is one component of interpretation the results of study, which involves the use of such a mathematical apparatus, as factor analysis, and methods of multivariate statistical analysis (correlation analysis, method of the main components).

The use of factor analysis is necessary for solving the following tasks:

- firstly, finding out how substantive and heterogeneous characteristics of an object which influence the quality of the personnel policy are found logically and expertly;
- second, valuation of the minimum number of indicators that most fully characterize the perfection of personnel management of the enterprise that operates in a competitive environment.

The separation of the main factors from a mathematical point of view consists in the allocation of linear combinations of random variables who have maximum possible variance, with what first main factor covering the maximum dispersion of numerical values of indicators that assess the quality of the personnel policy of the entire enterprise; at the same time, the factor load characterizes the contribution of each person in changing the priorities of the personnel policy.

The contribution r -th main component (factor of personnel) to the

total dispersion is determined by the formula (3.1) [3]:

$$V_r = \sum X_{ij} a_{jr}^2, \quad (3.1)$$

where V_r is the actual value of r-th main factor;

a_{jr}^2 is the weight of r-th component in j-th indicator.

The total contribution of the first components is calculated as follows (3.2):

$$Y_r = \frac{1}{n} \sum a_{ij}^2. \quad (3.2)$$

The boundary of this amount is determined depending from the requirements of task and usually set within the range of 0,80 - 0,95, and this quantity determines how much of the last major components can be excluded from consideration, thereby reducing the dimension of the investigated n-dimensional space.

The principle of selecting the main components (factors) at the maximum of the explanatory variability made it possible to determine the number of aggregate indicators that sufficiently determine all the output indicators. However, the factor-component system is not the only one. With the help of rotation the coordinate system, in principle, can get many solutions, so need to find the right axis rotation. To solve this task, it is necessary to rotate factor loads using the method Varimax normalized.

Thus, every major factor of quality the personnel policy (f), which gives some generalized new characteristics to all investigated objects, is expressed in the form of a linear combination of output indicators that allows to interpret the main factors:

$$f_r = \frac{1}{V_r} (a_{1r}y_1 + a_{2r}y_2 + \dots + a_{nr}y_n), \quad (3.3)$$

where f_r is the normalized value of r-th main factor;

V_r is the actual value of the r-th main factor;

Y_n is the normalized value of the j-th indicator obtained from the experiment;

a_{nj} is the weight of the r-th main factor;

$j = 1 \dots n$, n - number of indicators.

After identifying the main factors and optimal factor loadings, it is expedient to investigate the objects, that is, elements of the personnel policy, to rank them according to the level of the personnel policy.

For this purpose has been developed a graphical rating scale for the assessment of workers (Figure 3.11).

	Level higher than average	Average level	Level below the average
f_1			
f_2			
f_3			
	The most important elements		
	Significant elements		
		Required elements	
		Elements that do not affect of the personnel policies	
			Destabilizing elements

Figure 3.11 Graphic rating scale assessment of personnel policy enterprise

It should be considered, as it is accepted in the estimation of indicators that correspond to the normal distribution, that:

$-1 < f_n < 1$ – the average level of the relatively stable elements of the personnel policy enterprise;

$f_n > 1$ – level below than average;

$f_n < 1$ – level higher than average;

where f_n – defined relatively stable signs of the personnel policy.

The most important and essential elements for the personnel policy should be taken into account when forming and implementing a strategy of enterprise.

The research of components the personnel policy was carried out at the industrial enterprise “Litma Ltd”. Was generated a sample of 25 experts by using the Bernoulli formula. The experts included leaders and leading specialists who rated the most significant indicators.

The study excludes indicators whose selective distribution is not subject to the law of normal distribution, indicators that have a

significant collinearity with each other, are less informative and duplicate.

By standardizing the values of the output variables can go to the normalized values. The method of the main components is determined by the number of the most significant major factors characterizing the personnel policy enterprise. Among such factors are the professional-qualification level (0.75), the motivation management system (0.67) and the presence of participatory personnel management (0.43).

For 12 main factors, the share of total (cumulative) dispersion (cumul. %) is 81.71%, the total contribution of the other 18 major factors is 18.29%. In addition, starting with factor 11, own values (eigenval) are less than one. Therefore, it is advisable to dwell on the first 10 main factors that explaining 75.79% of the total dispersion, the eigenvalues of each of which are greater than one.

In the process of the research, have been identified factor loadings that allow us to find a correlation between the main factors and elements of the personnel policy enterprise, as well as formed the factor matrix.

The optimal solution is achieved by rotating the axes of the main components in the space of signs. With such an optimal solution, have been re-emerged the ten major factors that will have the same accumulated contribution of a total dispersion of 75.79% and more pronounced load on certain groups of attributes.

The method of main components are determined by the most significant key factors that characterizing the quality of the personnel policy enterprise. The most significant contribution is given by the first main component f_1 , which includes seven variables:

- y_{15} – social package of workers;
- y_{16} – use of modern teaching methods;
- y_{17} – influence of organizational culture on personnel;
- y_{18} – financing of personnel development;
- y_{19} – conformity of the level education of personnel to the requirements of production;
- y_{20} – degree of correspondence the level of education to career growth;
- y_{22} – possibility of personnel qualification upgrading.

These indicators characterize the educational resources of the enterprise, therefore it can be noted that this is a professional-qualification component of the personnel policy. All of these indicators are related to the first main component of positive weight factors.

The first main component can be presented as follows:

$$f_1 = 1/5,295 \times (0,719y_{15} + 0,891y_{16} + 0,833y_{17} + 0,833y_{18} + 0,819y_{19} + 0,852y_{20} + 0,765y_{22}).$$

The second main component f_2 includes the following variables:

- y_1 – the level of wages;
- y_2 – the level of material motivation;
- y_4 – the level of non-material motivation;
- y_5 – participation in management;
- y_6 – possibility of career growth;
- y_{11} – working conditions;
- y_{13} – delegation of powers.

All these indicators describe the state of the level of motivation on the enterprise, so can define this component as a motivational system and present it as follows:

$$f_2 = 1/4,8 \times (0,973y_1 + 0,854y_2 + 0,907y_4 + 0,838y_5 + 0,63y_6 + 0,64y_{11} + 0,912y_{13}).$$

The third main component f_3 closely correlates with the method of personnel management, namely:

- y_{23} – style of management;
- y_{24} – quality of managerial decisions;
- y_{26} – socio-psychological climate in the team.

According to many executives, they have a greater impact on the efficiency of personnel of the enterprise. But, as the data shows, they rank only third after the professional-qualification level and motivational system:

$$f_3 = 1/3,19 \times (0,981y_{23} + 0,966y_{24} + 0,972y_{26}).$$

At the final stage of solution the task factor analysis was obtained a matrix of normed values the main factors for the enterprise and was carried out the classification of objects by the normalized values of the main factors.

Thus, the value of the first main component determines the professional-qualification level, the second – motivation management system, the third – the method of personnel management. The analysis in the rating scale allows us to form an idea of the presence of each component on the enterprise and effectiveness of the personnel policy, depending on the weight of the identified groups of components.

The assessment of the quality of personnel policy made it possible to draw the following conclusions.

The weight of the component, which determines the method of personnel management, is within the normal limits. Personnel policy of the enterprise can be characterized as sufficient.

In order to achieve a level above the average, marketing personnel should direct management efforts to enhance the weighty elements, the availability of which is sufficient for further improvement of personnel management in the context of the enterprise development strategy. The most important elements, which make up about 3% of their total number, also allow management to implement important measures about improve personnel management, whose effectiveness is almost absolute.

However, elements that do not affect personnel policy and destabilize it are respectively 25 and 4%. These groups of elements should be paid to special attention, control the possible increase in their weight and to observe trends in their dynamics. The lack of manage action against these groups can significantly impair the situation at the enterprise and make personnel policy ineffective, which in turn will reduce the level of personnel management.

Research results will help:

– to get a comprehensive view about the state of personnel policy of the enterprise;

– to identify the reasons that adversely affect on effectiveness of the use of personnel marketing methods at the enterprise and, on the basis of this, develop a set of interrelated economic, administrative, educational, sociological, psychological, psychophysiological measures aimed at ensuring conditions for the most effective implementation of personnel management methods, motivation and professional-qualification component that has the greatest impact on the quality of the personnel policy enterprise.

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Chapter 4

FORMATION AND USE OF MODERN SECURITY MECHANISMS IN THE CONDITIONS OF PERMANENT CHANGES IN THE GLOBAL ENVIRONMENT

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DIAGNOSTICS OF UKRAINE'S DEBT SECURITY IN THE CONDITIONS OF GROWTH OF THE GLOBAL DEBT

Each sign of globalization has its positive and negative features [1, p. 35]. Providing the debt security of a modern state remains the most actual area for discussions. The multidimensional implications of the expansion of debt problems of the public sector to other areas, the difficulty in obtaining reliable information on the present and potential risks of accumulation of sovereign debts, identifying secure criterias for debt consolidation for each individual country and the ability of states to fulfill their debt obligations in a timely manner is only a partial list of issues the delay in solution of which increases global financial instability.

International financial organizations and global expert circles identify the excessive growth of aggregate global debt as one of the major systemic risks for the global economy [2]. By the end of 2017 its level reached its historic high of \$ 237 trillion or almost 317.8% of global GDP [3].

A significant share of global debt amounts to the government debt. According to IMF calculations, the ratio of the government debt to GDP in all countries of the world at the end of 2017 amounted to 82.4% of GDP, having increased by 2.6 percentage points over the past 5 years GDP.

The following specific factors, which influenced the increase of public debt in Ukraine are the structural imbalance of the national

economy, excessive increasing of the expenditure part of the budget at the expense of subsidies given by the state to certain industries such as energy, coal industry, saving significant numbers of unprofitable state-owned enterprises, significant amount of shadow economy, the structure of budget expenditures, which does not correspond to the available financial possibilities of the government, the acceptance by the Ukrainian state of obligations of the Savings Bank of the USSR, State debt collection by enterprises due to the lack of a clear distinction between the finances of enterprises and the state at the expense of the state budget, the repayment of overdue debts of economic entities for energy carriers, payment of significant amounts for the performance of warranty obligations for export credits, hidden budget deficit which is accumulation of arrears by budget institutions (settlements by mutual payments and treasury bills), misuse of budget funds, underdevelopment of the stock market, inflation expectations and permanent devaluation of the hryvnia; insufficient level of economic consciousness and culture [4, p.112].

We will analyze the main tendencies, which characterize the state of debt security of the country. In our opinion, the precondition for such analysis is the definition of the impact of public debt on the gross domestic product. In particular, to assess the impact of external debt on GDP, we will conduct a regression analysis of these indicators (Figure 4.1).

The results obtained in Figure 4.2, indicate a high degree of dependence between the analyzed values, which is the value of a determination coefficient and is quite high ($R^2 = 0,92$). It is worth noting that, if $X = 0$, other factors are influenced by Y . However, the value of the coefficient of the variable in our case is 1.38, which indicates the existence of a direct relationship between the values. With the growth of external debt of the country the volume of GDP also increases.

Taking into account the results, we will conclude that the country's external debt plays a positive role in GDP growth and can be an instrument of economic development, as it leads to its incrementing. On the other hand, such growth has little effect on budget expenditures, whether capital or social, which means that funds from such borrowings are diverted to other needs. It can be assumed that they are spent on repayment of previously accumulated debt, or solely on replenishment of gold reserves and domestic currency support, which could create a huge threat of insolvency in the future.

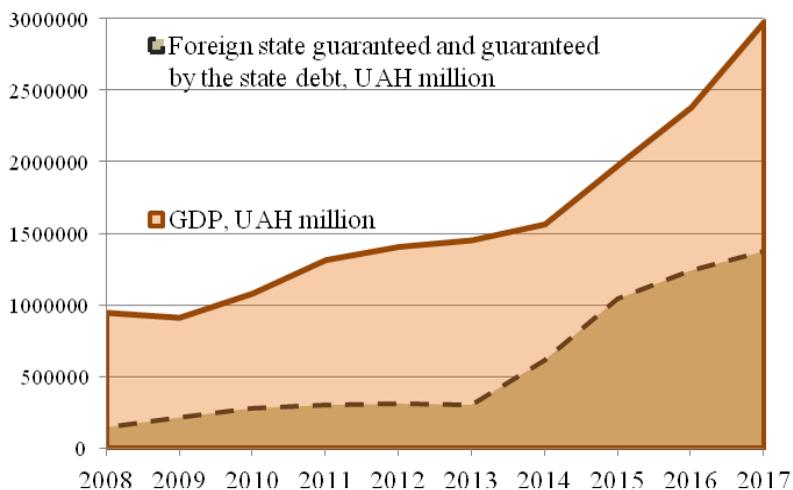


Figure 4.1 Dynamics of Ukraine's External Debt and GDP in 2008-2017 years, UAH million

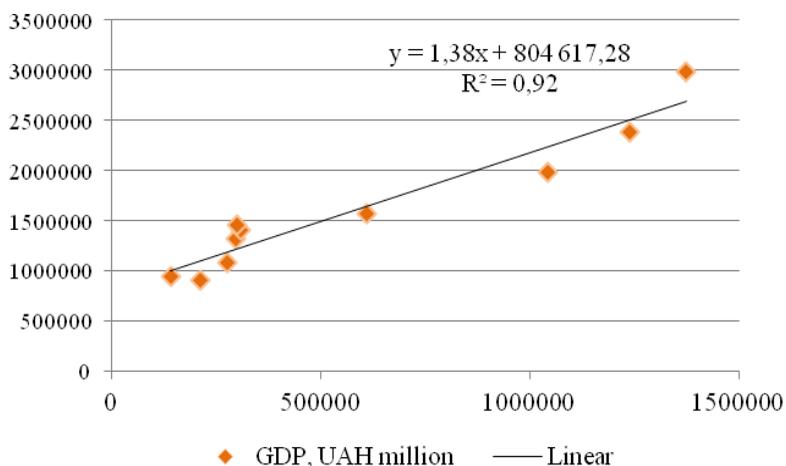


Figure 4.2 Linear trend model of the dependence of GDP and the external debt of Ukraine

The assessment of the country's public debt is usually carried out in medium-term scenarios. Accordingly, are often used indicators, which

are determined by the ratio of public debt to exports, GDP or budget revenues. The high value of the coefficient indicates the burden on debt servicing, which depends on the difference between the interest rate and the growth rate of exports, GDP or budget revenues. The growing ratio, especially in cases where the level of debt is quite high, indicates the deterioration in debt sustainability [5].

The generalization of domestic and world approaches to the assessment of public debt makes it possible to identify three groups of debt security indicators, which are debt load, debt sustainability, debt potential.

The first group of indicators is the assessment of the debt load and reflects the amount of funds spent on servicing and repayment of public debt, including the amount of reserve funds in each specific period of the selected time interval [6]. The debt burden suggested to understand as the amount of money spent on debt obligations through revenue and budget expenditures.

Thus, the debt burden indicates the financial and the economic stability and indicates the absence of a possible default in the country.

The second group of indicators is the assessment of debt sustainability and involves the calculation of an economically safe level of the government debt, taking into account the debt burden and the riskiness of the formed portfolio [7].

Debt stability is a qualitative characteristic of the volume and the structure of the government debt, which ensures the ability of the state to execute its debt obligations without increasing the debt burden on the budget under the conditions of maintaining a sufficient level of liquidity and solvency.

The central indicator is the safe level of debt, which is determined by the ratio of government debt to GDP.

In the international practice it is considered, that debt sustainability indicator to be the approximation of debt ratios to a level where the state is forced to cease debt servicing and to request creditors about its restructuring or write-off. A significant number of representatives of Ukrainian and the world science determine the boundary of debt stability of the state through substantiation of the limit value of the indicator of the ratio of public debt to GDP / GNP.

According to experts of the International Monetary Fund and the World Bank, about two-thirds of all defaults occurred in countries with a ratio of public debt to GDP less than 40%. Taking this into account, 25% of GDP is recognized as an acceptable level of the government

debt for developing markets. In addition, the representatives of these international organizations have proved that countries with weak institutions are characterized by increased risks of the debt crisis when the state debt reaches the level of 30% of GDP and 100 budget revenues [8].

The third group of indicators is the Debt Capacity Assessment, allows to identify opportunities or determine the features that can be used. We propose to consider debt potential, on the one hand, as the maximum possible amount of public borrowing taking into account the need for repayment before reaching the maximum permissible amount of public debt established by regulatory enactments, and on the other hand, as the maximum amount of debt repayment without restructuring for the purpose to identify opportunities for reducing public debt.

The system of “debt indicators” developed by the IMF allows us to assess not only the solvency of the state, but also the condition of the debt of the state, financial and private sectors of the economy. But, according to many scientists, this technique has no indicators that reflect the relationship between debt and reproductive processes in the economy and show the impact on socio-economic development of the state [9, p. 41].

The debt position of Ukraine in the period 2015-2016 was characterized by a rising trajectory of debt load indicators and exceeding the maximum allowable values of key indicators (Table 4.1).

Table 4.1

Indicators of Ukraine’s debt security in 2015-2017, %

Indicators	Limit value	2015	2016	2017
The ratio of total public debt to GDP	30-50	79,1	81,0	71,8
Repayment and servicing of the state debt to the state budget revenues	200	294,0	313,1	270,0
Repayment and servicing of government debt to state budget	10-15	15,0	14,2	13,2
The ratio of external public debt to exports of goods and services	200	248,1	247,2	217,6
The ratio of short-term external debt and international reserves, according to the Greenspan criterion	100	384,6	303,0	248,4

In 2017, relative indices of Ukraine's debt load have been improved to some extent, but have not reached an economically secure level. The maximum weight of the ratio of the public debt and GDP was achieved at the end of 2016 the amount of 81% of GDP. Since then, the relative index of debt load has been gradually declining up to 71.8% of GDP at the end of 2017. Such shifts were due to the revaluation of the real exchange rate of the hryvnia and the slow restoration of economic activity.

The limit of the public debt for emerging market countries is 30-50% of GDP and for developed countries is 70-90% of GDP [8]. The actual amount of public debt in relation to GDP in Ukraine exceeds these maximum permissible values at least by 18.8 p.p. of GDP.

As for the budget revenues, the state and state-guaranteed debt at the end of 2017 reached the level of 270%, which also exceeded the maximum permissible level of 200%. Ukraine's gross external debt, which includes both state and corporate debts in 2017, amounted to 217.6% of exports, while the maximum permissible value for low and middle income countries is 200% of exports.

It is known, that the maximum permissible value of the ratio of short-term external debt and international reserves, according to the Greenspan criteria is 100%. In Ukraine, this indicator in 2017 amounted to 248.4%, indicating the potential instability of the debt position of the state and the private sector, as well as, the inadequacy of official currency reserves to support the international liquidity of the country in the event of reverse of capital flows.

The need to hold the debt-to-GDP ratio at a constant level or to limit its growth rate to maintain debt sustainability is argued by the fact that the ever-increasing amount of public debt may soon reach a certain limit that will be perceived by stock market participants as a solvency threshold (debt overhang). Then the state will continue to be unable to serve actual and attract new loans, which will eventually lead to a debt crisis.

Therefore, the amount of accumulated public debt is acceptable (sustainable debt), when the state by conducting a rational policy, can serve this debt in such a way that the debt / GDP ratio is either stable or declining. On the contrary, the debt will not be acceptable (unsustainable debt), when even if the government adopts the necessary measures and taking into account objective macroeconomic forecasts, the above ratio and in some cases, the debt / export ratio is substantially will grow. Thus, this means that it is necessary to restructure debt with a

reduction in its size at current value (NPV) terms [10].

In the macroeconomic context, the risk of a high debt burden in the public sector is due to the following factors:

1) increasing in the degree of economic uncertainty and decreasing in private investment in the economy, as a result is the effect of displacement, which inhibits the country's economic growth;

2) the emergence of the need to generate surplus current account balance or budget surplus to service accumulated debt, which reduces investment and consumer demand in the economy;

3) the loss of the government's ability to pursue anticyclical fiscal and monetary policies that deprive its tools of maintaining aggregate demand in times of crisis and thus increase the duration/ depth of the economic crisis;

4) rising the risks of refinancing the public debt. The government may suddenly lose access to loan financing, which will generate a liquidity crisis and generate crisis impulses for the economy;

5) enhancing vulnerability of the economy to the impact of external shocks on the part of changes in interest rates, prices for exported products, demand in partner countries, which could be the cause of default.

Deepening of the debt burden on the Ukrainian economy can not be considered as an isolated problem. This situation creates difficulties in macroeconomic regulation and has a negative impact on the possibility of using fiscal policy levers. For example, the difficulty of fostering fiscal policy, which is in elevating a public spending and limiting tax burden.

Government structures recognize debt burdens for themselves, first of all, for the possibility of excessive growth of budget expenditures on servicing the debt and in limiting revenues to the budget by borrowing. It is worth noting that such threats are the most obvious and they are interconnected.

The growth of the volume of the public debt and ineffective management ultimately forms the stable tendency for lifting the amount of budget funds needed to service and repay debt. This, in turn, further exacerbates the debt problem and provokes the need to attract new loans in ever larger scales.

The debt crisis can cause and already leads to many other negative consequences, among which, in our opinion, such threats as the risks of reducing the degree of economic security of the country due to debt security breach, increasing the burden on the state budget and deepening

the problem of its chronic deficit due to rising costs of debt servicing, risks of imbalance of the financial system of the country, reducing opportunities for cooperation with international financial institutions, diversifying sources of financial resources, the growing dependence on external creditors and their claims, and thus the difficulty of realizing the economic and social policy of the state independent of external influence, reduction of credit ratings of the country to the pre-deflated state, reduction of opportunities for socio-economic recovery, disruption of incentives for economic growth, the narrowing of opportunities for active state innovation and investment policy, as resources are diverted to debt servicing, while in today's conditions the introduction of innovations serves as the basis of economic growth. The "effect of crowding out" consumer and investment costs through raising interest rates in case of excessive domestic debt financing of the state budget deficit [11].

The new trends, which emerge in the process of globalization at the beginning of the 21st century cause ambiguous consequences, filled with uncertainties and risks. In the conditions of the financial and economic crisis and the growth of public debt, Ukraine's debt security is in the unsatisfactory state. During 2015-2017, there is a positive trend towards improving the debt security indicators of the state, but in the 2018-2019 periods, the need to attract large volumes of domestic and foreign borrowings, problems in the range of cooperation between Ukraine and the IMF create high risks of deterioration of debt security, loss of state solvency and its default. Therefore, comprehensive measures should be taken to improve the assessment and monitoring of debt security, the formation and implementation of the state's debt policy and the improvement of the efficiency of public and guaranteed debt management. Naturally this does not exhaust global and national anti-crisis measures that are being implemented in order to improve the sovereign finances and are part of the debt function of the state.

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**ACTIONS TO
IMPROVE CRISIS
MANAGEMENT
OF ECONOMIC
SECURITY OF
BANKING
INSTITUTIONS AT
THE NATIONAL
LEVEL**

Improving the state regulation mechanism of the crisis management of the economic security of banking institutions in Ukraine will provide an opportunity to provide higher indicators of the level of economic security of banks compared to those that could be stated now, which in the future will positively affect the state of the banking system as a whole.

The state regulation mechanism of crisis management of economic security in banking institutions in Ukraine is implemented through the forms, methods, techniques and tools, which were described in detail in the first section of the study [1].

At the same time, it is expedient to use the norms of banking activity of the National Bank of Ukraine only in order to establish the level of financial security of the bank for various kinds of hazards and threats, as well as its financial stability. At the same time, the corporate resources of banking institutions, the protection of which should be a priority task

of a highly organized system of economic security of the bank, is not limited to its assets, investment resources, monetary funds in the accounts and shareholder's equity [2].

In order to solve the existing problems in the functioning of banking institutions, it is necessary to formulate an algorithm of actions in accordance with the developed state regulation mechanism of crisis management of the economic security of banking institutions in Ukraine [3] (Figure 4.3).

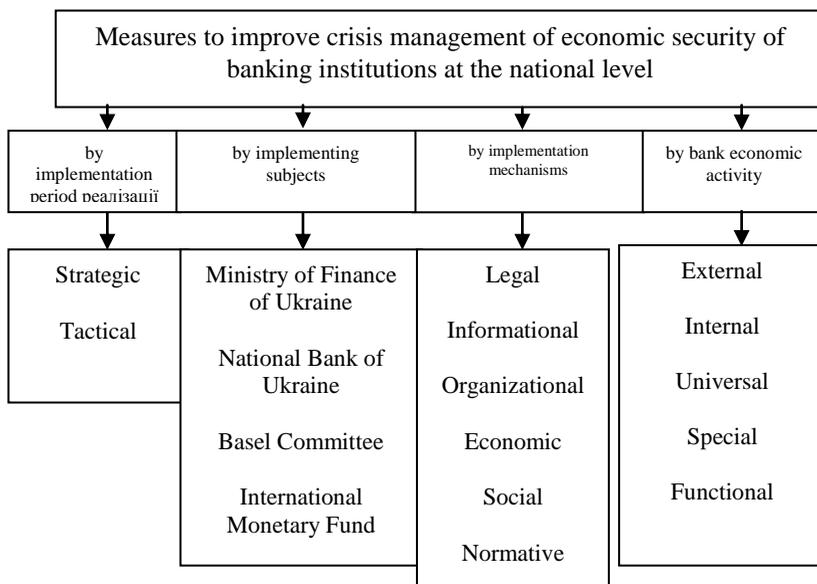


Figure 4.3 Classification of improvement measures of crisis management of economic security of banking institutions in Ukraine

Source: compiled by authors

It is necessary to consider each of the proposed measures in more detail to improve the crisis management of the economic security of banking institutions in Ukraine.

I) By implementation period:

– tactical – improving the internal organization of work: improving the rules and procedures for implementing various banking transactions, improving the work of bank personnel engaged in passive operations, finding new forms of work with customers, reducing the likelihood of risk and inappropriate decisions, etc.;

– strategic – aimed at strengthening its position in the market, which envisages taking into account the whole complex of factors that create the external environment for banking activities.

II) By implementing subjects:

1) Ministry of Finance of Ukraine: by managing public finances that can provide high-quality public services, effectively accumulating resources and distributing them in accordance with the priorities of the development of the nation in the medium- and long-term perspective through:

– full implementation of strategic and medium-term planning, which will ensure the allocation of resources in accordance with the state's priorities;

– introduction of effective planning and evaluation systems of state regulation implementation, increasing the role and responsibility of the main spending units in determining priorities of their activities and efficient use of funds for their achievement;

– increasing the state regulation effectiveness through a comprehensive analysis of feasibility and effectiveness through changes in approaches to their implementation through the transition from institutional maintenance to the provision of qualitative public services;

– strengthening control over bank risks and taking measures to minimize them, in particular regarding banking institutions, state guarantees and other debt offerings;

– provision of strategic distribution and monitoring of state investments;

– supporting the decentralization process by ensuring a clear distribution of relevant authorities and resources, as well as ensuring the accountability of banking institutions;

– increasing the level of managerial accountability and effectiveness of internal control and audit in central and local government bodies.

1) National Bank of Ukraine:

– low and stable inflation – deepening the transmission mechanism of monetary policy and setting a discount rate at a level that will bring expected inflation to target values at the political horizon;

– stable and transparent effective banking system – transition to risk-oriented banking supervision: analysis of business models and strategies of banks;

– annual stress testing; strengthened control of bank operations with related parties. Harmonization of the prudential requirements for banks with the norms of the European Union legislation and the

recommendations of the Basel Committee;

- restoration of lending – start of work of the Credit register.

Strengthening consumer rights protection, strengthening the protection of creditors' rights: improving bankruptcy procedures; the establishment of the institution of private performers;

- effective regulation of the financial sector – definition of target model of financial sector regulators functioning (SPLIT project);

- free capital movement – currency restrictions liberalization (depending on macroeconomic conditions) in relation to: operations under the current account and the account of direct foreign investments, portfolio investment and credit operations of legal entities; financial transactions of individuals;

- financial inclusion – development of payment infrastructure through: transfer of transactions in electronic channels: development of electronic payments;

- a modern, open, independent, efficient central bank.

In our opinion, the transformation of the National Bank has two main directions:

1. *Process direction* provides an effective decision-making system for achieving goals through:

- development of analytical and research potential, regular and clear informing of society and markets as main tool of constructive influence;

- ensuring a transparent and effective process of development and implementation of regulatory decisions;

- systems of proper internal control and risk minimization.

2. *Resource direction* develops the adaptability of the National Bank's internal resources to strategic objectives through:

- development of a new leadership and focus on personality, formation of teams;

- development of modern information infrastructure, ensuring a high level of automation of processes;

- development of a culture of economical and efficient use of national resources.

At the same time, we propose to unite the participants of the financial system into six client groups according to their role:

- experts (create the basis for the development of qualitative regulations);

- subjects of economic and financial state policy (create an effective legal framework for all participants in the financial market);

- entities of financial activity (provide access to financial services

- and resources, risk management, investment security and savings);
- subjects of economic activity (produce goods and services, provide economic growth);
 - the nation as a provider of services (ensures the welfare of the country and the free access to public services necessary for a healthy life and effective economic activity);
 - citizens of Ukraine (decide on consumption and savings to maximize their own welfare) (Table 4.2).

Table 4.2

Main tasks of client groups of banking institutions in Ukraine

Client groups	Who belongs to client groups	What client needs have to be satisfied	What value produce the products of banking institutions
Experts	International organizations, expert media, separate experts	Promoting the effectiveness of approved decisions, access to information	Environment for the development of market rules
Subjects of economic and financial state policy	Governmental regulating institutions	Creation of qualitative and effective activity rules in the market	Effective interaction model of and expert assistance
The state as a services supplier	Public institutions providing social security	Macroeconomic stability, national economic development	Development of modern financial sector infrastructure and financial inclusion
Citizens of Ukraine	Individuals / households	Preservation of real value of incomes and savings, convenient calculations	Preservation of purchasing power, protection of consumers' rights to financial services

Source: compiled by authors

Within their role in the system, each client performs some functions, offering others a certain value, which he creates independently or jointly with the National Bank. The exchange of valuables takes the form of certain products or services that meet the needs of clients and client groups.

The National Bank interacts with all client groups. Created values satisfy the needs of each client group and can multiply in the process of

interaction with other participants of the financial ecosystem.

2) Basel Committee:

– development and implementation of Basel IV, the rules of which are to a large extent to strengthen capital requirements by means of calculating the risk weighted assets (RWA);

– increase of the first-tier capital adequacy ratio of banks that do not wish or cannot increase the fixed capital, which will be forced to reduce the volume of risky operations, in particular, to reduce the level of lending, which will lead to a decrease in the profit of banks.

2) International Monetary Fund:

– ensuring financial stability through the formation of an effective monetary and credit policy to ensure price stability;

– flexibility of exchange rates and a comprehensive strategy to strengthen the financial position of banks through recapitalization of banks, lending and the settlement of troubled assets, which will have a significant impact on the restoration of public confidence in banking structures;

– strengthening of public finances. The revision of expenditures and their reduction will ensure budget consolidation in the next period;

– continuing of structural reforms. Includes governance reforms, including the fight against corruption and judicial measures, tax administration reforms, and the reform of state-owned enterprises in order to improve the quality of management and reduce fiscal risks;

– development, broad discussion and approval of international standards for banking operations, monetary and fiscal policy, statistics of payments balance;

– conducting research, analysis and forecasting of the development of the world economy and international financial markets;

– temporary provision of the Fund's common resources to the member states (with appropriate guarantees) in order to remedy the imbalances in their balance of payments, avoiding any measures that could harm the national or international level.

III) By implementation mechanisms:

1) Legal mechanisms:

– gradual integration of Ukraine into the European legal field and harmonization of national legislation with international standards;

– accelerate the adoption of laws and strengthen the weak interaction of state bodies in ensuring the development of the financial sector;

– legal proceedings and enforcement proceedings systems must work effectively resulting in strong protection of the rights of creditors;

– improve the system of protection of consumer rights of financial services in Ukraine.

1) Information mechanisms:

– provision of constitutional rights and freedoms for the collection, storage, use and dissemination of information;

– full satisfaction of the needs of citizens, enterprises and organizations of all forms of ownership in access to reliable and objective information;

– effective interaction of public authorities and civil society institutions during the formation and implementation of state policy in the information sphere;

– protection of national secrets and other information, the protection requirements of which are established by law;

– forming a positive image of Ukraine in the world, reporting prompt, reliable and objective information on events in Ukraine to the international community.

1) Organizational measures:

– changing the models of classical banking in the world: the emergence of new, alternative payment systems, instruments of payment and lending;

– reduce the risk of cyber attacks;

– improve the development of national information databases (demographic registry, electronic receipts, etc.).

2) Economic measures:

– it is necessary to achieve macro-financial stabilization, the economy should gradually recover, but it remains vulnerable to shocks;

– to diversify foreign trade, reduce dependence on one partner;

– significant openness of the economy;

– high level of market monopolization.

3) Social measures:

– It is necessary to develop a system for protecting the rights of financial services consumers and to expand the financial inclusion in the world is necessary;

– conflict in eastern Ukraine is a permanent source of risks for the country and its economy; the rapid withdrawal of the country from this state will affect the economic situation;

– increase of the birth rate in Ukraine, as “rejuvenation” of clients will promote the innovative development of banking institutions of Ukraine;

– raising the level of the national currency, because its low level only

increases the distrust of the population to the banking institutions in Ukraine.

4) Normative measures:

- introduction of norms, which will give an opportunity to more accurately assess the status of banking institutions;
- application of effective instruments of refinancing policy, taking into account the experience of developed countries of the world;
- improvement of interest rate policy, in particular lowering the discount rate, which will affect interest rates on the market and the availability of borrowed funds;
- use of an effective method for evaluating the financial stability of the bank, which will determine the real financial condition of the bank and reduce the risk of non-repayment of the refinancing loan.

5) By bank economic activity:

- internal and external – through introducing clear conditions for the functioning of banking institutions, reducing the appearance of shadow schemes, creating favorable conditions for increasing the level of economic security of banking institutions;
- universal and special – the use or full transition to the new standards of banking institutions, the implementation of European norms and standards, the introduction of economic mechanisms for the development of banking institutions and ensuring an effective partnership between the state and the banking institutions of Ukraine.

We believe that the proposed classification of measures to improve the crisis management of economic security of banking institutions in Ukraine will promote a more reasonable identification of threats to the national economic development not only in general, but also specifically for each component. It is hardly possible to set specific threats and to submit specific offers without their selection for each of the indicated segments that are presented by:

- state regulation bodies;
- normative legal acts regulating activity;
- services provided;
- mechanisms for the services provision, etc.

Failure to take into account these features or to give them insufficient attention will lead to mistakes in identifying bank risks and ineffective functioning of individual segments and banking institutions as a whole, which may lead to a disturbance of the balance and the emergence of a financial crisis.

Therefore, we believe that the proposed measures to improve the

state regulation mechanism of the crisis management of the economic security of banking institutions at the national level will promote the development of banking institutions taking into account macro- and micro-features, which will serve as a basis for strengthening the stability of the banking system and preventing bank crises.

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**SCIENTIFIC-
METHODOLOGICAL
BASES OF CHOICE
THE STRATEGY OF
ENSURING ENERGY
SAFETY OF MACHINE
BUILDING
ENTERPRISES**

Sustainable development of the domestic economy is not possible without reliable, stable, well-founded energy supply. Ukraine belongs to countries that are partially equipped with their own traditional fuel-energy resources, the consequence of which is the need for significant volumes of their imports. The share of imports in the total supply of primary energy to Ukraine over the past few years was about 38%, which determines its energy dependence as a middle-European one. It

contributes to such dependence not only on the lack of sufficient quantities of own energy resources, but also on their ineffective use. A leading role in ensuring economic growth and development of domestic business entities plays industry. The largest share in the domestic industry is machine building. It is the foundation of the country's economic potential, from the level of efficiency activity the enterprises in this sector depends the state of socio-economic development of Ukraine. The priority in the development of domestic machine-building complex is increasingly the provision of energy independence, security and energy efficiency of production, as the present economy of Ukraine is characterized by challenges and threats that require the search of effective management solutions to ensure national and, in particular, energy sustainability. To solve the energy efficiency problem of the enterprises machine-building complex, the key issue is the implementation the concept of strategy for ensuring energy security. The problem of forming a strategy for ensuring energy security of the enterprises is connected with the strengthening of energy dependence of Ukraine on other countries, limited in the energy resources, as well as the rapid growth of their value. This motivates to the search of new methods and tools in determining ways to reduce the volumes use of fuel-energy resources, their efficient and rational consumption.

Modern researchers define “energy security” as an integral part of national security, manifested in the ability to provide access to vital energy resources at affordable prices. Key factors in energy consumption are factors such as: diversification supplies of energy resources, transit safety, availability of reserves, qualitative and timely information, infrastructure security, increasing energy efficiency, environmental protection, etc. [1; 11; 18-21]. The concept of “energy security” is generally interpreted as an achievement of the state of a technically reliable, stable, economic effective and environmentally acceptable ensuring of energy resources of the economy and the social sphere of the country, as well as creating conditions for formation and implementation of a policy of protection of national interests in the field of energy. The scientists consider the concept of “energy security of the enterprise” as a state of ensuring and energy-efficient consumption of energy resources of the enterprise and entrepreneurial opportunities, for which guarantees their most efficient use for the stable functioning, dynamic development and prevention of internal and external negative influences. Using the property of scientists, systematize existing definitions of energy security (Table 4.3).

Table 4.3

List of existing approaches to interpretation of the category “energy security”

Source	The essence of the concept of “energy security”
Website of the International Energy Agency [8]	Continuous physical availability at a price that is acceptable in terms of environmental compliance
Resolution CMU “On the Concept of Activities of Executive Bodies in Ensuring Energy Security of Ukraine” [13]	Energy security – a timely complete and uninterrupted ensuring of fuel and energy of the required quality of material production, non-productive sphere, population, communal-household and other consumers; prevention of harmful influence on the environment, transportation, transformation and consumption of fuel-energy resources in the conditions of modern market relations, trends and indicators of the global energy market.
N. Kovalko, A. Shidlovskiy, V. Kuhar [4]	Energy security – a state of protection of vital “energy interests” of the individual, society, country from internal and external threats; these interests consist in uninterrupted ensuring of consumers economic affordable fuel-energy resources of acceptable quality under normal conditions and in emergencies.
A. Shevtsov, N. Zemlyanyi, A. Doroshevich [16]	Energy security – the state of readiness of the country’s fuel-energy complex regarding the maximum reliable, technically safe, environmentally acceptable, economically efficient and sufficiently justified energy ensuring of economics the country and population, as well as on the guaranteed ensuring the possibility of state leadership in formation and implementation of policies protecting national interests in the field of energy without external and internal pressure.
V. Mykytenko [10]	Energy security – a combination of potentials: economic, political, technically-technological, resource and actually energy, as well as factors: scientific, geographic, organizational, managerial, etc.
O. Suhodolya [15]	Energy security – a state of protection of vital “energy interests” of the individual, society, the country from internal and external threats, that ensuring uninterrupted satisfaction of consumers with economically accessible fuel-energy resources of acceptable quality under normal conditions and in emergency situations.
Methodology for calculating the economic security level of Ukraine [9]	Energy security – a state of the economy that ensures the protection of national interests in the energy sector from existing and potential threats of internal and external character, enabling to meet the real needs in fuel-energy resources to ensure the life activity of the population and the reliable functioning of the national economy in the normal, extraordinary and martial law.

In order to ensure an adequate level of energy security an enterprise must effectively use available fuel-energy resources and try to prevent and counteract existing dangers and threats or other unforeseen circumstances and actions of destabilizing external and internal factors of influence [3; 6]. Such an approach requires increased control of this system, that is, an adequate level of strategic management. The practical solution to the problems associated with the need to ensure the energy security of the enterprise not only today but also in the future depends from the degree of development the methodology and methods of strategic management. Strategic management of energy security is an integral part of a general system of enterprise management and involves the process of developing a strategy for ensuring the energy security of an enterprise and enterprise management with a purpose to its realization [7].

Implementation the concept of strategic energy security of the enterprise involves a phased process realization of management functions (Table 4.4).

Strategic management of energy security – a process of managing strategic planning and developed a strategy of ensuring energy security, taking into account the interconnection of the internal environment of the enterprise with the external and adaptation to their changes in order to achieve the goal of the enterprise and protect it from the impact of threats, risks and achievement of safe functioning. The strategy of ensuring the energy security of the enterprise is a key functional strategy, which is a complex of interrelated measures for choosing technology and organization of production goods allowing to ensured sustainable energy-efficient consumption energy resources of the enterprise on the basis of a combination of planned actions and solutions for adapting the enterprise to the new situation and opportunities for obtaining energy-efficient advantages and to new conditions for reducing its energy-efficient positions. Without a carefully formulated strategy activity the enterprise is losing ground [12]. The efficiency of the energy security management of the enterprise is ensured by the repetition of the PDCA cycle (the Shuhart-Deming cycle). It allows improving the system of management energy security in the conditions of implementation the prescribed stages (Table 4.5).

Thus, by agreeing the functions of strategic management of energy safety of the enterprise and the PDCA cycle, in the first stage are determined the purposes of ensuring the energy security of the enterprise, carried out collection and analysis of the required

Table 4.4

Functions of strategic management of energy security of the enterprise

Strategy function	Content of the strategy function
Planning	Substantiation of strategic purposes the enterprise in accordance to ensuring its energy security on the basis of energy efficiency, energy preservation and energy saving; develop of a system of strategies for ensuring the energy security of the enterprise; drafting a strategic plan for the development of the enterprise in the direction of ensuring the energy security integrated into the overall development plan; develop of a program of major measures and advisory actions in accordance to the ensuring of energy security of the enterprise.
Organization	Creation of the department energy security service of the enterprise; conduct internal energy audit, appointment of responsible persons; definition of forms and methods of preparation and implementation of the strategy of ensuring energy security at the enterprise; develop of coordination procedures, coordination of the action plan in accordance to the strategy of ensuring the energy security of the enterprise.
Motivation	Motivation of the personnel and subjects of management to use energy-efficient means and methods of ensuring the energy security of the enterprise.
Control	Conducting the current monitoring of the coordination of actions in accordance to the ensuring of energy security of the enterprise; conducting control over the implementation of the strategic plan of the enterprise for ensuring energy security and assessing the effectiveness of implemented energy-efficient measures.

information of the energy consumption of the enterprise [14]. The obtained data is an information base for planning of effective energy efficiency projects and the formation of energy saving programs at the enterprise. At the implementation stage, being carried out the organizational and low-cost activities the purpose of which is to optimize the system of consumption the energy resources at the enterprise. The third stage of the PDCA cycle involves reconciling the results achieved with the goals set, determining the effectiveness from implementation of each specific project aimed at ensuring the energy security of the enterprise. Element of the cycle “Checking” is aimed at analysis of energy consumption regimes, assessment of the received results, as well as the drawing up of a corresponding report from energy audits and their arrangement. At a result of implementation the final stage of the PDCA cycle, there is a correction of actions to ensure

Table 4.5

PDCA Cycle of Energy Security Management of the Enterprise

Elements of the PDCA cycle	Characteristic
1. Planning	defining goals and objectives; gathering of information about the energy balance of the enterprise; analysis of current information from energy consumption; planning measures from energy efficiency; formation of energy efficiency program
2. Execution	conducting energy surveys; controlling and monitoring the state of energy consumption; optimization of system supply the energy resources; implementation measures from energy efficiency
3. Checking	analysis of regimes the energy consumption; evaluation of the received data; reporting
4. Improvement	correction the direction of activity; elimination of shortcomings; identifying steps to improve of efficiency energy consumption in the future

energy security of the enterprise, eliminating identified deficiencies and making appropriate changes.

Based on the methodology continuous improvement cycle of the Plan-Do-Check-Act (PDCA), as provided by the International Standard ISO 50001:2011 “Energy management systems – Requirements with guidance for use”, an algorithm for developing strategies for ensuring energy security of the enterprise should include the following stages (Figure 4.4).

According to the developing a strategy for ensuring energy security of the enterprise its choice is preceded carrying out by a strategic energy analysis, the purpose of which is to study the external and internal factors that influence on the energy security of the enterprise. For the implementation of energy analysis, the purpose of which is identifying the potential of energy saving and energy efficiency at the enterprise, it is necessary to carry out a series of successive stages, namely:

- a) analyze the use and consumption of energy, identify existing sources of energy; assess energy consumption and track the dynamics of energy consumption over the past periods;
- b) on the basis of analysis consumption the fuel-energy resources, determine the sources of energy over expenditures, current indicators of the energy performance of buildings, equipment, systems and processes related to the significant use of energy;
- c) identify opportunities for optimizing energy use.

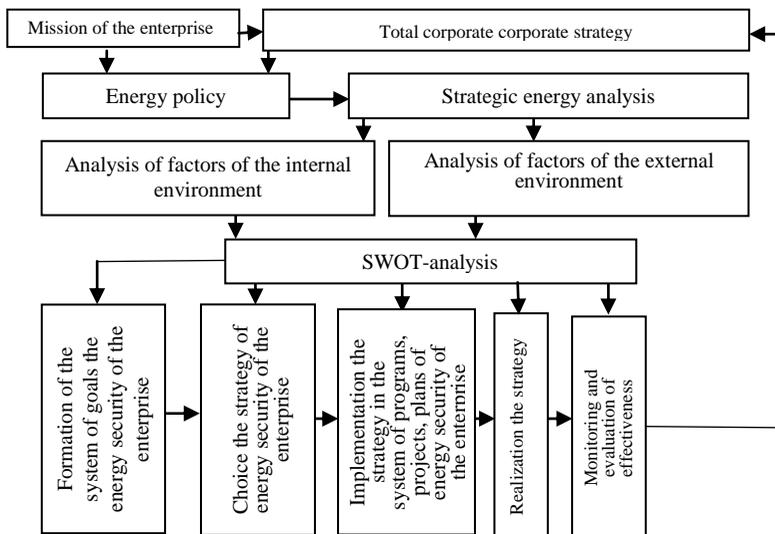


Figure 4.4 Algorithm of developing a strategy for ensuring energy security of the enterprise

Carrying out energy audits will enable to explore all energy and energy-financing flows of an enterprise, offer economically feasible measures of energy saving, forming of the department of energy management services and carry out other actions aimed at ensuring the energy security of an enterprise. Accordingly, energy audit is a priority method of strategic energy analysis.

Completed a strategic analysis carrying out of the SWOT-analysis, with the help of which develops strategic alternatives, develop different scenarios for the development of events, for example, with the growth increasing of tariffs for fuel-energy resources. At the next stage is grounded a strategy of ensuring energy security, which will allow us to maximize used the opportunities and strengths of the enterprise, as well as to neutralize the threats and reduce the weaknesses. Implementation the strategy in concrete actions is possible through a quality system of programs, projects, plans of energy efficiency. Realization of the planned measures to ensure the energy security of an enterprise requires the use of technical, economic, organizational, legal and other methods. The enterprise should ensure carrying out the monitoring, measurement and analysis of energy efficiency indicators, on the basis of which are formed conclusions about the effectiveness selected strategy. The necessary stage in ensuring the algorithm is a complex of corrective

actions regarding the need to revise the general strategy of enterprise development and its energy policy. Achievement of the system of goals within the framework of the chosen strategy will ensure the most efficient use of energy resources to prevent internal and external threats, will promote the stable functioning of the enterprise, which are the priority directions for ensuring its energy security.

The proposed sequence develop of strategy to ensure energy security of an enterprise demonstrates the importance of energy analysis (energy audit), the need to find “pair combinations” in the SWOT-analysis, and to ensure alternatives to justify the strategy.

In the conditions of constant increase of prices for all types of traditional energy, irrational energy consumption, technical-technological backwardness of domestic industrial enterprises, the key factor in the exit from the energy crisis is the formation of an effective strategy to ensure the energy security of the enterprise and its realization [2; 7]. It should be noted that the strategic interests of the enterprise are closely linked to the mechanism of management the energy security (Figure 4.5).

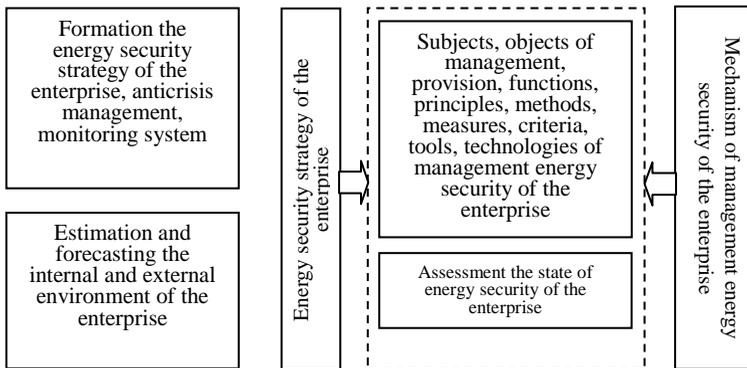


Figure 4.5 Interconnection the strategy ensuring of energy security of the enterprise and the mechanism of management of energy security

We believe that a strategy for ensuring energy security should be a base and a strategy of a higher level. Such a hierarchy will serve to ensure the principles of the International Standard ISO 50001:2011 “Energy management systems – Requirements with guidance for use”, which establishes requirements to the energy management system, on the basis of which the enterprise can develop and implement energy policy, set goals and objectives, and develop action plans taking into

account legislative requirements and data on the significant use of energy [14; 17].

According to the economic essence of the energy saving provided by the Law of Ukraine “On Energy Saving” [5] is formed the actual interpretation of the term: the strategy of energy security of the enterprise – a long-term, qualitatively determined direction development of the enterprise in the field of energy security, aimed at rational and economical use of the primary and transformed energy and natural energy resources during production goods, execution of works, provision of services; achievement of strategic goals of energy policy. Ensuring the energy security of the enterprise is closely linked to energy efficiency management system of the enterprise and is strategic character as part of a general strategy of activity. A key point in planning a strategy for ensuring energy security of an enterprise should be the determination of the goals and objectives of energy efficiency management in the future. First of all, should be carried out an energy audit, which will give an opportunity to assess the level of efficiency the use of fuel-energy resources at the enterprise (based on the existing technological equipment and technological processes, as well as taking into account plans of technological development of the enterprise).

Thus, strategic management is a complicated process that involves a comprehensive assessment of the environment functioning of the enterprise, determination the level influence of internal and external threats, and also develops a system of measures to ensure an adequate level of security through substantiation and implementation of relevant strategies. Therefore, the strategy to ensuring energy security of the enterprise should be based on development of the enterprise in the field of energy efficiency its production processes, the application of high-performance technologies on base which is the principles of energy efficiency and energy saving.

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ENHANCING THE SAFETY OF ASSESSMENT OF EXPERT KNOWLEDGE IN FUZZY CONDITIONS GLOBAL ENVIRONMENT

Recently, the importance of tasks has considerably increased, when it comes to making compromise solutions in the process of studying complex social objects. This is due to an increase in the dynamism of the environment and the development of science and technology, which led to the emergence of a large number of alternative choices. Under these conditions, expert procedures are used to make decisions more frequently. Expert methods are an effective tool for analyzing social objects, forecasts making, and for defining their quality and value. The use of expert methods is relevant for the assessment of many processes.

Thus, the urgent task of information modeling is to increase the safety of expert knowledge evaluation. The technology, on the basis of expert assessment of some indicators of the object under study, displays the aggregated assessment and its linguistic interpretation of the level of expert knowledge security for making further decisions.

Let us formulate the task of evaluating the object under study as follows [1]. Let there be a set of objects $X = \{X_1, X_2, \dots, X_n\}$ that needs

to be evaluated by many indicators (criteria) and ordered by a certain rule. For a specific application, a general set of criteria for expert evaluation needs to be grouped according to the criteria $G = \{G_1, G_2, \dots, G_m\}$. Each group of criteria has a different number, which we will denote as follows: $K_i = \{K_{i1}, K_{i2}, \dots, K_{in_i}\}$, $i = \overline{1, m}$. Each criterion is a question to answer on which one is to choose the answer variant Z_{ijk} , $i = \overline{1, m}$, $j = \overline{1, n_i}$, $k = \overline{1, 4}$ (value i is a group number of criteria j – criterion number in the group i , k – number of answer to question), that is close to the truth. For each criterion, an expert chooses one of the answer options to which the corresponding score b_{ijk} . The given rating scale for answers to questions is heuristic and characterizes the level of the object being evaluated [2-3]. Thus, a criteria set can be presented in the form of a questionnaire of expert evaluation, Table 4.6.

Table 4.6

Expert evaluation questionnaire for the group G_1

Group of criteria	Criteria name (question)	Answer to the question	Score in points	Answer expert	
G_1	K_{11}	Z_{111}	b_{111}	g_{11}	
		Z_{112}	b_{112}		
		Z_{113}	b_{113}		
		Z_{114}	b_{114}		
	K_{12}	Z_{121}	b_{121}	g_{12}	
		Z_{122}	b_{122}		
		Z_{123}	b_{123}		
		Z_{124}	b_{124}		
				
	K_{1n1}	Z_{1n11}	b_{1n11}	g_{1n1}	
		Z_{1n12}	b_{1n12}		
		Z_{1n13}	b_{1n13}		
Z_{1n14}		b_{1n14}			

For example, to the group of criteria “commercial validity of the idea” the following indicators can be considered:

K_1 – strategic partners:

1. exchanged a few letters with these people who met in the network (5 points);
2. a letter of intent prepared by a potential distributor for my product (10 points);
3. several signed partnership agreements, and the rest are in the work (20 points);
4. partnership, licensing, supply and sales agreements signed with dozens of companies (25 points).

K_2 – intellectual property:

1. all developments are in the process of reflection (10 points);
2. there is a pre-application for a patent that has been prepared and filed by me (15 points);
3. in anticipation of patents, which has already been filed for a while (25 points);
4. several patents that cover the whole chain of the creation of the invention value, along with trademarks and service marks, to protect the trademark (35 points).

K_3 – availability of a business plan:

1. does not exist (0 points);
2. has a lot of errors (10 points);
3. looks quite perfect for me (20 points);
4. looks quite perfect for consultants, lawyers and accountants who saw it (30 points).

K_4 – the amount of your own funds in the startup:

1. \$0 - \$24 999 (10 points);
2. \$25 000 - \$99 999 (20 points);
3. \$100 000 - \$249 999 (30 points);
4. \$250 000 or more (35 points).

K_5 – the corporate platform attorney is:

1. a lawyer with only juridical education (5 points);
2. a small local firm (10 points);
3. medium-sized firm operating in the investment sector (25 points);
4. nationally recognized corporate law firm with a large number of connections in the venture community (35 points).

For each criterion, an expert chooses one of the answer options to

which the corresponding score is assigned b_{ijk} . Define a convolution of estimates, for example, as the sum of the grading scale response points for a group of criteria G_i , what we represent – $g_i, i = \overline{1, m}$.

Thus, we obtain a set of numerical variables $g = \{g_1, g_2, \dots, g_m\}$ for the group of evaluation criteria, respectively, $G = \{G_1, G_2, \dots, G_m\}$, which take values at a certain numerical interval. Each of these numeric variables will be considered as a set – the carrier of linguistic variable U that consists of the following terms [4]:

- U_{i1} – “assessment of a group of criteria G_i is much lower relative to the "desired value”;
- U_{i2} – “assessment of a group of criteria G_i is lower relative to the "desired value”;
- U_{i3} – “assessment of a group of criteria G_i is close to the “desired value”;
- U_{i4} – “assessment of a group of criteria G_i is slightly better relative to the “desired value”;
- U_{i5} – “assessment of a group of criteria G_i is much better relative to the "desired value”.

“Desired value” is a conditional convolution of points that satisfies the person who makes decisions when considering, evaluating and choosing object of evaluation.

Let us construct a structural scheme for improving the safety of expert knowledge assessment, Figure 4.6.

Here is a general algorithm of technology for improving the safety assessment of expert knowledge in the fuzzy conditions of the global environment [5].

Consider the two-tier mathematical model of expert evaluation [1]. Since the input data is presented as a questionnaire, which collects points that have a subjective character, then the first level must uncover the uncertainty of the input data groups of criteria. At the second level, the set of “desired values” is projected onto the set of the carrier of linguistic variables U .

Consider the first level

Let us cite a general algorithm for improving the safety of expert knowledge evaluation.

Step 1. For the applied task of expert evaluation under consideration, we are conducting an expert survey and calculate the convolution of the

sum of points for the corresponding groups of criteria $\{G_1, G_2, \dots, G_m\}$.

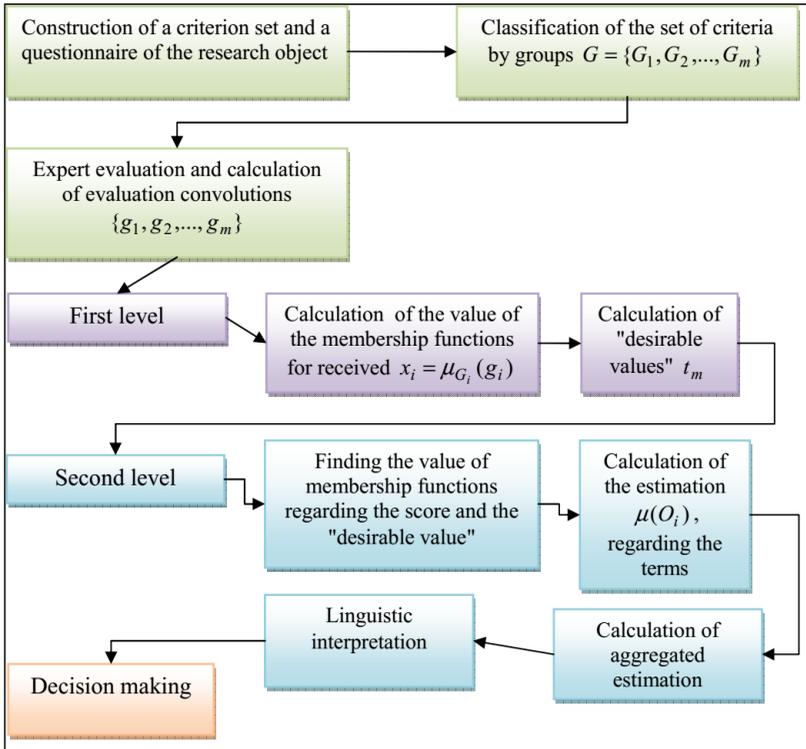


Figure 4.6 The structural scheme for improving the safety of expert knowledge assessment

Step 2. For each group of criteria, the decision maker (DM) has its own reasoning, which should be the “desirable values”, that is, the sum of the points for each group of criteria, respectively $T = (t_1, t_2, \dots, t_m)$ respectively, according to the criteria groups $G_i, (i = \overline{1, m})$.

Step 3. We calculate the values of membership functions for the obtained points of the object of research and “desirable values”, respectively (4.1).

Since the obtained numerical variables $\{g_1, g_2, \dots, g_m\}$ take different numeric values, then for comparing them, normalized values must be available. With this purpose, let us build an s-shaped membership

function in the following form [2]:

$$\mu_{G_i}(g_i, a, b) = \begin{cases} 0, & g_i \leq a; \\ 2\left(\frac{g_i - a}{b - a}\right)^2, & a < g_i \leq \frac{a+b}{2}; \\ 1 - 2\left(\frac{b - g_i}{b - a}\right)^2, & \frac{a+b}{2} < g_i < b; \\ 1, & g_i \geq b. \end{cases} \quad (4.1)$$

Where a – the convolution of the minimum points sum, b – the convolution of the maximum points sum of the grading assessment scale by criteria in the group G_i , g_i – the convolution of the points sum according to the grading scale ($i = \overline{1, m}$). Thus, the received input will be normalized and comparative.

Let us denote $x_i = \mu_{G_i}(g_i)$ – as the value of membership function of the given start-up by the groups of criteria G_i , ($i = \overline{1, m}$). Then, upon calculating the convolution of points for each group of criteria G_i and finding their membership functions by the formula (1), let us proceed to the next step.

Received values can be presented according to Table 4.7.

Table 4.7

Received data according to the first level

Group of criteria	Point estimation	Membership function of point estimation	“Desired values” T	Membership function of “desired values” α
G_1	g_1	x_1	t_1	α_1
G_2	g_2	x_2	t_2	α_2
...
G_m	g_m	x_m	t_m	α_m

The second level

Step 4. We find the value of membership functions $\mu_{U_{ij}}$ regarding the score and “desirable value” according to (4.2)–(4.6).

On the second level of the model, relative to the “desired values” and

the obtained results for each group of criteria G_i , we project the value of membership function to a set of carrier of linguistic variable U . This will reveal the essence of the object being evaluated in relation to the "desired values".

For each term U we will build the membership function as follows (4.2)–(4.6).

$$\mu_{U1}\left(x; \alpha - \frac{\alpha}{2}; \alpha - \frac{\alpha}{4}\right) = \begin{cases} 1, & x \leq \alpha - \frac{\alpha}{2}; \\ \frac{3\alpha - 4x}{\alpha}, & \alpha - \frac{\alpha}{2} < x \leq \alpha - \frac{\alpha}{4}. \end{cases} \quad (4.2)$$

$$\mu_{U2}\left(x; \alpha - \frac{\alpha}{2}; \alpha - \frac{\alpha}{4}; \alpha\right) = \begin{cases} \frac{4x - 2\alpha}{\alpha}, & \alpha - \frac{\alpha}{2} < x \leq \alpha - \frac{\alpha}{4}; \\ \frac{4\alpha - 4x}{\alpha}, & \alpha - \frac{\alpha}{4} < x \leq \alpha. \end{cases} \quad (4.3)$$

$$\mu_{U3}\left(x; \alpha - \frac{\alpha}{4}; \alpha; \alpha + \frac{\alpha}{4}\right) = \begin{cases} \frac{4x - 3\alpha}{\alpha}, & \alpha - \frac{\alpha}{4} < x \leq \alpha; \\ \frac{5\alpha - 4x}{\alpha}, & \alpha < x \leq \alpha + \frac{\alpha}{4}. \end{cases} \quad (4.4)$$

$$\mu_{U4}\left(x; \alpha; \alpha + \frac{\alpha}{4}; \alpha + \frac{\alpha}{2}\right) = \begin{cases} \frac{4x - 4\alpha}{\alpha}, & \alpha < x \leq \alpha + \frac{\alpha}{4}; \\ \frac{6\alpha - 4x}{\alpha}, & \alpha + \frac{\alpha}{4} < x \leq \alpha + \frac{\alpha}{2}. \end{cases} \quad (4.5)$$

$$\mu_{U5}\left(x; \alpha + \frac{\alpha}{4}; \alpha + \frac{\alpha}{2}\right) = \begin{cases} \frac{4x - 5\alpha}{\alpha}, & \alpha + \frac{\alpha}{4} < x \leq \alpha + \frac{\alpha}{2}; \\ 1, & x \geq \alpha + \frac{\alpha}{2}. \end{cases} \quad (4.6)$$

Depending on which interval x , belongs in, for each group of criteria G_i , we choose one or another membership function μ_{Uij} relative to the "desired value" α . We compute a membership function relative to terms $U_{ij}, (i, j = \overline{1,5})$ for the considered start-up. As a result, for each group of criteria G_i we will receive linguistic value and the assessment of the reliability of object of research. That is, the accuracy of that the assessment of a group of criteria belongs in one or another term. This will make it possible to receive an interpretation for the gathered expert

points, revealing their subjectivity, and to have an understanding of what a object of research.

Step 5. DM expresses his own thoughts on terms (desirable terms) in groups of criteria – U^* .

Let the valuation expert have his own arguments as to what the terms should be in the groups of criteria G_i . Such terms are denoted as U^* , Table 4.8.

Table 4.8

Received data according to the second level

Groups of criteria	Resulting term	The authenticity of the term (the value of the membership function)	“Desired values” of term
G_1	U_{1j}	$\mu_{U_{1j}}$	U_{1j}^*
G_2	U_{2j}	$\mu_{U_{2j}}$	U_{2j}^*
...
G_m	U_{mj}	$\mu_{U_{mj}}$	U_{mj}^*

Step 6. We calculate scores $\mu(O_i)$, ($i = \overline{1, m}$) regarding the received and desired terms according to (7).

The next step is to calculate the points relative to the received and desired terms using the following membership function:

$$\mu(O_i) = \max \{ \mu(A_i); \mu(B_i) \}, \quad (4.7)$$

$$\text{where } \mu(A_i) = \begin{cases} \mu_{U_{ij}}, & U_{ij} = U_{ij}^*, \\ 0, & U_{ij} \neq U_{ij}^*. \end{cases}$$

$$\text{and } \mu(B_i) = \begin{cases} \frac{\mu_{U_{ij}}}{2}, & U_{i(j\pm 1)} = U_{ij}^*, \\ 0, & U_{i(j\pm 1)} \neq U_{ij}^*. \end{cases} \quad (i = \overline{1, m}).$$

Received membership function shows to which extent a considered object of research satisfies the requests of the decision maker by each group of criteria.

As the constructed membership functions (4.2)–(4.6) have

intersections, then for the groups of criteria we will receive both one or two terms and the same number of reliabilities, accordingly. Therefore, if we have two points by a group of criteria, then the constructed membership function (4.7) selects the largest of them for the next stage.

Step 7. Sets weight coefficients for each group of criteria $\{p_1, p_2, \dots, p_m\}$ and according to (4.8) we carry out their normalization:

$$w_i = \frac{p_i}{\sum_{i=1}^m p_i}, i = \overline{1, m}; w_i \in [0,1]; \quad (4.8)$$

which are eligible $\sum_{i=1}^m w_i = 1$.

Step 8. Using the weighted average convolution (4.9), we compute the aggregated estimate and compare it with the term set M to obtain a linguistic assessment on the subject of research [6]:

$$m = \sum_{i=1}^m w_i \cdot \mu(O_i), i = \overline{1, m}. \quad (4.9)$$

Let us introduce the linguistic variable $M(m) = \langle \text{the safety of expert knowledge assessment} \rangle$. The universal set for the variable $M(m)$ is the segment $[0; 1]$, and the set of values of the variable m – is a term set $M = \{m_1, m_2, m_3, m_4, m_5\}$, where:

- ✓ $m_1 = \text{“the safety of expert knowledge assessment is very low”};$
- ✓ $m_2 = \text{“the safety of expert knowledge assessment is low”};$
- ✓ $m_3 = \text{“the safety of expert knowledge assessment is average”};$
- ✓ $m_4 = \text{“the safety of expert knowledge assessment is above average”};$
- ✓ $m_5 = \text{“the safety of expert knowledge assessment is high”}.$

To establish a linguistic assessment of the object of study, the obtained value is compared to one of the term-sets: $M = \{m_1, m_2, m_3, m_4, m_5\}$. The scale of estimates can be determined as follows: $m \in (0,67; 1] - m_5$; $m \in (0,47; 0,67] - m_4$; $m \in (0,36; 0,47] - m_3$; $m \in (0,21; 0,36] - m_2$; $m \in [0; 0,21] - m_1$.

Thus, for the estimated object of research the initial data of the model will be the evaluation and its linguistic value. Further, a following decision is taken regarding the object of the research on the

basis of the safety of expert knowledge assessment.

Thus, the task of information modeling of improving the safety of expert knowledge assessment on the basis of a two-level mathematical model is developed. It can be used to obtain an aggregated assessment of the reliability of alternatives in various tasks with expert assessments, increasing their security of obtaining.

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Chapter 5

PRACTICAL ASPECTS THE IMPLEMENTATION OF MANAGEMENT MECHANISMS AND DEVELOPMENT STRATEGIES AT THE LEVEL OF SECTORAL ECONOMIC STRUCTURES

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THE INFLUENCE OF GLOBAL PROCESSES ON THE STRATEGIC DEVELOPMENT OF FESTIVE TOURISM IN UKRAINE

At the present stage of development there are hundreds various definitions and interpretation of the notions of globalization, which are absolutely contradictory and mutually exclusive thereby identifying the emergence of the problem that has the complicated absence of understanding of the essence of globalization and its national communities' challenges as well as their hopes due to it, and also the prediction of the occurred consequences in future.

In the end of XX century the world suffered from qualitatively new changes that in some ways could transform social, political, economical and state-management world's systems, as a result, the building of world order acquired new features but even the processes of globalization which were tied up with reasons of poorness, ecological crisis and bursting of international terrorism, became instrumental for the modern society's fate. But according to these processes a number of historical and socio-economic backgrounds and facts were certainly preceded. [1, p. 5]

As for S. Huntington "globalization is developing on the base of generally planetary's process of differentiation of local civilizations."

Due to this it is “a logical process of unification cultural values which are prepared by the whole step of humanity’s development”. So, according to this, the researcher got some reasons to understand that globalization is “a new impulse in dynamic and dialogue of modern civilizations” [2, p. 34].

Another American researcher D. Henderson, identifying the globalization with the development of international trading and economic relationships as well as increasing financial interdependence of national domestic economy, was too surprised when he found out that the level of economic interdependence from the 70s XIX century till 1914 of industrial countries was too low in some positions than it was in the end of XX century. For the researchers, it was this time as “the period of the highest blooming of colonialism, going from the level of GDP among the leading countries of economic development involved in the sphere of international trading.” [1, p. 7].

V.Ramzes’ marked opinion needs our attention, he confirms that “globalization is a competitor of internationalism most likely its anthesis than the logical continuing of development of modern world”. The researcher insists that “any process of internationalism necessarily leads to the references of internationalism of different countries so that is one of the forms of manifesting of globalizational process” [3, p. 15].

The notion “globalization” entered the scientific circle in the 80s of XX century like a reflection of fundamental transformations of the world’s modern economy caused by reinforced actions of generally civilised laws and regularities which surround all spheres of social life and post-industrial forms of the world civilization.

In conditions of the globalization of the world economy, the range of tourist services occupies the leading position which becomes one of the influencing factors from which the increasing of economy, rising of competitiveness of the country on the world’s tradings, improving welfare of the population depend on. The tourism, under the influence of the processes of globalization occurs the most dynamic development and one of the influencing factors from which the increasing of economy on the world trading and improving of population’s welfare. The processes of globalization in touristic branch are reflected in the changing of technologies, the internationalization of the business activity, the modernization of the transport infrastructure, the creation of the mechanism of regulation and management of tourism. One of the manifestations of globalizational processes in tourism is enhancing the role and influencing in the late decade of festive tourism which

surrounds more and more kinds of touristic route. All in all, it reflects globalizational tendencies in the tourism where cultural, educational and entertaining forms become the top of increasing of touristic streams in developed countries. The European Integration has been declared as an orientation of the foreign policy course in Ukraine so the festival movement in our country has to get additional strategically oriental propulsion for development, borrowing organized methods and forms of the central European countries.

According to the researchings by the Council on issues of travellings and tourism, the influential status of industry's hospitality will keep on in future. So the direct profits from tourism in 2016 became more than 2200, 0 billion dollars USA which consists of approximately 3,1 % from the world GDP and almost is four times higher of this indicator in 2000, but the prediction by 2023 will increase to 3249,2 billions dollars USA (3,1 % from GDP) [4].

In 2017 the USA profits from tourism consisted of 210,7 billion dollars, in Spain – 68 billion dollars and in France – 60,7 billion dollars. So the leaders were Thailand, The UK, Italy, Australia, Germany, Makao (China) and Japan. These countries' profit from tourism consisted of 643,5 billion dollars. For more than 40 countries of the world touristic branch is the main resource of national budget revenues, but for 70 countries – one of the three main articles [4].

UN WTO predicts, that in 2020 the number of international tourists will increase 1 billion people and will consists – 1,360 billion people, in 2030 – 1,809 billion people, due to the profits, there will be 2400 billion dollars USA [5].

During the authors' publication's writing was examined and anylized the whole ranges of research where the separate aspects of globalizational processes are anylized and considered. Special attention deserves such works as: "International economic activity in Ukraine" V.Ye. Novytskyy (2003), "The strategies of economic development in the conditions of globalization" edited by D.G.Lukyanenko (2001), "Global trading system: the development of institutions, rules, instruments of WTO" edited by T.M.Tsygankova (2003). This problem was also carried on: G.V.Maksymenko, G.I.Vainshtein, I.V.Burakovskyy, V.Golovytska, V.F.Danilchuk, A.M.Poruchnyk, O.I.Rogach, S.V.Sidenko, O.K.Skalenko, A.S. Filipenko and others. But a number of issues connected with peculiarities of festive tourism in the conditions of globalization, left practically beyond the researchers' attention.

Due to the competitiveness index of touristic branch Ukraine got over in 2017 year 88 price among 136 countries in the world. In tourism industry there are 214 people consisted of 1,2%. The part of tourism in GDP of country consists of 1,4% and according to the datas of State Council of Statistics for 2017, Ukraine was invited 14,2 million foreign citizens but 26,437 Ukrainian people went abroad. Due to the datas of State Statistic Comitee in 2017 the tuoristic services offered more than 3500 companies. They implemented almost 1.6 million tours on the sum of 27 billion gryvnyas. Turkey, Egypt, Georgia, Bulgaria, Montenegro enjoyed the greatest demand [6].

One of the suitable conditions for development of tourism in Ukraine was to accept no visa with countries of EU. The travelling abroad became much cheaper as previous visa costed 40-60 euros for tourist, family's visa – 130-180 euros.

International tourism at the beginning of XXI century has become like indivisible global entire in which diverse and versatile processes are constantly happening. The globalization of world tourism was caused by such cooperative factors:

- international devision of labor: the structure, the practice and the logistics of modern global tourism branch lead to the emergency of new concept of international devision of labor which not only contributes to the changings of economic power's balance between separate countries and regions for using partial advantages (geographical location, the cheap energy, resource or labor, access to markets, qualified staff of tourism etc.), but creates backgrounds for forming economic and lately – even political world's multipolarity;

- internationalism of finance: the bright examples of this phenomenon are the establishment of the single European currency and the unification of the world currency market, functioning of international bank system, dependence financial systems of many countries from the waving of the world global stock market;

- new informational and technical systems: new global informal orientally touristic market gives the advantage of making technical eruptions in the developing at the expense of implementation no-how-technologies, new products due to this new informational space, makes boundaries of the countries “clear”, and the process of globalization in tourism – irreversible;

- strenghtening of competitive fighting between new industrial countries and the principal touristic-leaders;

- gemogeny of international tourist consumer market – one of the

reasons is the spreading of mass culture which brings fashion for using equal tourist suggestion, consuming equal kinds of services their standardization and penetration to all spheres and world's regions.

Certainly, that the complicated socially economic situation in the country, irregularity of mechanisms of stimulation of tourism industry, generally, and festive tourism partly, the situation in the east part of Ukraine, and the absence of effective strategy of development of festive tourism as national as regional levels have more difficulties in the development of festive tourism in the country. The question belongs not only to the tourism industry in Ukraine and festive tourism, but also in generally, to the ways of involving of the countries with transition economy and even to the powerful globalizational processes and competitiveness such economies in the world market.

A paculiar challenge for the processes of globalization in the sphere of the tourism became The Global Ethical Code of Tourism. The necessity in the developing of the Code was still said in the resolution which was accepted in 1997 on the General Assembly of the WTO in Stambul. The following two years the Special Commettee of Preparing of the Global Ethical Code of Tourism was formed, the project was created by the General Secretary of the WTO Franchesko Frungialy based on the consultations with the Business Council, the Regional Commissions and Executive Council of WTO. The Commission of OUN of the constant development, during its sessions in April 1999 in New York, accepted the consepction of this Code and suggested the WTO to add it with additional proposals from uncouncil organizations. The written comments for the Code were sent by more than 70 countries-members of WTO and different organizations. The recapitulative Global Ethical of Touristic consists of 10 tips and is made by the results of a long constitutional process, was unanimously approved in October in 1999 on the session of General Global Assembly of WTO in Santiago [7].

Global Ethical Code of Tourism installs the mixture of orientations for the constant developing of the world tourism. There are some ideas from many previous declarations and active professional codes and it carries new thoughts which reflect the changes in our society at the edge of the millennium. The Global Ethical Code of Tourism is necessary for helping as much as possible to tighten up the advantages of the developing of the tourism for the population in the touristic centers and decrease into minimum its negative influencings on the environment and cultural heritage.

The processes of globalization and their influence on the strategic development of festival tourism in Ukraine have their own reflection in the usage of new, informational and telecommunicative technologies which mostly increases effectiveness and improves the work tour agencies and tour guides, makes better the quality of client's service, mostly decreases the time of all procedures and becomes more better in creation of new marketings' methods.

In touristic business in Ukraine under the influence of globalizational processes the trading of services and selling are actively used online every year.

The bright example of globalization performs like a creation of global intergrational hotels' chains which appered on the markets in Ukraine last years. In XXI century the hotel's chains became the main element of economy in more countries of the world, their principal power and the increasing of the effectiveness. So, 90 % of all hotels in the USA are combined to the nets, in Europe these points are 40%. There are more than 300 hotel's nets that went out of the line of the national boundaries under the influence of globalizational processes, the part of which consists of 50% of hotel's rooms. There are 16 hotel's nets in Ukraine. There are included such hotels as Reikartz Hotel Group, Radisson Blu Hotels&Resorts, Reno, Swissotel Hotels & Resorts, Ramada Worldwide and others.

So, the building, the reconstruction and technical retooling of the hotels in Ukraine for 2014-2016 were invested 723 million hryvnyas, 611 million hryvnyas and 1113 million hryvnyas. Thus, the main part (approximately 80%) investment crouched on the technical retooling and reconstruction and only 20% for new building. While for getting the world proofs, the tourism branch in Ukraine needs about 85-86 billion hryvnyas for investments annually [8].

In the point of this, the processes of globalization reflected on going out of Ukrainian hotel market of global chains, is the bright example of positive strategic changes in tourism's market as well as festive tourism. The tourists who are travelling with the aim to visit the festival, among everything, they need even the comfortable conditions of the location which the world hotel chains guarantee, so they are introduced on Ukrainian market.

The greatest extend to globalization has touched civil aviation that has also got its indirect effect on the festive tourism. The leading air companies of the world prefer creating the strategic alliances with the competitive of its level for limiting the market's abilities of smaller

carriers.

For the tourism industry, the main area of cooperation are the agreements between air carriers which belongs to the encouraging programs for potential clients. The most profitable units of air carriers are “Star Alliance” and “Oneworld”. Each of these units services about 189 million passengers a year.

The globalization of tourism has also got negative moments which influence directly and indirectly on the development of festive tourism. They are ecological problems, outbreaks of disease and epidemic in different corners of the world and the threats of terrorist acts. Most counted problems have got regional characteristic but globalization “makes” us react on the whole world industry of tourism.

The next important problem of globalization’s consequences for the strategic development of festival tourism in Ukraine is an excessive standardization of consumption’s characteristics and the service offer models that makes negative influencing on the local culture. So the tendencies to the internationalism and unification are against the tendencies of saving national uniqueness and originality of Ukrainian culture in different country’s regions.

Now, in the conditions of globalization, the problem of the saving touristic resources has particularly been acute. For instance, because of irresponsible attitude to architectural treasures in Lviv, the architectural monuments ruin which are in charge of Councils in Tartakiv, Sadova Vyshnya, Zhuravno, Komarno and others. The renewal and reconstruction is, of course, the state’s deal but it is not funded properly. The reconstructed buildings could be used for festival tourism as extremely interesting projects in profitable business.

It should be said, that the example for us can become our closest neighbours and even not the countries of Western Europe where most castles and palaces are centurily left as a state’s properties: Latvian, Polish, Czech and Slovak people tried to transform their historical monuments to the modern business centres, the institutions for holiday etc.

The important factor of influence that moderates the development of festive tourism in Ukraine today is the world economic crisis, for analysts the first features of it appeared several years ago. Its influencing will be felt during the summer season this year. Approximately 40% produced products by Ukrainian enterprises are exported and about 30% of bank sector belongs to foreigners. Don’t, simultaneously, forget about the political opposition which doesn’t allow different councils and

centres of agreements of decisions to act concordly and harmoniously. However, for the tourism branch's real prospects are seen during the economic crisis.

Under the conditions of globalization, and also today's economic situation in Ukraine the development material data of festive tourism and its closer types of tourism must be focused on the most quantity of funds which comes from tourism activity as the main branch of economy with fast payback. Potentially the profitable sphere of tourism in Ukraine, feeling the state's support, will grow its potential, relying on the separate enterprises' initiative, the potential of the regions and after the decade of Ukrainian independence the acquired experience of market management.

To sum up, it can be said that the festive tourism as a form of economic activity- objective global phenomenon which harmonises and differentiates fundamental processes of economic development of space. In many cases, the festive tourism does the additional managing functions and complements the dominant production.

Using the advantages of the tendencies of the development of the world management, the festive tourism visually demonstrates the pros of using the regional characteristic in global world in which the cultural identity of local communities and originality in the regions turns into the massive festive touristic product. For successful decision of global problems it is necessary to analyze them in connection of their entirety, the close interweaving of economic, political, ecological, psychological, and others processes.

The processes of globalization that influence on the strategic development of festival tourism today are characterized by the following features:

- the changing and unification of festival technologies which are directed on the improving of services;
- the modernisation of transport infrastructure as well as aviation transport;
- internationalism of business activity;
- creation of mechanism of management and regulation of influence of globalizational processes on tourism generally, especially festival tourism.

Therefore, the strategic development of festival tourism connects to the strengthening of the processes of globalization and integration in the world economy. In the conditions of economy's globalization, the festive tourism develops very intensively which tightly connects with

the expansion of opening of the national economies, increasing of intensity of investment flows and others. The Ukrainian market of tourism services as well as festival tourism hasn't acquired enough development yet. The development of festival tourism in Ukraine needs activation of involving in this sphere, the investments, thus even, foreign ones. The state's policy must be focused on the creation of the properly environment for developing of festival, so it has the main role in many countries of the world.

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**STUDYING
GENDER
STEREOTYPES IN
THE CURRENT
ADVERTISING OF
VICTORIA'S
SECRET COMPANY**

In the modern world, advertising is the most common means of stimulating demand for products and services. At all times, it served as a function of informing potential buyers about the existence of a particular type of product or service. However, for many organizations, purely informative advertising is of secondary importance. More important to them is that with the help of advertising can convince the consumer in the benefits of the product to promote their products to the market. Modern enterprises in a market environment are trying to organize all aspects of their marketing activities in the most effective way. In this regard, we can say that advertising plays an irreplaceable role in the overall set of marketing communications.

Summarizing the terminology of work [1-7], we can conclude that advertising is any information that is usually paid for a product or service that forms and maintains the interest of consumers and promotes market advancement. At present, two approaches have been developed

to define the term “advertising”. In the narrow sense, the most widespread in the West, is interpreted as announcing in the media information about a product or service. In a broad sense, more common in domestic practice, advertising also includes exhibition events, commercial seminars, pamphlets, catalogs, posters and so on. There are also many advertising classifications; the most common is the classification, depending on the stage of the life cycle of the goods of the object of advertising:

The purpose of advertising is to increase the awareness of products in the market, improve the image, inform consumers, the impact on the desire of the consumer to buy products and allocate it among competitors.

In the modern world advertising ceased to be just an economic phenomenon and became an element of mass culture. It transmits not only information about goods or services, but also demonstrates different types of relationships in society, including the relationship between men and women. In other words, direct offers for goods and services are usually presented in advertising in the context of other images that tell about the structure of society, its cultural structures and the relationships in it (men and women) [8].

That is, the problem of modern advertising is that it is filled with stereotypes and social principles. Characteristically, gender stereotypes are always present in advertising, they constantly shape the images of a man and a woman in most consumers. From these images, our self – esteem, perception of the world and our behavior also depends. With gender stereotypes, gender roles that limit our livelihoods are fixed.

Although men and women belong to the same biological species and have many in common, they differ from each other in a number of important physiological, psychological and social characteristics that should be taken into account in the process of creating the concept of advertising communication [9].

Social psychologists believe that the two main reasons why people are trying to meet gender expectations is regulatory and informational pressure. Normative pressure demonstrates that a person is forced to social expectations, so as not to be rejected by the company itself. Information pressure is due to the fact that trying to know the world and determine which social norms to follow, we are turning to the cause of a society or a certain group.

Consumer behavior depends on many factors, including gender. Gender characteristics of consumer behavior must be taken into account

when developing a marketing strategy for positioning a product, service or brand. Approximately 80% of purchasing decisions are taken by a woman, and if the man's main goal is to achieve the result, that is, to make the purchase, then women will enjoy it. In addition, women love to talk about shopping for girlfriends, colleagues and just friends. According to S. Bern, a marketing and management specialist, a man recommends the right goods (service, brand) on average three others, a woman – 21 people [10].

Advertising is rather stereotyped. Young, carefree girls, she must promise success in men, housewives – home comfort and family idyll, mothers - the health of the child. What is important for any woman? First of all, beauty, youth and health. That is why the advertising posters appeal to us with slender and attractive models with happy faces. When designing an advertisement for women it is important to consider their emotional and sensuality. Such slogans as “trust a sensation”, “go for pleasure”, “adjust for the best”, “do not miss” appeals to emotions and therefore cause a response in the female audience.

A man's advertising fewer channels of influence. For modern man, first of all, the social status, success and, of course, women are important. He wants to be surrounded by attractive girls and have true male features: strength, activity, determination, volitional qualities. The unmatched attribute of any advertising for men is a beautiful woman.

However, the game on stereotypes is not always winning, it is important to feel the measure. Excess can drive off consumers and cause their irritation. After all, one should not forget about family purchases, which the woman has more influence.

By their nature, women are very different from men. You can refer to the list of basic needs that were formulated as a model of the eight motivational goals of Tamberg and Badjin (M8M):

- Domination – for men the domination is actual in its pure form: to surpass all competitors. For women – only in the context of belonging to a group: the correlation with a certain elite, imaginary or real;

- Sex – achieving sexual attractiveness for women is a top priority. Everything that can be connected with this motivational purpose – everything can be safely targeted at women. For men in this form, this need is not relevant;

- Security – for men, safety is primarily associated with protection from external enemies, while for women this issue is much wider and can be related to the safety of daily life, food safety, child safety, etc.;

- Affiliation – the issue of social interaction for women is

fundamentally more important than for men. The phenomenon of fashion is directly related to this need: those women – big fashionistas, to prove, probably, not necessary;

- Savings – it is difficult to talk about whom this need has expressed more: each gender has its own specifics;

- Research – this need is fundamentally more characteristic of men, for women it is for the most part only an accompanying motive when purchasing;

- Care – there are women out of competition and the degree of influence of this need, and in the realm of its implementation;

- Hedonism – women are more egocentric, because they have a stronger desire to please, comfort themselves.

Immediately we can see that the reasons for consumption in women are much higher than in men. So a woman, by its very nature, is a more active consumer. And now, as women are increasingly gaining opportunities to meet their needs, the proportion of female buyers in most of the markets considered men's will only grow. It is stimulated, on the one hand, by the development of the ideology of feminism, on the other – by the cultivation of egoism.

If you follow advertising stereotypes, then formed a distorted thought about women's desires and aspirations. It may be thought that everything that a woman needs is harmony, healthy skin, pleasure and everyday life. But this is not entirely correct, because the woman is not so limited. Many of the modern-day representatives of the weak sex seek to provide their descendants travel and make the world better. A beautiful girl from advertising, calling to look just as beautiful as she, is more annoying and repulsive.

Often, I have to observe that the female version of the product also has one distinctive feature – design. More vivid and appealing, women are more focused on aesthetics and convenience. Women are more frank in their choices. The woman honestly admits that she likes the car, because she is “pink”. A man, when he likes the sophisticated silhouette of the car, says something about power and reliability.

Advertising uses certain traits of both men and women. So the features of a typical man in advertising – this is strength, determination, confidence, domination and business. The features of a woman – softness, tact, sexuality, talkativeness and the need for protection. Advertising should not depart from them, but rather broadcast through non-verbal behavior of characters, graphic-image image, carefully prescribe scripts of commercials, based on archetypal (subconscious)

level.

The advertisement uses the following female images that are in line with public stereotypes:

1) the image of the guardian of the home hearth (mother, wife) used in the advertising of household chemicals, food, baby goods, household appliances, medicines (advertising Tefal, Sam Samych, Pampers, Haggis, Tayd, Myth, etc.);

2) the image of a frivolous beauty that easily cope with any situation conducting an active lifestyle, is engaged in the promotion of cosmetics, perfumes, clothing, accessories, footwear, beverages, sports (advertising Lacoste, Touch of pink, Maybelline, Coca-Cola, Biobalance and other);

3) the image of the business lady, which the advertised product helps to move up the social ladder, to be independent, always at a height, the image is used in advertising of machinery, cars, food, cosmetics, perfumes, clothes (advertising Samsung D500, Dior, Activia, Prada, Chanel).

In ads intended for male audience, both male and female images are used, but they have a different meaning:

1) the image of a seductive woman, with a minimum amount of clothing, causes the desire to have, own, is used to promote all goods and services (Ax, Eclipse);

2) the image of a loyal and beloved woman, aimed at advertising the goods for the couple used in advertising cigarettes, cell phones, operators, perfumes (Nokia, Solliden, Him, Oriflame, L & M, MTS);

3) the image of a business businessman, whose product helps in achieving power, power, is used in the promotion of elite things (Citizen's clock, cars);

4) the image of a brave hero, which meets the needs of men in leadership, is used in advertising of perfumes, cosmetics for body care (Old Spice, Eclipse).

Sometimes there are changes related to the fashion in the ad. For example, such a phenomenon as unisex, which in the 90 years was at the peak of popularity, very much affected, including in the fashion "on the body". But despite this, stereotypes still play a key role in creating and impacting the advertisement in its entirety.

The latest trends in the world even affect such an independent and self-sufficient brand as Victoria's Secret. Thought about the concept of beauty is transformed with each passing day, many fashion brands have already presented their collections of "plus" size. Representatives of the company after the show on December 1, 2015 hinted at some changes in

the company – the appearance of “angels” category plus. This will help dispel the myth that is beautiful – it’s a must-have, and also increase the number of sales and positive reviews. Although “God-positive” models are far from reality, women’s proportions in their figures are saved. Most of them, despite their size, have tensile bodies. However, the company is not yet in a hurry to present a collection of “plus-size” models, because high standards for “angels” is a chip that allows the brand to remain an unattainable ideal for inhabitants.

The scientific novelty of this work is that due to the analysis of gender stereotypes in the advertisement “Victoria’s Secret” through the prism of manipulation of consciousness, the introduction of gender stereotypes into the consciousness of viewers has been proven, affecting not only consumer behavior, but also their perception of the world.

The peculiarity of the questionnaire is that it is based on the statements of individual experts. Expanding the number of experts leads to unnecessary labor costs and costs. In the case of a large number of specialists in the field of analysis, the degree of consistency of experts’ answers according to a separate factor or in general on the list may be the criterion for the sufficiency of the number of observations.

Experts were invited to conduct a ranking of components according to the degree of significance of one or another element of analysis to study the influence of stereotypes in the advertisement “Victoria’s Secret” on the minds of viewers. The constituent, who has the greatest significance, has been assigned the first rank, and so on.

On the basis of the proposed approach an evaluation of the impact of gender stereotypes in advertising was carried out. To this end, 25 research and practical workers in the field of advertising and marketing were surveyed, which determined the significance of each component and evaluated the high priority of stereotypes in advertising. According to the tabular value corresponding to the error of 0.5 with probability of confidence of 95%, the number of experts should not be less than 15 people, so the attraction of 25 leading specialists who directly work in the field of marketing is sufficient both in quantity and quality warehouse.

Six gender stereotypes were proposed for evaluation:

- b1 – beauty form (perfect face and thin body);
- b2 – form of “business woman”;
- b3 – year of “city jacket”;
- b4 – image of the model (in the center of attention of rich men);
- b5 – image of a woman as a sexual object;

b6 – image of a carefree girl.

The results of the expert survey on determining the importance of influencing stereotypes on advertising.

The calculation of the coefficient of concordance and verification of its importance obtained the following results: $W = 0.714$; $X_p^2 = 89.25$; $X_r^2 = 11.07$.

The evaluation of the impact of gender stereotypes in the Victoria's Secret advertisement on the minds of viewers, based on the results of a survey of experts, identified the priority of the image of a woman as a sexual object, the second place was the image of a beautiful (the perfect face and thin body), the third - the image of the model (in the center the attention of rich men). The least used and influencing the minds of viewers is the image of "urban coquette", "carefree girl" and "business woman". The results of the survey showed the priority of using the female image as a sexual object in the "Victoria's Secret" advertising, aimed at female and male audiences, which allows us to conclude that manipulation of the mindset of viewers. It is necessary to develop recommendations for a more effective advertising message that affects the viewer, without damaging his feelings and without causing harm.

During the study, the main stereotypes were identified and the priority of their use was identified. A woman as a sexy object is the most popular stereotype in advertising. After all, a woman in such an advertisement has external model data from the podium and is not ashamed to be exposed for the sake of product promotion. It creates the effect of some distortion compared to real women, less sexually divorced.

Based on our example, the "Victoria's Secret" company and its ads, it can be noted that the brand is constructing reality by imposing its ideals on society. The company is guided only by strict standards of "beauty", does not distribute and does not simplify these standards.

And while the whole world was embraced by "God's Positive", at his desire to convey to us that it is important to take oneself with anyone, regardless of their parameters and appearance, the most popular brands of lingerie are stubbornly continuing their standardization policy.

The last couple of years of the "plus-size" model on the Week of High Fashion or on the covers of the world's leading magazines are no longer a novelty; only companies of the lingerie stubbornly continue to boycott "God's deposit". Despite the statement of Victoria's Secret representatives about the quick collection for girls, not model parameters, nobody has ever lived for life. This applies not only to

Victoria's Secret, but also to the main competitors of the brand, such as AgentProvocateur, LaPerla, and Intimissimi. These brands continue to believe that the beautiful means *hade*, and therefore the "plus-size" model is no more than a regular trend, the popularity of which will soon be. Most often in advertising, a woman who does not fit model parameters is a mother, a housewife or a woman advertising the means for weight loss, and the sexual object must meet the unattainable ideal of a large half of the male audience and create women complexes.

Sexual images are considered a universal way of attracting attention to an advertising message, increasing the memory of advertising, and hence the advertised products. Consumers are most responsive to women's attractiveness, because a man has a strong instinct for the continuation of the genus, and the nervous system is arranged so that any signal perceived by the sex, perceived by the body, instantly causes an indicative response. Attention of the person immediately focuses on the source of the signal, and this is not always what happens consciously.

That is, while many well-known brands and people who, in their example, are trying to demonstrate the positive effect of "god-positive" on the psychological state of people, and especially the female part, advertising, in particular, famous brands of lingerie, is stubbornly reversed. Their advertising companies are convincing us that only a decent and beautiful decent enthusiasm, which provokes young beautiful individuals to turn themselves into exhaustion, increasing the statistics of people suffering from anorexia.

Through questionnaires, we have investigated whether advertising has an impact on the psychological well-being of a person and whether they compare the viewers with those people whom they see in the advertisement. The survey was attended by 30 men and 30 women aged 16 to 55 years.

Psychological pressure from advertising affects more than half of women – 75% of respondents, while others do not feel this pressure 25%. Among men, the situation is different: 60% of men agreed that advertising had an impact on them. Other 40% of the psychological impact does not feel.

According to the results of the survey, we see that women are much more likely to compare themselves with the heroines of advertising. If only 65% of men compare themselves with men in advertising, then among women this percentage is higher by 20%.

In the advertising of Victoria's Secret, it is recommended to

introduce a new image of a modern business woman. Research in the field of gender can change the social order, based on the principle of gender inequality. The study of gender stereotypes that affect the perception of advertising “Victoria’s Secret”, has given recommendations that will help in the future to create high-quality, ethically flawless and most effective commercials.

After research, it can be noted that, despite the feminist movement that has embraced the whole world, the role of women in advertising remains narrow. A woman often convinces potential purchasers to buy it by their sexuality. We also considered the formation of women’s and men’s images in advertising on specific examples of promotional products. It should be noted that recently the image of a woman is transformed under the influence of changes taking place in her social and professional position – her image is endowed with determination, entrepreneurialism, and independence. A woman becomes active, trying to realize herself as a person, gradually moving away from the usual role of wife and mother.

It would be desirable that advertising cease to put so much pressure on society, creating an unattainable ideal, such as “Victoria’s Secret”. Advertising should encourage buying, rather than creating complexes for most potential buyers.

The scientific novelty of this work is that due to the analysis of gender stereotypes in the advertisement “Victoria’s Secret” through the prism of manipulation of consciousness, it was proved the introduction of gender stereotypes into the minds of viewers, which affects not only consumer behavior, but also their perception of the world.

The practical value of the work is to provide motivated recommendations for the more effective construction of an advertising message that affects the viewer, without damaging his feelings and without causing harm.

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**PRACTICE FOR USE OF
COMPARATIVE
ANALYSIS FOR THE
FORCE OF
SUBPROCESSES OF
PROCESSES OF
FUNCTIONING OF THE
ENTERPRISES ON THE
BASIS OF AUTHORIAL
RATES OF
COMPONENTS OF THE
EFFICIENCY**

Problem statement in general form. It is known that with viewpoint of structural and functional construction system of management by the object contains a subsystem of analysis. Therefore, object management should be based on an appropriate analysis of this object. In particular, in the process of benchmarking in the study of certain objects, it often becomes necessary to divide them into separate groups (classes, categories) according to the main strategic priorities [4, p. 126]. There is such a necessity in the study of the processes of functioning and development of enterprises (in particular, agricultural). At the same time different methods of grouping objects and allocating among them groups that are strategically important can be applied. One of these methods is a discriminant analysis that allows us to determine the quantitative abutment that would allow the group of enterprise leaders to be allocated among all other enterprises [4] with an aim to make appropriate decisions on managing certain enterprises. The results of the evaluation of the force of the decisions taken directly are a measure that confirms (or refutes) the correctness of the choice of these decisions. Obtained estimates are calculated on real data reflecting the main consequences of the enterprise's activities, including as a result of management measures. The problems of evaluation should be related to the formation of an appropriate system of rates, which can directly evaluate the performance of enterprises with an aim to determine the level of force of decisions.

Recent research and publications analysis. In article [3] we considered the practical use of discriminant analysis to characterize the force of the processes of enterprises functioning on the basis of the rates

of the components of the efficiency on the example of the processes of generating gross incomes of specific agricultural enterprises of the grain and product subcomplex; compared it with author's approaches based on the models of Burunnikova (Polischuk) – Yarmolenko.

The questions of assessing the force of the activities of enterprises in general and management decisions in particular were reflected in their work by domestic and foreign scholars T. Ambler [1, 27], E. Billyard in collaboration with D. Donohue [28], A. Borisov [2], P. Gordienko [4], P. Grigoruk [5, 6, 31], Yu. Dainovsky [7], P. Drucker [8], N. Erdumlu [30], T. Zagorna [9], V. Zvarich and S. Lapach [10], N. Illyashenko [11], S. Ilyashenko [12], N. Klymash [13], J. Lareshe [14], V. Lyametz and A. Tevyashev [15], S. Moherny [16], O. Oleksyuk [17], Y. Robul [19], R. Sulpovar (co-authored with T. Bogachev) [20], I. Teslenko with co-authors [21], A. Tyshchenko with co-authors [22] L. Fedulova [23] Yu. De Jorge collaborated with K. Suarez [29], N. Khrushch [5, 31], N. Chukhra (in collaboration with I. Mlynko) [24], A. Sheremet (co-authored with R. Sayfulin) [25], R. Yampolsky [32] and others.

These and other authors consider in their works the force of the operation of specific systems from individual viewpoint for these systems: the effectiveness (economic, technological, a priori, a posteriori etc.), the efficiency (in a particular understanding for concrete cases), linking this force with the formation of the corresponding system of rates (in particular, of integral rates).

It is known that in branches, investigated by methods of discriminant analysis, the determining factor is the choice of a chain of rates that characterize the critical processes, chosen at application of benchmarking (as a method of competitive analysis). As for the rates of the force of various processes (as the ability of the processes to give a certain result), the authors of the works often use the notion of efficiency as a concept equivalent to the effectiveness (for example, the authors of works [2, 15, 16, 25]); the rest of indicated authors of the work use somewhat different approaches to the equivalence (although some of them allow some confusion as to the concepts of effectiveness and efficiency of the process).The peculiarity of our authoring (of N. Burennikova (Polishchuk), V. Yarmolenko) approaches to the force of functioning of the systems is as follows. By tracing the functioning of any system in the form of the occurrence of a set of certain processes, we examine the force of the process using the efficiency as category, which has two components: quantitative (in the form of characteristics of a scaled product of the process) and qualitative, taking into account

the effectiveness of the process [3, 18, 26 and other author's works]. In this case, there is a need to use and relevant rates as indicators of process. The meaning of this kind of consideration of the category of efficiency has been proven by our researches for more than 20 years. Formation and development of author's approaches to the solution of the problem of evaluating of the force of the process with the help of the components of efficiency (as the labor process, Yarmolenko V.O, Polishchuk (Burennikova) N.V, 1996), and any process ([26], 2012)) were considered in a paper [18] (2014) of a collective monograph.

With regard to methods analogous to methods of discriminatory analysis, **the unresolved part of the problem** is the disclosure and improvement of the methodology for their use to study the comparative characteristics of the force of subprocesses of process of the functioning of enterprises on the basis of the rates of components of the efficiency taking into account the features of the methodology of discriminant analysis for the purpose of identify and implement of the optimal options of actions as for management of these processes; as you know, you we can to manage only of subject which is measurement.

The purpose of the study is to reveal, refine and implement the methodology of comparative analysis of the force of subprocesses of the process of functioning of enterprises on the basis of author's rates of components of the efficiency with a glance of the methodology of discriminant analysis.

The tasks are to determine quantitatively the boundary that separates the enterprises of the group of leaders from all other enterprises and to divide these enterprises into groups according to certain determinant priorities, when considering the each defined subprocesses. and to use in the sequel for management by concrete enterprises. Realization of the mentioned purpose and tasks of work on the example of the actually operating agricultural enterprises of grain and product subcomplex of Vinnytsia region is its practical significance.

Main results of the study. As noted above, in [3] we discussed the practice of using the method of discriminant analysis for the study of the force of the processes of functioning of enterprises on the basis of indicators of the components of the efficiency in the example of the processes of formation of gross incomes of specific agricultural enterprises of the grain and product subcomplex. It shows in this example that models based on methods of discriminant analysis, although they are obviously suitable for solving the problem of the correct distribution of studied objects, into separate groups according to

the key priorities, but not always with their help it is possible to distinguish objects of a separate group from the point of view of an adequate rating. It turned out that the values of the discriminant function do not always determine an adequate assessment of the ranking of objects that are allocated to individual groups (therefore this assessment requires of additional analysis). As was emphasized in [3], the result could be expected, since the construction of discriminant functions is based on the solution of systems of linear equations, which is most often performed by searching for reciprocal matrices. The stability of the corresponding calculations in accordance with [10] is very much dependent on the properties of the original matrix, and the poor conditionality of such a matrix leads to instability of estimates of the coefficients of the discriminant function. Therefore, for comparison, author's approaches to the method of grouping objects and the allocation of strategically important groups among them are proposed. This methodology is based on the models of Bourennikova (Polishchuk) – Yarmolenko, which are based on rates of components of the efficiency. It enhances and diversifies existing models in the context of the study of the processes of functioning and development of business entities for the purpose of adopt and implement scientifically-sound management decisions. In article [26], we have focused on the components of the efficiency of the functioning of complex systems as objects of modeling, suggesting in contrast to previously published works in the study of any process proceed from the fact that the result of the process are its products: the product as a benefit – the pure consequence of the process, the product as a loss (the lost result of the process), the total product (the cumulative consequence of the process both from the point of view of profit and from the standpoint of losses); a scaled product in the form of a product as a benefit and a part of the product as a loss, which is proportional to the proportion of the product as a benefit in the total product (this product characterizes the scale of the process – hence its name implies). In it, along with other materials, we submitted a structured, interconnected system of models for calculating of the rates of the components of the efficiency of the subprocesses of the process of functioning of the complex system, which is shown in Table 5.1. In this article [26] we emphasized, that the practical application of the proposed approaches to the study of the components of the efficiency of a particular process on the basis of modeling depends from the specifics of this process and requires special consideration, which is associated with the peculiarities of measuring the products of the process.

Table 5.1

Structured interconnected system of models for calculating the rates of the components of the efficiency of the subprocesses of the process of functioning of a complex system

Rate	Sign	The formula for calculating
1) of general product of subprocesses	V_i	
2) of pure product of subprocesses	G_i	
3) of losses of subprocesses v	Z_i	$Z_i = V_i - G_i$
4) of scale product of subprocesses v	K_i	$K_i = G_i + Z_i \cdot G_i / V_i$
5) of required product of subprocesses	K_{G_i}	$K_{G_i} = K_i \cdot G_i / V_i$
6) of added product of subprocesses	K_{Z_i}	$K_{Z_i} = K_i - K_{G_i}$
7) of index the scale product of subprocesses	J_{K_i}	$J_{K_i} = K_i / K_n$
8) of effectiveness of subprocesses	E_i	$E_i = V_i / Z_i$
9) of share of losses in the general product of subprocesses	D_{Z_i}	$D_{Z_i} = 1 / E_i$
10) of share of the benefit in the general product of subprocesses	D_{G_i}	$D_{G_i} = 1 - D_{Z_i}$
11) of quantitative component of effectiveness of subprocesses	E_{1i}	$E_{1i} = E_i - 1$
12) of index of effectiveness of subprocesses	J_{E_i}	$J_{E_i} = E_i / E_n$
13) of efficiency of subprocesses	R_i	$R_i = K_i \cdot E_i$
14) of index of efficiency of subprocesses	J_{R_i}	$J_{R_i} = R_i / R_n$
15) of size of incentives of efficiency of subprocesses	S_i	$S_i = S_{i-1} \cdot J_{R_i}$
16) of qualitative component of effectiveness of subprocesses	E_{2i}	$E_{2i} = V_i / G_i$
17) of index qualitative component of effectiveness of subprocesses	$J_{E_{2i}}$	$J_{E_{2i}} = E_{2i} / E_{2n}$
18) of index is a quantitative component of the effectiveness of subprocesses	$J_{E_{1i}}$	$J_{E_{1i}} = J_{E_i} / J_{E_{2n}}$

Sorce: developed by the authors in accordance with [26]

For example, in the case of research objects, we choose to compare the following three processes: the process of obtaining a gross profit, the process of obtaining a financial result from operating activities, the process of obtaining net profit, having considered the activities of five

agricultural enterprises O1, O2, O3, O4, O5 grain and product subcomplex . We do not provide specification of certain statistical data of each of these enterprises by virtue of the confidentiality of such information under Article 21 of the Law of Ukraine “On State Statistics”, but we note that such enterprises are:

“LLC JV “Nibulon”, SOE with foreign investment “Santrade”, LLC “Kernel-Trade”, LLC “ADM Trading Ukraine”, PAT “Food Company Podillya” (confidentiality is provided by drawing lots against these enterprises).

In table 5.2 shows the average annual rates of activity of these enterprises for the period 2012-2016, and also the total average values (TAV) of the respective rates of these enterprises (Object O6) for the period 2012-2016, which are calculated as arithmetic mean values. In Table 5.3 describes the components of the efficiency of these subprocesses of the processes of functioning of each the objects O1, O2, O3, O4, O5, O6, obtained from the data Table 5.2 according to certain formulas [26], and the ranking of these objects was carried out.

Table 5.2

Average annual rates of activity of the objects O1, O2, O3, O4, O5, O6 for the period 2012-2016

Rate	Objects					
	O1	O2	O3	O4	O5	O6
Net income from sale of product (ths UAH)	10336052	7769647,2	24957378,2	5918855,2	1538885	10104163,52
Gross income (ths UAH)	1828556,8	1084783,8	4123414,4	940336	572471	1709912,4
Financial results from operation activity (ths UAH)	980313	494537	2418037,4	122006	402656,4	883509,96
Clean profit (ths UAH)	-744013	225388,2	307481	-60633	293913,2	4427,28
Number of working (of persons)	5222,2	684	676,2	144,6	2285,8	1802,56

Sorce: calculated by the authors according to the data enterprises

From data Table 5.3 shows that the ranking of enterprises by the effectiveness of the process of obtaining gross profit is as follows: O4, O3, O2, O1, O5 (the leaders are enterprises O4, O3, O2); the process of

Table 5.3

Characteristics of the components of the efficiency of the subprocesses of the processes of functioning of the objects O1, O2, O3, O4, O5, O6 for the period 2012-2016

Process of forming of gross profit						
Object	Characteristic of general product of the process	Characteristic of product as costs of the process	Characteristic of net product of the process		Characteristic of the qualitative component of scale product of the process	
	V	Z	G	Degree	I+Z/V	
O6	5605,452	4656,85	948,6022	4	1,8307716	
O1	1979,252	1629,102	350,1506	5	1,8230894	
O2	11359,13	9773,191	1585,941	3	1,8603818	
O3	36908,28	30810,36	6097,921	2	1,8347817	
O4	40932,61	34429,59	6503,015	1	1,8411287	
O5	673,2369	422,7903	250,4467	6	1,6279963	
Object	Characteristic of the scale product of the process		Characteristic of effectiveness of the process		Characteristic of efficiency of the process	
	K	Degree	E	Degree	R	Degree
O6	1736,674	4	1,2037	3	2090,435	4
O1	638,3559	5	1,214935	2	775,5608	5
O2	2950,457	3	1,162275	6	3429,241	3
O3	11188,36	2	1,197918	4	13402,73	2
O4	11972,89	1	1,188879	5	14234,31	1
O5	407,7262	6	1,592366	1	649,2495	6
Process of forming of a financial result from operating activities						
Object	Characteristic of general product of the process	Characteristic of product as costs	Characteristic of net product of the process		Characteristic of the qualitative component of scale product of the process	
	V	Z	G	Degree	I+Z/V	
O6	5605,452	5115,311	490,1418	4	1,9125599	
O1	1979,252	1791,532	187,7203	5	1,905156	
O2	11359,13	10636,13	723,0073	3	1,9363501	
O3	36908,28	33332,36	575,92	1	1,9031132	
O4	40932,61	40088,86	843,7482	2	1,9793869	
O5	673,2369	497,0814	176,1556	6	1,7383453	
Object	Characteristic of the scale product of the process		Characteristic of effectiveness of the process		Characteristic of efficiency of the process	
	K	Degree	E	Degree	R	Degree
O6	937,4252	4	1,095819	4	1027,248	4
O1	357,6365	5	1,104782	3	395,1104	6
O2	1399,996	3	1,067977	5	1495,163	3
O3	6805,384	1	1,107281	2	7535,472	1
O4	1670,108	2	1,021047	6	1705,258	2
O5	306,2192	6	1,35438	1	414,7372	5

Table 5.3 (the end)

Process of forming of a net profit						
Object	Characteristic of general product of the process	Characteristic of product as costs	Characteristic of net product of the process		Characteristic of the qualitative component of scale product of the process	
	V	Z	G	Degree	I+Z/V	
O6	5605,452	5602,996	2,456107	4	1,9995618	
O1	1979,252	2121,723	-142,4712	5	2,071982	
O2	11359,13	11029,62	329,5149	2	1,9709913	
O3	36908,28	36453,56	454,719	1	1,9876797	
O4	40932,61	41351,92	-419,3153	6	2,010244	
O5	673,2369	544,6547	128,5822	3	1,809009	
Object	Characteristic of the scale product of the process		Characteristic of effectiveness of the process		Characteristic of efficiency of the process	
	K	Degree	E	Degree	R	Degree
O6	4,911033	4	1,000438	4	4,913186	4
O1	-295,1975	5	0,932851	6	-275,3754	5
O2	649,4705	2	1,029875	2	668,8737	2
O3	903,8353	1	1,012474	3	915,1097	1
O4	-842,9283	6	0,989859	5	-834,3809	6
O5	232,6064	3	1,23608	1	287,5202	3

Source: calculated by the authors

Note: Valuable rates were submitted as the average annual on one person in actual price (ths UAH); V – rate of general product; Z – rate of product as costs; G = (V – Z) – rate of net product; K = G + Z G / V; E = V / Z; R = K E.

obtaining a financial result from operating activities - O3, O4, O2, O1, O5 (leaders - enterprises O3, O4, O2); the process of obtaining net profit - O3, O2, O5, O1, O4 (the leaders are enterprises O3, O2, O5). Thus, the best on average in all cases was the company O3, and behind it - the company O2. As for the efficiency of the processes, the O5 enterprise was the best.

Conclusions. When using benchmarking (as a method of competitive analysis), in many cases, in the study of the functioning and development of enterprises (in particular, agricultural), there is a need to allocate the studied objects to separate groups (classes, categories) in accordance with the main strategic (decisive) priorities. In this case, different methods of grouping objects can be applied and the allocation of such groups among them is strategically important, requiring the implementation of appropriate algorithms on the basis of modeling. One such method is known to be the classic discriminatory analysis, which allows you to determine the quantitative threshold that would allocate a group of enterprise leaders from all other businesses. In previous

studies, we have found and proved on a concrete example that the value of discriminant function does not always determine adequate ratings of the ranking allocated to separate groups of objects, although models based on methods of discriminant analysis, and are obviously suitable for solving the problem Proper allocation of objects to separate groups according to the main strategic priorities. Therefore, these estimates require additional analysis. In this connection, author's approaches to the method of grouping objects and the allocation of strategically important groups among them are proposed. It was found out that the determining factor in applying this method is the choice of a number of indicators that characterize the objects and processes allocated by using benchmarking. Such indicators have chosen indicators of efficiency and large-scale product as components of performance indicators, which characterize any process, both from a qualitative and quantitative point of view. The practical implementation of the methodology, similar to the methodology of discrete analysis, was carried out on the example of specific agricultural enterprises of the grain-product subcomplex. The method of grouping objects and allocating strategically important groups among them is based on indicators of performance components based on the models of Burunnikova (Polischuk) – Yarmolenko. The implementation of such a method on the example of a comparative analysis of the efficiency of the three subprocesses of the functioning of the functioning agricultural enterprises of the grain product subcomplex indicates the possibility of its application at the micro level for the purpose of adoption and implementation in practice of scientifically grounded management decisions. **Further research.** The study is supposed to be linked with the management of subprocesses of the processes of operation of enterprises on the basis of author's SEE-analysis.

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**MAIN ASPECTS OF
IMPROVEMENT OF THE
STATE SUPPORT MECHANISM
FOR AGRICULTURAL
PRODUCTION IN UKRAINE**

It is impossible to form competitive agricultural production in Ukraine without solving the problem of improvement of the state support mechanism for agricultural production. The deficit of new scientific economic knowledge is acutely felt in now days.

The backlog of Ukraine behind developed countries by parameters of efficiency of domestic agricultural producers, low crop yields, low livestock productivity is the result of lack of state support for agricultural production.

The basis of modern mechanism of state support of agricultural production has formed by works of V. Andriyчук [1], O. Borodina [2], S. Demyanenko [3], B., S. Kvasha [4], A. Mohylny [9].

Research works of the scientists listed above do not allow to solve questions concerning finding of alternative option of the state support mechanism, considering market demand strategy.

The aim of research is justification of the alternative mechanisms of state support for agricultural production on the basis of “market challenges”.

General scientific and special methods were used during the research, in particular, monographic method, method of analogy, method of combination of quantitative and qualitative analysis, method of systems analysis, and method of pluralism or alternatives, method of comparisons. Works of domestic and foreign scientists, legislative and normative documents of Ukraine, statistical data, materials of scientific conferences, periodicals, and results of author’s research and calculations made up informational base of performed research.

State support is related to state regulation of the economy. Both the first and the second is the relationship among government and commodity producers. They can be both weakened and strengthened in the light of state influence. It should be taken into account that at present the implementation of measures of state support in scientific circles

includes two directions, two distinctive alternative methodological approaches, two concepts, two assessments, two variants of recommendations.

The first option – it is believed that state support with its metamorphoses distorts the market situation, leads to a deepening of the bias of generating profits, stimulates the next failure of the market. It is recognized that the best form of state support for production, is such support which is completely absent.

State support can only harm the market, since to the latter must be given full freedom so that the market can generate sustainable economic development. It is recommended not to use state support in agrindustrial complex, and counted on the fact that, for example, after 3-4 years, economically weak business entities will go bankrupt and cease to exist as noncompetitive.

On the contrary, economically strong business entities will strengthen, expand the markets, improve technology and on this basis will overcome the restrictions of profit will provide high profitability. State support from 2000 till 2008 was a burdensome form of mismanagement of public resources. There have been created a special field of economic tension among enterprises that received and enterprises that didn't receive state support.

In addition, the experience of many countries of the world proves that the increase of budget allocations is not always conducive to improving the situation in the industry, increasing the competitiveness of commodity producers. Budget payments may increase, while actual revenue to commodity producers, production efficiency is reduced. Public intervention in market equilibrium causes losses of public welfare. For example, O.M. Borodina [1] noted that during the Soviet times meat and milk were the most subsidized food. With the liberalization of retail prices in the first half of the 1990s, animal husbandry that faced the problem of limited sales, as the demand for these products dropped sharply.

The government has been struggling to cope with the growing sales crisis that triggered it significant losses of the main stock, the introduction of direct payments for milk and meat, which created the illusion of increased demand while reducing real incomes. As a consequence, purchasing prices and profitability of the industry decreased; continued the decline of livestock and consumption of livestock products. Over time, the situation in livestock was complicated by introduction surcharge for high-value cattle. This form of “support”

aimed at counteracting development; reduction of production efficiency, preservation of old technologies, increase of production costs, etc. [7].

The economy operates effectively if the state does not interfere. Production should be the exclusive area of private business. When they deny the expediency of state support for agricultural production, they tend to refer to the experience of England, Iceland and the Netherlands.

In the second variant – it is stated that agriculture needs state support. This is due to seasonality of production, a large period of capital turnover. The most significant arguments in favor of state support are the variety of natural and climatic conditions, the volatility of prices and incomes of commodity producers, the weak attractiveness of investment in production, the need to ensure the stability of retail prices for food.

Naturally, the market itself can not provide full economic stability, but to achieve the stability of the economy, to mitigate the economic downturn, it is extremely necessary to introduce state support. There is no ideal market in reality, and therefore rational market relations can be developed taking into account the fundamentals of state support [4].

It is clear that public support legislation should regulate actions and prevent the manifestations of their own creative interpretations. It is necessary to provide state support to producers who are able to increase the sale of goods and services both in the domestic and foreign markets. With the state support of producers, the role of the state is fundamentally transformed. The state becomes, above all, the focal point for them.

Economically efficient state support can only be achieved when an efficient economy. The path to effective state support is rather complicated. When proving expediency of state support, then traditionally refer to the experience of Germany, France, Spain, Australia, the USA and Canada.

It is clear that the precedent of the first and second options really exists. The positions of scientists are debatable.

They fit into one vector, alternative representations. It is significant that both approaches to the formation of state support have the right to recognition. Each of the recommendations has its own dominant, evidence, and doubts.

Government Programs in 2018 for State Support in Agriculture included: 1% of agricultural GDP, bln. UAH, 4 000 mln UAH of this amount was accounted for development of animal breeding: 1 000 mln UAH – for development of farmers, almost 1 bn UAH for reducing the

price for ag machinery; 300 mln UAH for development of orchards and wine-growing; 945 mln UAH amount of state support – 25% amount of state support, +20% for the market of agricultural machinery of local production; 4 bn UAH volume of state support for agricultural producers who buy livestock, agricultural producers who build or reconstruct animal breeding complexes, agricultural producers who breed dairy cows, private persons who breed cattle young stock, agricultural producers, who buy pedigree livestock; 300 mln UAH amount of state support – 50% compensation of the price of highly productive animals, biological materials and embryos, agricultural producers who build or reconstruct animal breeding complexes; 2,5 bn. UAH amount of state support for: 25% compensation – of the body of the credit, for construction or reconstruction of the pig, poultry or cattle, which results in interest rate 3%, 30% reimbursement – value of already launched animal breeding complexes which were built without attracting credit cash.

It is necessary to point out that Ukrainian agricultural production's fate will depend on its ability to find a new critical path and new model of development. Technological upgrading of industries and creating conditions for investments can be carried out through the active participation of business entities in the market environment. The struggle for economic leadership is possible and acceptable for each industry [2]. Agrarian complex has to reduce the gap with high-tech industries in economically developed countries, to improve the dynamics of economic and financial performance management. This should give a great positive effect in future. Within the above, there is an urgent task to assess the state support schemes of agro industrial complex. Let's analyse the period from 2006 till 2009, as the best period from the point of view of state support of agricultural producers. Until 2009, a group of farms that received the most public funds represented by large commercial units with average number of 290 employees, which is 2.7 times higher than the average aggregate livestock. These companies received from the state in average per year for one employee 3.25 hryvnia grants and payments, and their revenues from sales for 1 hryvnia of grants 2.2 times lower than the average livestock enterprises whereas in the group of farms with number of 64 workers amount of subsidies and payments per employee amounted to 0.04 UAH and revenues from sales per one hryvnia grants exceeded the average of 14.5 times [15]. Reckless policy concerning expenditure on support causes decline of production [18]. Bet on development of small and medium-

sized enterprises were not realized in full force. It should be clearly understood the need for stable expenditure for support of production. Measures at the expense budget expenditures tended to reduce: partial compensation to producers for purchase of elite seeds in 1994 – 20,4 mln USD USA, in 1999 – 1.9 mln USD USA; breeding livestock in 1994 – 18.9, 1999 – 7.2; radical improvement of land in 1994 – 12.9, 1999 – 0.1; preferential price for electricity used for production needs in agriculture 1994 – 178.7 mln USD USA, in 1999 – 6.0 mln USD USA [11]. The information above confirms the view of the need to develop sustainable systems to support budget expenditures. It is necessary to pay more attention to issues concerning improvement of budgetary funds. In this regard Y. Luzan [11] indicates that in 2007 the use of public funds largely constrained because of the inefficiency of existing orders to use them. Approaches to distribution of budget financing were changed during development and approval of their usage – not only at regional but also at district level. Major troubles in support were related, as usual, to domestic origin and were deepened as a result of inconsistent and unbalanced measures of economic policies. Question of construction of modern mechanism of state support, and overcoming of systemic imbalances were remained far from being solved. We must remember that purchasing power of population remains unacceptably low, which pushes constant narrowing to the consumer market. This is, in turn, brings almost meaningless all measures to support producers in agriculture. Attention has to be paid to the fact that during the analysis of investigated problems according to statistics, in recent years a significant part in agricultural farms were unprofitable. Lack of motivation to work, poverty, labour migration continue to be the most acute problems in rural areas [15],[9]. The salary is less than half their average for industries. Wage arrears were observed in the farms. It should be noted that state support for the state budget was growing dynamically until 2008: total support of 9.3 bln UAH, including State budget expenditures to support agriculture – 5,2 and VAT exemptions – 4.2 bln UAH. It does not cover existing disparity in prices – the prices of industrial products are rising faster than agricultural products. As a result, an adequate improvement in agricultural development is not provided. However, there is support of the production due to non-payment. Payables arrears in agro-industrial sector amounts significantly, not less than receivables. This situation means that some production work at the expense of others. In addition, there is a permanent loans from the population to ineffective enterprises through

non-payment of wages. At the basis of these resources usage a new type of support for enterprises were formed. The mechanism of their use does not encourage the development of production in agriculture. Waiting for sustainable agricultural development in many ways enters into conflict with the public interest and profit enhancement processes [4], [7]. The analysis shows that in the literature on economics found a lot of proposals on agriculture for a fundamentally new or alternative system or model of government support, taking into account current imperfections, mistakes and failures recorded in the global and national levels [5], [9], [8], [6], [2]. With this determined, that in Ukraine the problem of providing state support to industries in general is almost in its infancy condition. There is no adequate scientific providing for such support. The question arises. What are the recommended radical innovations in this regard? New mechanisms for distributing subsidies to producers, which focus on market signals, rather than subsidies, are recommended [1,2, 8].

Therefore, subsidies should: first – not to create incentives for the production of (positive or negative); secondly – not to depend on consumption of agricultural resources; third – not to depend on volume of agricultural production. To determine a reasonable, competitive, or rather key way in which state support of agricultural production should develop, we will attempt to understand the criterion postulates that are able to meet the needs of today. In this regard, we note that in agriculture recently, producers of cattle meat were payed of 59% subsidy payments, but realized only 31% of the products; pork producers have received 88% of the budget, but have implemented only 81% of the products; poultry producers, received 98% of subsidies and have implemented 63% of poultry products; milk producers received 56% of the funds but have implemented 43% of total milk production. These findings give grounds for thoughts: whether maintained the principle of fairness in the allocation of budget funds according to the units produced and sold products. There are reasons to believe that adequate indicator of sales equated with “market call” or in other words of application markets. The above specificity ratio between the received and realized funds especially with regard to budgetary programs 28001210 “Financial support of livestock production and crop”, 2801230 “Financial support of farmers”, 2801480 “Financial support of dairy processing” required determining whether there is a link among performed indicators. To assess the density of correlation between features ordinal (rank) we will use the scale factor rank correlation,

between signs ordinal (rank) scale use ratio rank correlation ρ , which is identical in content to the linear correlation coefficient. We use the formula of Spearman (1) where d_j – deviation ranks of factor (R_x) and effective (R_y) features; n – the number of ranks:

$$\rho = 1 - \frac{6 \sum_{j=1}^n d_j^2}{n(n^2 - 1)}, \quad (5.1)$$

According to the data given in the text, we estimate the density of connection between the level of sales (absolute number – 10) and reliability of benefits received (responses to the market). Since the information is presented in the form of integrated indicators (percentage-points scoring assessment), we need a ranking of products: poultry products – A; production of pig farming – B; meat products – C and dairy products – D. To the smallest value of integral index is given rank 1, the largest – rank $n = 4$. We constructed the table 5.4

Table 5.4

Calculating the correlation coefficient of rank – ρ

Type of production	Integrated parameter		Ranks of indicators		Deviations of ranks	d_j^2
	Sold goods ($m=10$)	payments received ($max=100$)	R_x	R_y		
A	6,3	98	3	4	-1	1
B	8,1	88	4	3	1	1
C	3,1	59	1	2	-1	1
D	4,3	56	2	1	1	1
					0	4

The sum of squared deviations ranks is (5.2):

$$\sum_j^n d_j^2 = 4, \quad (5.2)$$

and the coefficient of rank correlation (5.3):

$$p = 1 - \frac{6 \cdot 4}{4(4^2 - 1)} = 1 - \frac{24}{60} = 1 - 0,4 = 0,6, \quad (5.3)$$

Assessment ρ carried out within the available information. Unfortunately, statistical information was very limited. But even with this value coefficient of rank correlation p indicating the presence of

direct and highly visible connection between components of government support of enterprises. Consequently, with the alternative variant of the mechanism of state support for agricultural production on the basis of “market challenges”, or receiving payments there is no need to use a large range of selected indicators and actions for support, namely the: increasing agricultural productivity, support of competitiveness and redistribution of income in favor of business entities, guarantee income, opposition to crowding out from market of weak competitors, support of prices, providing cost payments per unit of output and the area of agricultural fields. Sometimes such figures are unsystematic, not coordinated. They are often unable purposefully to influence on the development of agriculture. With alternative mechanism of state support of agricultural production based on “market challenges” it is provided procedurally to implement once previously normalized stimulating compensation, calculating for one percent – point of the actual growth of sold product, which starting level is determined on the base of the previous period (previous year, five-year plan, the first year of the program). This assumption is logical, as compensation payments in complex are able to perform the production, distribution, stimulating and other important functions. From here “challenges of markets” have a significant impact on specific business decisions making. Previously normalized compensation payments – is universal indicator, the foundation of reforming the entire system of government support of enterprises, and comprehensive incentives for businesses in order to increase agricultural production volume and increase of production efficiency.

Regarding the estimation of cost of one percentage-point compensation payments, then calculations can be performed in different ways. One of them, which illustrate proposed methodology can be as follows: the program 2801230 “Financial support farmers” approved in the state budget expenditures for the year 10 250 thousand. UAH registered entities that really need help and voluntarily participate in the implementation of the program in 2000, forecasted sales growth for a particular year – 5 percentage points. Under these conditions, we have 10,000 interest-points and the value of each percentage-point concerning compensation – 1,025 thousand USD. If an entity has provided a sales increase of 5 percent-points during the year, then he is entitled to receive 5,125 thousand UAH compensation. Payments are not limited. Stimulation of producers, or companies, but not intermediary not a commercial bank – is the main feature of this mechanism.

Conclusions. Previously normalized compensation payments – is universal indicator, the foundation of reforming the entire system of government and comprehensive incentives for businesses in order to increase volume of production. Using the alternative variant of the mechanism of state support for agricultural production on the base of the “market’s calls”, it is offered to carry out one-time pre-arranged compensatory payments per one percentage point of the actual increase in sales, starting level of which is determined by the volume of the previous period.

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**THE MAIN
TRENDS IN THE
DEVELOPMENT
OF TOURISM IN
LATVIA****Introduction**

Tourism is one of the powerful stimulants for the expansion of globalization due to the effective computer communicative and information components. In current global conditions, tourism is increasingly vulnerable due to the effects of such negative factors as natural disasters, epidemics, terrorist acts, criminal nuisances, as well as the impact of such purely economic factors as the financial crisis, fluctuations in the securities market, and the reduction of consumer spending, increase in petroleum prices, tight credit policies, and escalating unemployment. Therefore, the development of the innovative orientations should contribute to the intensive development of the economy, enhance the development of the latest achievements of science and technology in production, efficiently satisfy consumers in a variety of high-quality and competitive products and services.

World practice shows that the tourist industry is yielding to the yield and the dynamics of development only after the extraction of petroleum and gas refining. In fact, according to the **World Tourism Organization**, tourism business provides 10% of the turnover of the service and the service market; in particular, it accounts for 7% of total

world investment and 5% of all tax¹.

Innovations in Tourism

Innovation is the discovery path to the introduction of scientific achievements, advanced experience in the fields of management, labor organization, and technology. In fact, tourism is one of the important sectors of the economy of any country. In several countries it is among the primary sources of income; Island States of Macao (89.5%), Antigua and Barbuda (75.8%), Anguilla (71%), Aruba (70%), Maldives (61.3%), Seychelles (54.5%), and Bahamas (53.6%). The touristic sphere certainly affects any continent, state or city as tourism is an interbranch sphere of the economy, which encompasses not only accommodation facilities, but also transportation, communications and much more. Given the successful development, tourism brings certain advantages, with which its' importance for the economies of different countries and for our republic in particular is related.

Innovations and creativity in tourism are systemic events that have a qualitative novelty, leading to many positive developments in the industry. On one hand, the innovation process receives its recognition through the tourist market and the degree of customer satisfaction. On the other hand, mainly due to the adoption of joint decisions by tourism organizations and management bodies of different levels. The introduction of innovations in tourism is influenced by the economic factors in a particular country, the social status of the population, national legislation, as well as intergovernmental and international agreements. Therefore, there are several reasons for introducing touristic innovations: saturation of many classical and traditional directions, danger of a large loss of market share in inbound tourism, increased competition and increased supply, technological revolution and expansion of the field of application of information technologies, and the transition from the supply economy to the demand economy. Innovative activities and inventions in the touristic sphere include:

- Implementing changes to the existing tourist products (aimed at improving the quality of services, as well as changing the consumer properties of the tourist product) or creating a qualitatively new tourist product (using innovative forms of marketing, planning and design).
- Introduction and use of innovative technologies in the hotel industry: management systems, booking, online communication with

¹ webpage [www. unwto.org.en](http://www.unwto.org/en)

business partners and potential clients, virtual tours, teleports, smart home (The innovative hotel with solar panels on the roof for heating water, wind generators for power generation, window glass from recyclable material, and with furniture designed and made from recyclable material. The finish uses non-toxic paints. The food waste is processed into fertilizers. In addition there is no staff in the hotel and its functions are performed by the computer service system), use of smartphones to pay for services, smart mirror with interactive menus, online consultants, “intellectual” numbers, electronic receptions, etc.

- Introduction and use of innovative technologies in the culinary industry: the use of new types of food raw materials, use of innovative process equipment; use of innovative technologies for storage and prolongation of shelf life of products, and application of innovative technologies in the sale of products, customer service, etc.

- Introduction and use of innovative technologies in the transportation services for tourists: use and introduction of new transportation including all the latest technical achievements, use of the latest technologies for servicing tourists at railway stations and airports, as well as during transportation, introduction and use of new booking systems, passenger registration and services, bonus programs, etc.

- Introduction and use of innovative technologies in the field of travel insurance for tourists: the use of new innovative programs for insurance of tourists developed by the insurance companies.

- Introduction and use of innovative technologies in excursion services for tourists: the use of innovative technologies in the development and creation of an excursion product, technical innovations on excursions, scanans, Military Historical Sites (Military-Historical reannactment of events such as a reannactment that takes place every year in Daugavpils – taking the fortress), thematic, ethnographic reconstructions with the use of interactive and animation methods, master classes, game elements, theatrical. Virtual tours, city-quest, photosprint, extreme excursions, adventures, corporate, career-oriented, etc. The use of audio guides, radio guides for GPS guides and other innovative equipment for excursions.

- Introduction and use of innovative technologies in the work of tourist firms: the introduction of innovations related to the development of tourism business in the system and management structure, personnel policy, introduction of modern forms of accounting, economic planning of the firm, the reconstruction of old and the creation of new tourist products, automated sales management, booking and selling tours

online, in other word, a new manager.

- Introduction and use of marketing innovations: creation of qualitatively new websites of travel agencies: providing accurate and best information, internet-representative offices, online booking systems and services for tourists, online payment systems, demonstration on the sites of "virtual tours", online communication in real time, the creation of internet offices and online stores. Delivery of advertising at a qualitatively new level, market research based on new information technologies; effectively use social networks for advertising purposes, etc.

Thus, innovative activities in tourism are aimed at creating a new or changing existing product, developing new sales markets, introducing advanced IT technologies and modern forms of organizational and managerial activity. This is why innovations in tourism are pertinent and are an indispensable criterion for its development. Innovation management and their implementation for the development of tourism - these factors are the main and most significant in this area.

Innovations in tourism are defined as directions in which there is a certain novelty, as well as a number of principles leading to a positive state of affairs in the industry. In the tourism industry, as nowhere, various structures interact, such as local authorities, the country's leadership, travel companies, operators, and hotel owners. With the integrated coordinated actions, there will be a positive effect in the development of the tourist industry.

Innovations in Tourism in Latvia

The Travel & Tourism Competitiveness Report 2017 paving the way for a more sustainable and inclusive future.

Latvia ranks 54th in terms of competitiveness in the tourism industry among 136 countries according to research of the World Tourism Organization (UNWTO) and the World Travel and Tourism Council ².

As can be seen from the figure above, the most competitive characteristics of the tourism industry for Latvia are: Environmental sustainability (13th) and the Health and hygiene (16th). The lowest competitiveness indicators of the Latvian tourism industry are the Natural resources (108th), Cultural resources and business travel (98th), as well as the Prioritization of Travel & Tourism (79th). Clearly the

² <http://reports.weforum.org/travel-and-tourism-competitiveness-report-2017/country-profiles/#economy=LVA>

Natural Resources are hard to influence, but the innovations in the directions of Cultural resources and business travel, Prioritization of Travel & Tourism must develop and improve.

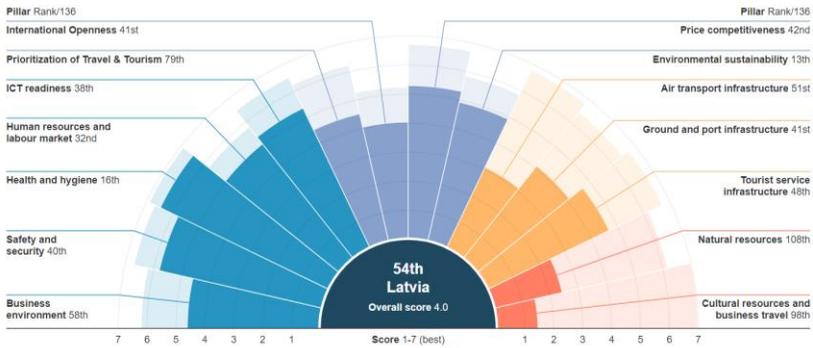


Figure 5.1 Travel & Tourism Competitiveness Index 2017 edition for Latvia

Now it is vital to observe the following: Government prioritization of travel and tourism industry, increase T&T (Travel & Tourism) government expenditure percent of the government’s budget, the number of World Heritage cultural sites, oral and intangible cultural heritage number of expressions, sport stadiums, number of large stadiums, number of international association meetings, expand the cultural and entertainment tourism digital demand, boost the effectiveness of marketing and branding and Country brand strategy rating.

There are already successful examples of introducing innovations in Latvia’s tourism industry³. In fact, the Latvian company “Dd studio” has created a permanent digital exhibition, which can be visited at the Balvi Museum. The exhibition is dedicated to the unique intangible cultural heritage of North Latitude which includes ethnography, traditional singing, stories, skills of ancient crafts, as well as other cultural heritage of North Latitude. This exhibition has been recognized this year as the most modern exhibition in Latvia. The exhibition is arranged in five museum exposition halls and in contemporary forms of expression using various multimedia and innovative technologies, North Latitula’s traditional music, folklore, customs, psalms, Mayan chants, human skills, as well as other values that are reflected. The elements of the

³ <http://jtl.lv/turisma-inovacijas-latvija>

exhibition are exhibited using modern artistic expressions and technologies such as video projections, innovative graphic designs, and touch screen applications. The aim of the exhibition is to present in an interactive and attractive way to get people interested and acquainted with the historical and cultural heritage; in particular, attracting people in the target groups of different ages, thus ensuring the preservation and transfer of the heritage and knowledge.

For the fourth consecutive season in Valmiera, the first Gauja tram in Latvia, flying through Valmiera's scenic and historic sites, is floating through the Gauja River. During the season, the tram will call the city's quay at a certain time in order to take and explore the Gauja River and the valleys and its guests. The Gauja tram is an engine-equipped boat for entertainment and excursions around the Gauja River Valley, built in the industry of the active recreation organization "Eži". The tram home and the only start and stop are the boat mooring in Valmiera's Old Town. The Gauja tram runs along the Kazu River and the Iron Bridge. Gauja tram is headed by "Gauja tram" – a guide that tells interesting, historical stories and tales about Valmiera during the trip. Gauja tram can accommodate up to 30 passengers.

The Baskājis Trail is a 2.7 km long trail on the steep bank of the Gauja River in the Feeling Park, which is made up of various natural elements such as pebbles, VSS glass beads, spruce and pine cones, sand, slabs, peeled mulch, chestnuts and other materials, so that sensations when walking on the trail with bare feet should be as contrasted as possible. After a long walk, everyone has the opportunity to pamper their legs in the foot baths with seasonal additives (like buds, flowers, leaves, berries), and to relax or, on the contrary, to warm up with a drink. The feel of the park will soon be complemented by the "Taka kokos", which will be a high sensation trail – universal, suitable for people of all ages and physical abilities, natural, visually appealing, equipped with simple elements of activity. The trail will be used for walking, watching, and exploring.

Expansions of the Innovations Leading to Successful Implementations of Ideas

In modern business, one of the main components of success is a good, unconventional and fresh idea. Here are some examples of the best innovative ideas at the Deutscher Tourismstag branch conference in Hamburg.

- For example, in the land of Schleswig-Holstein, one of the popular regions of summer family vacation, they decided to systematically take up the eternal problem of their parents. On vacation they sometimes want to spend an evening together, without your favorite children. Tourists caught in such situations often at their own peril and risk leave their children after dinner alone and unattended in the hotel room. The option is not the most optimal and reliable.

- In order for parents to no longer face such a dilemma, the land tourist organizations started the “Nightlife für Kinder” project, that is, from the popular mix of English and German – “Night Life for Children”. The project is a kind of evening-night garden with programs for all stages of child development: from the smallest to almost teenagers.

- Another project, celebrated last year by the jury, is being carried out in the East German Magdeburg. He was called in pure German language – “Mein Besuch schläft besser”, that is, “My guests sleep better”. The answer to the question of how they manage to do this, to the banality is simple – they sleep in a hotel. In particular, not because inhospitable burghers live in Magdeburg, just for their friends and acquaintances the townspeople can book rooms at special and very profitable rates. This particular project involves 15 city hotels.

- The winner of the contest was also one tourist product from the series “You Can not Do It Naturally”. Residents of the city of Brunsbüttel on the North Sea decided to organize their own Olympics with new sports adapted to this region. Its zest – watts – is the name of the coastline of the North Sea, flooded during tides. Here at low tide hours you can make long excursions along the muddy bottom, which many tourists do.

- The program “Wattlimlepik Games” includes, for example: “Wattleleyball” (volleyball on watts), team race with the eel instead of the baton, throwing rubber swamps to a distance, “shooting” tea bags at a target, etc.

The introduction and dissemination of innovations in the tourism sector can increase competitiveness and minimize the impact of negative endogenous and exogenous factors. One of these areas is the development of the information component of the tourism industry. It is necessary to increase the quantity, as well as improve the quality of such services:

- Reservation of hotel rooms, tickets for transport via the Internet.
- Expansion of advertising services; in particular, the distribution of

electronic catalogs with video clips and a list of hotel services.

- The use of complex promotional events; for example, booking rooms with a flexible system of discounts in case of extended residence of tourists in hotels, solemn events (weddings, birthdays) in the lives of visitors.

Innovations await us everywhere, including in the touristic sphere. There are a lot of ideas and concepts, however, many of them simply can not fully reveal themselves. Now we will describe the main directions of innovations that will change the tourism beyond recognition in the next few years. The first innovation in tourism concerns transportation. In fact, car rentals are getting more and more popular; however, this activity may disappear. The cars with autopilot will come to replace those who will deliver customers along the necessary routes, with the exclusion of opportunities for deception or other unpleasant situations. Such an innovation will develop for excursion trips.

The second innovation will be virtual reality, which allows you to visit the resorts almost live. Emotions that a person experiences during such shows will be the main reason for buying a tour, and this fundamentally changes the tourism marketing.

The third innovation that can change the attitude to modern tourism and improve the level of customer comfort is the electronic keys from the rooms in the hotels. The bottom line is that you are sent an Android application key from the hotel room. With this application and a specialized key, you can easily get into the room and start the rest without any problems and long expectations.

The fourth innovation refers to the rapid travel abroad on burning tours. It is aimed at issuing an electronic passport, which is in your phone. On-line, you can get a visa, renew it or perform certain procedures. Of course, the implementation process itself will be delayed, but everything goes to full automation and simplification.

The latter invention relates to fiction, because it involves the use of chips during flights. Those who fly frequently are bored to undergo the tedious procedure of check-in for a flight, so everything can be simplified by using the chips. These innovations will create permanent changes in the journey. At the heart of this trend, the main factor of improvements is the customers' convenience.

Conclusions

The introduction of innovations in the touristic sphere requires the

diversification of innovative technologies in related industries. In this sense, it is possible to create the transportation networks with the transition to environmentally friendly alternative fuels. The hotel sector is also increasingly using resource-saving technologies.

An important role for the development of tourism is played by so-called organizational innovations in the management structure. These are associated with the development of entrepreneurship, the reorganization and absorption of competing firms, personnel policy (training, updating and replacement of personnel, upgrading the skills of tourism workers).

A very important condition is an increase in the number of payment system services that will prevent financial inconveniences for tourists and contribute to improving the quality of service in hotels, shops and other places where visitors stay.

The marketing research also remains an innovative environment in the touristic sphere. Inventions of new goods and services, research of new markets and emerging markets, promotion of current products to the global market, support of constant indicators of growth in demand for tourist trips – these and other operations are impossible without the introduction of innovations.

Therefore, thanks to the application of scientific knowledge and methods of implementing innovative transformations, it is now possible to create new tourism products, dramatically improve the quality of hotels, transportation, and services, develop new markets and improve the competitiveness of the tourism sector in the context of globalization.

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**TIMING IN THE
 IMPLEMENTATION OF
 UPGRADE WORKS ON HEATING
 NETWORKS IN UKRAINE FOR
 THE BALANCED USE OF
 LABOUR, MATERIAL AND
 FINANCIAL RESOURCES**

Implementation of the plan of energy efficiency operations, stimulation of energy consumption reduces creation of transparent and competitive environment to attract investments into the industry, as well as the growth in energy efficiency of state and municipal property objects is one of the chief tasks of the Cabinet of Ministers of Ukraine defined by the Program [1]. However, the current procedure of heating energy pricing by respective authorities is based on the „out-of-cost” principle, which significantly reduces the possibility of real increase in the efficiency of central heating system [2]. The operational practice of calculation of heating tariffs at the stage of its release into the network results in the lack of financial incentives for the reconstruction of heating system, thus determining low rates of its restoration. Ukrainians are forced to pay for the heating energy, 45% of which they do not

actually receive because of its loss during the transportation. In fact, nobody takes care of the quality (temperature) of the heat carrier received by consumers, as everything has been already paid.

Adaptation of economical and mathematical models and critical path method (CPM), Program Evaluation and Review Technique (PERT) and making decisions on stochastic GERT-networks (Graphical Evaluation and Review Technique), which are existing in the theory of network planning and management, will increase effectiveness of scheduling the implementation of works that can be substantial by their volumes, cost and time, the project management as for replacement and/or upgrade of generative points and networks for the transportation of steam, hot water and conditioned air. This foresees a large amount of interrelated works that must be executed in strict technological sequence, requiring proper timing and control in order to achieve a certain goal.

Scientific works by Lazanovskyi P. [3], Sybal Ya., Ivanytskyi I., Kadyuk Z. [4], Sokhan V. [5], Timinskyi O. [6] and other researchers are devoted to the application of a method of network planning and management in various types of economic activities.

Despite the considerable number of scientific works and growing attention to this problem, the task of modeling on the basis of the theory of graphs and analysis of networks in the system of technical improvement and technological upgrade of heat-power engineering objects, in order to increase the energy efficiency of energy consuming equipment, to reduce the rate of energy losses in supply networks, to minimize specific costs per one unit of output (generated energy unit) and to raise the efficiency of final energy consumption is significant on a practical level and requires amplification.

The purpose of the article is an adaptation of economical and mathematical models, existing in the theory of network planning and management for determination of time reserves, with the help of which both labour and material, as well as financial resources can be efficiently and rationally allocated within the set of interrelated works.

When applying network methods, the minimum duration of a project is determined by the sequence of works, which form the longest (a so-called critical) path through the network, and those works creating the critical path are called critical works, so any increase in their duration or delay in their execution cause an increase in the time of project implementation as a whole. Availability of time reserves will give the users some freedom in allocating particular resources.

In today's realities of rapid development of new information and

communication technologies, which form the informational society and, in particular, the informational economy, with modeling as their intellectual core [7], during the planning of projects with the use of computer technologies, together with the network models and methods, the most relevant way is the statement of a problem in the form of a “node-work” model. The difference of a “node-work” model from a “node-event” model is that the notion of an event is not introduced: various works within the network are displayed by nodes, while arcs only reflect the relation of top priority that is the time is spent in knots, but not in arcs. Construction of the network is not a complicated task due to the introduction of only two conditional works, both having a zero duration: the first of them means a “beginning”, preceding all other works, and the second of them means an “ending”, following the completion of all works. Using the mathematical model there is no need to use symbols with double sub-indices, as in the case of designating any work with an arc, since all the works are uniquely linked to one particular node, one index will be enough [8, p. 309-313].

Implementation of economical and mathematical models of time reserves, systematized in [9], can be carried out through the use of software products – comparative characteristic of their functionality has been completed in [10]. Calculations (Table 5.6) in accordance with the initial data from Table 5.5, regarding the replacement of heating network area, has been performed in MS Excel.

Taking into account the methodological principles of creation, calculation of parameters and optimization of network diagrams, disclosed, as an example, in [13, p. 172-202], the “node-work” network model for the given statement of problem can be represented as follows (Figure 5.2).

The total time reserve of works S, A, B, F, R, W, X, Y is equal to zero, indicating the creation of a critical path by these works precisely, and also a necessity to carefully monitor the timing of their execution. The work G, although it has a total time reserve (3 days), has no free reserves, because its delay will lead to untimely execution of the work P. The work O has a total time reserve of 14 days, but its free time reserve is only 11 days and any delay beyond 11 days will result in violation of terms for the earliest possible start of the work P. Only the work K has a non-zero independent reserve of time, while the rest of works can completely lose their time reserve due to untimely execution of previous works. Works Z, C, K and T are characterized by a non-zero secured time reserve. The following Figure 5.2 shows that delay of the work C can

Table 5.5

Initial data, taking into account technological and engineering features in the sequence of execution of interrelated works and duration norms for the construction of heating networks [11], [12]

Designation and specification of work	Immediately previous work	Duration of works, days⁴
S Preparatory operations (preparation for engineering works)	–	10
Z Preparation of the network area for disconnection (informing the consumers)	–	30
A Planning and designing works	S	2
B Arrangement of a list of materials	A	1
C Purchase of pipes	B	30
F Purchase of flanges, shut-off valves and other materials and stuff for installation works	B	45
G Manufacture of sections	C	5
I Disconnection of the network area	Z, B	1
K Digging of the canal or erection of the supports (depending on the method of laying)	B	2
O Dismantle of the old pipeline	I, K	6
P Installation of a new pipeline	O, G	6
Q Welding works	P	2
R Installation of flanges and other details	F, I, K	1
T Fitting of the pipeline and other details	R, Q	1
U Leak testing of the pipeline	T	1
W Insulation	R, Q	4
X Land management works	T, W	1
Y Cleaning of the area	U, X	1

occur due to the untimely execution of works G and P, and work K may be delayed as a result of delay of the work O. Works O, G and P will be deprived of secured time reserve due to possible delays in previous works.

The proposed approach can be used by state authorities, business entities and investment companies in the process of development of measures to increase the energy efficiency rate at the macro-, meso- and microeconomic levels, which will involve intensification of innovation activities, more complete implementation of social and economic potential of business entities and local communities.

⁴ In order to minimize the time needed for the disconnection of heat supply system for consumers, the overnight works are expected

Table 5.6

Variation in timing for execution of works on upgrading and improvement of heating networks and indicators of time reserves, days

Work (i)	Duration	The earliest possible term		The most recent deadline	
		beginning (ES _i)	ending (EF _i)	beginning (LS _i)	ending (LF _i)
Beginning of the project	0	0	0	0	0
S	10	0	10	0	10
Z	30	0	30	14	44
A	2	10	12	10	12
B	1	12	13	12	13
C	30	13	43	16	46
F	45	13	58	13	58
G	5	43	48	46	51
I	1	30	31	44	45
K	2	13	15	43	45
O	6	31	37	45	57
P	6	48	54	51	57
Q	2	54	56	57	59
R	1	58	59	58	59
T	1	59	60	62	63
U	1	60	61	63	64
W	4	59	63	59	63
X	1	63	64	63	64
Y	1	64	65	64	65
Ending of the project	0	65	65	65	65

Table 5.6 (continued)

Work (i)	Time reserves ⁵			
	total (TF _i)	free (FF _i)	independent (IF _i)	secured (SF _i)
Beginning of the project	–	–	–	–
S	0	0	0	0
Z	14	0	0	14
A	0	0	0	0
B	0	0	0	0

⁵ The calculations are based on the models given in [9] with the corresponding symbols.

Work (i)	Time reserves ⁵			
	total (TF _i)	free (FF _i)	independent (IF _i)	secured (SF _i)
C	3	0	0	3
F	0	0	0	0
G	3	0	0	0
I	14	0	0	0
K	30	1	16	30
O	14	11	0	0
P	3	0	0	0
Q	3	3	0	0
R	0	0	0	0
T	3	0	0	3
U	3	3	0	0
W	0	0	0	0
X	0	0	0	0
Y	0	0	0	0
Ending of the project	–	–	–	–

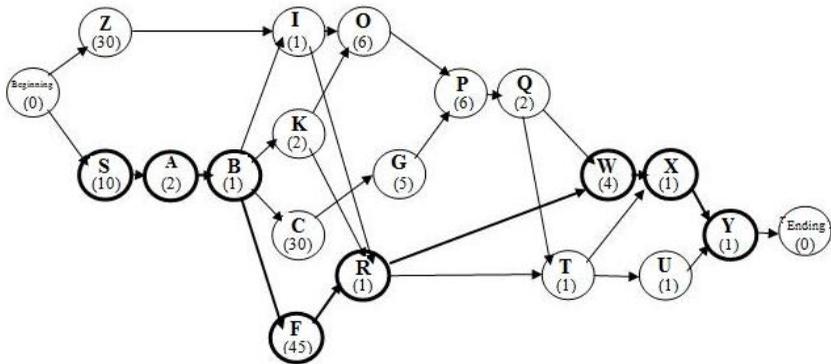


Figure 5.2 Network model of the project⁶

Management of the process of upgrading boiler stations and heating networks through the application of network methods, in particular, determination of admissible delays as a time reserve for further coordination of project implementation, will help managers to establish the sequence and timing as for the use of limited resources throughout

⁶ In this case the final work with the execution of 0 days could not be entered, since the last work regarding the Cleaning of the area (F) and the display of conditional work “Ending” are both carried out specifically by the procedure of model constructing, in order to obtain solely initial and final nodes.

the entire period of project implementation, to conduct dynamic regulation of timing for the beginning of each work, to optimize rational allocation of project funds and materials due to the criterion of reducing duration of the whole project, to perform an analysis of trade-off relationships between the costs and timing of various works, with regard to the available time reserve.

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Chapter 6

MODERNIZATION OF EDUCATIONAL MANAGEMENT AND INTRODUCTION OF THE NEWEST METHODS OF EDUCATION TO ENSURE THE OPTIMAL DEVELOPMENT OF THE ECONOMIC ENTITIES

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MODERN REALITIES OF UKRAINIAN HIGHER EDUCATION AND EDUCATIONAL MIGRATION

The need for reforming Ukrainian education system has been on the front burner since 1991, and the events of 2013-2014 created additional prerequisites for that: society matured, the state authorities have changed, and a new version of the Law on Higher Education was adopted. It is important to investigate the development trends of education quality sustaining system, certain issues of academic and financial autonomy of Ukrainian HEIs as means for improving their competitiveness as well as that of national educational system in general. Since Ukraine has adopted pro-EU orientation, there is also a need for studying and applying European experience and best practices in order to access the European educational and scientific space. It is also crucial to analyze the problem of educational emigration from Ukraine. Determining the benefits of studying abroad and the disadvantages of the Ukrainian educational system should serve understanding the changes that could stimulate development of Ukrainian HEIs and the educational system.

In the context of Euro integration prospects of the Ukrainian HE became the subject of analysis by many scientists. Features of the Ukrainian HE system are systematized in [16] while its current state and

the level of financing are analyzed by Vlasyuk T. [22].

Analysis of the new Higher Education Law (2014), description of defeats, successes, and prospects for the higher education development in Ukraine are highlighted in [12]. The reform of the higher education system in Ukraine is analyzed by Nikolaev E. and Dluhopolskij O. [13]. Shandruk S. and Shatrova Zh. [17] investigate challenges detaining the education reforms in Ukraine. They consider alignment of the Higher Education Law of Ukraine with the Bologna Process as a way of integration into the European HE Area.

Averianova I. and Chochlova T. [1] argue that although the first stage of Ukrainian HE integration into the EU educational system is complete, it brought mostly negative results and has not provided expected improvement of education quality. They state that HEIs should modernize content and methods of education. Hrynkevych O. and Lutchny N. [9] investigate the problems of internationalization in Ukrainian HE in the context of innovative development.

Bąk M. [2] suggests that in Eastern Europe declining status and prestige of the teaching profession and still existing huge hierarchic and administrative educational structures hold back progress in education. Still he recommends using Polish and Czech experience for modernizing Ukrainian HE and states that high quality education is crucial from the perspective of demography, unemployment and migration problems in the country. Furiv U. [6] investigates how the Ukrainian HEIs have been impacted by and coping with the political and economic crisis the country has been undergoing since 2014.

Majority of foreign scientists believe that corruption in the Ukrainian HE is the biggest obstacle for its development. Osipian Ar. [14] affirms that corruption in Ukrainian HE undermines quality and credentials of academic degrees received and constrains country's sustainable economic growth, but modernization of modes of teaching, and curriculum, and development of university autonomy may help to restrain corruption. In his later work [15] he states that it is difficult for Ukrainian HE to adapt to recent free market challenges because of corruption and lack of university autonomy, even though internal pressures, financial integrity and marketization of educational services, changing organizational and managerial structures of HEIs are forcing the system to change. Vasylyeva A. and Merkle Or. [21] show the grave extent of corruption in Ukrainian HEI and identifies three most prevalent corruption schemes: at the stage of entering a university, in grade attainment throughout all years of education, and administrative

corruption. For combating corruption they propose: further research; increasing transparency in the HEIs; information campaigns and participation of the civil society; increasing oversight of HEIs; creating a better reward and punishment mechanisms for HEI employees; standardization of written exams; encouraging academic freedom.

Thus our purpose is investigating the key development trends and problems in Ukrainian HE for finding ways of increasing its competitiveness in the Euro integration framework, and in particular for reducing educational migration.

Nowadays, Ukraine is having tough times; reforms are planned within almost all public areas. Development of the Ukrainian economy depends directly on the quality of education, since it provides potential opportunities for increasing labor productivity and, as the consequence, growth in the total national revenues. State authorities believe that education is the major area along with defense and healthcare that needs immediate changes. The government is trying to develop new quality standards for HE.

The results of the Democratic Initiatives Foundation's poll show that most Ukrainians (51%) rate the national HE's quality as "average", 16% – as "rather low" and 3.8% – "very low" [5].

The problems of HE date back to the very beginning of Ukrainian independence and are complex and systematic, as the result of the lack of a clear strategy in this area. The main of them encounter: 1) corruption in HEIs (37% of respondents); 2) non-recognition of diplomas of Ukrainian HEIs in the world (34%); 3) inconsistency of teaching methods with the requirements of the Ukrainian labor market (32%); 4) poor material and technical base of HEIs (32%) [5]. Other problems are: low competitiveness of Ukrainian universities; mass character of HE; outdated teaching methods and transfer of backward knowledge to students [8].

However, one of the main current problems is the lack of a global vision for development of the national HE in general, as well as visions of individual HEIs in particular, which makes it impossible to identify the demand for professional workers, as well as the fields of study that most likely can contribute to the development of society and the nation in general.

After the Revolution of Dignity, there was a need for reformation of educational sector in Ukraine. The public initiated some changes, HEIs actively developed their projects, and the Ministry of Education and Science developed a new edition of legislation in this area. The Higher

Education Law became the first large-scale reformist bill adopted by the Ukrainian parliament, Verkhovna Rada of Ukraine, in 2014. The process of HE transformation in Ukraine started during difficult times – when the economic crisis and the war affected all spheres of social life.

The adoption of the Law was just the beginning of the reforms. Autonomy of HEIs became one of the main issues of the adopted bill, as achieving success under the conditions of significant power centralization is impossible. The content of trainings was previously not defined by the universities themselves, but by the Ministry of Education and Science of Ukraine. The ability to independently determine curriculum will give universities the impetus for improvement [13]. In the context of increasing autonomy of HEIs, measures were taken to reduce the number of disciplines studied by a student per semester to 8. This is an attempt to get rid of the echo of the Soviet system, where students were forced to attend a large number of courses, while in the Western Europe and the United States only 4-5 basic disciplines are studied. As the result of the excessive number of courses students learn similar material under different titles of subjects, which leads to extra work by the students with little or no results. The consequences include the loss of interest in learning and the search for “easier ways” of studying – cheating on exams, plagiarizing essays and diploma works etc. [12].

Universities’ autonomy should also encounter financial issues. In 2014, only one significant change has been adopted within the financial sector – the permit for universities to hold accounts in state-owned banks that should reduce technical barriers for payment transfers. The issue of financing education is one of the most painful, as it concerns many people including both teachers and students. We distinguish the following key problems in this direction: 1) excessive accumulation of power by the Ministry of Education and Science of Ukraine; 2) corruption and bribery at all levels of the system; 3) imperfect system of financing via the state ordering system.

A rather big, and constantly increasing, share of the state budget is being spent on HE annually (Table 6.1), but funds are sprayed through a large number of universities, teachers and students, even though the general dynamics of the Ukrainian HEIs and students’ quantity in 2010-2018 is negative (Table 6.2). The budget is often used not for attaining socially important results, but instead for funding some outdated processes with no formal performance indicators for evaluating the effectiveness of public spending, such as increase in labor productivity or employers’ level of satisfaction with the quality of workforce.

Table 6.1

**Expenditures of the consolidated budget on education in 2000-2017,
mln UAH**

Years	Expenditures of the consolidated budget			Years	Expenditures of the consolidated budget		
	Total	On education	On higher education		Total	On education	On higher education
2000	48148,6	7085,5	2285,5	2015*	679871,4	114193,5	30981,8
2005	141989,5	26801,8	7934,1	2016*	835832,1	129437,7	35233,6
2010	377842,8	79826,0	24998,4	2017*	1056759,9	177755,7	38681,1

* Excluding budgets of the Autonomous Republic of Crimea and Sevastopol

Source: developed by the authors, based on [19]

Table 6.2

Quantity of Ukrainian HEIs and students in 2010-2018

Total quantity	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18
HEIs	813	805	785	767	664	659	657	661
including by accreditation levels:								
I - II levels	483	479	469	458	387	371	370	372
III - IV levels	330	326	316	309	277	288	287	289
Students	2448111	2246363	2106174	1992882	1689226	1605270	1586754	1538565

Source: developed by the authors, based on [19]

The total amount of Ukrainian education state budget financing is around 2% of GDP, which is over UAH 30 billion per year, largely assisted by the local budgets. Strengthening the institutions' autonomy increases chances for economic development of HEIs and provides possibilities for self-reliance and self-financing [22]. An innovative project of financing the HE system in Ukraine was developed in 2015, and it included the following steps: 1) financing of the activities of HEIs out of the state budget at the level of 80% of the previous year expenses; 2) possibility of obtaining more significant funding by a HEI on condition of meeting certain requirements; 3) reduction of financing of HEIs by 20% compared to a previous year in case of poor results, while successful institutions receive additional funding; 4) creating special funds for capital and social expenditures of HEIs.

Another reality faced by the Ukrainian education system is the "brain drain" process of qualified staff in conditions of its low status and salaries. A new mechanism for evaluating teachers has been created and the Ministry of Education and Science of Ukraine is trying to overthrow

the old patterns of behavior, in particular corruption. The main emphasis in evaluation is based on international criteria: articles in journals indexed in Scopus or Web of Science, and knowledge of English at least at B2 level.

As educational systems' types in different countries vary, the Ukrainian government attempts to reform the national system according to the Western model can dampen all efforts on improving it. So to say the idea of "not inventing a bicycle" may not necessarily lead to a success. For instance, in Great Britain only such old universities as Oxford and Cambridge have been functioning for hundreds of years. They had determined the direction of education development trends in the UK for a long time, and graduation from these institutions guaranteed a good career in the future. However, within the changing environment many HEIs were founded with a focus on the needs of the labor market. So there was time when graduates from Oxford and Cambridge universities had problems with employment because they did not meet the requirements of the market [9]. Currently in England, HEIs have wider autonomy; they can independently determine their curricula and programs. These programs may include variety of subjects combinations based on the needs of students, society and the labor market.

In Europe, besides universities, there are also a large number of different HEIs types. This contributes to the fact that there is some incomprehensibility of the diplomas value and rating when compared to each other. In France, such a system of comparison does exist, and despite the existence of a large number of HEIs, all of them have opportunity to independently determine educational programs. Germany and Switzerland, having federal structure of the states, established decentralized education systems. HEIs in these countries are legally independent and self-governed; they have rights to define the structure of management, teaching methods, content of studying and areas of research. Italy recognizes the International and European Baccalaureate, and has signed agreements with Spain, France and Belgium on the automatic recognition of certificates for admission to universities. It also signed bilateral agreements with universities of France, Spain and Germany, which provide the opportunity to recognize diplomas, which in turn increases the opportunity for students' employment in these countries [3].

Relative quality of the Ukrainian HE can be analyzed on the basis of world rankings. According to the Global Competitiveness Index of the

World Economic Forum in 2017 Ukraine was ranked 35th among 137 analyzed countries by the “Higher education and training” sub index (Table 6.3). As it can be seen enrollment into secondary education improved while for tertiary education it shows a negative trend. The quality of education deteriorated while the situation in professional training has improved.

Table 6.3

Ranks of Ukraine by the sub index “Higher education and training” of the Global Competitiveness Index in 2014-2017

	Years			
	2014	2015	2016	2017
Total amount of countries	144	140	138	137
Total rank of Ukraine	40	34	33	35
incl. index components:				
The share of education	14	14	11	16
- secondary education enrollment rate	41	39	53	51
- tertiary education enrollment rate	13	14	11	16
Quality of education	65	46	46	49
- quality of the education system	72	54	56	56
- quality of math and science education	30	38	27	27
- quality of management schools	88	87	93	88
- Internet access at schools	67	44	35	44
Professional training at a working place	88	74	85	79
- local availability of specialized training services	84	78	77	68
- extent of staff training	92	74	94	88

Source: developed by the authors, based on [23]

In 2018 by the new methodology of WEF’s GCI 4.0 [24] Ukraine was ranked 46th among 140 countries by the “Skills” sub index. The ranks by the sub index components were: 1) mean years of schooling – 51, 2) extent of staff training – 74, 3) quality of vocational training – 63, 4) skillset of graduates – 62, 5) digital skills among population – 55, 6) ease of finding skilled employees – 54, 7) school life expectancy – 54, 8) critical thinking in teaching – 41.

According to the Global Human Capital Index of the WEF [25], in 2017 Ukraine was ranked 24th among 130 countries, on a par with the neighboring countries (Poland, Czech Republic and Lithuania); Ukraine also is at the top of the south states-members of EU (Portugal, Spain, Italy and France). Some sub indexes of the GHCI, connected with HE, are: tertiary education enrolment rate – 82,3 (11th rank), skill diversity of graduates – 90,3 (57th), quality of education system – 50,7 (51st),

availability of skilled employees – 80,8 (35th).

According to the Human Development Index by the United Nations Development Programme in 2018 Ukraine is rated 88 (“high human development”) out of 189 countries and improved its position comparing with 90th place in 2016 [20]. The HDI sub index “education index” has been above average and has been constantly improving since 1990 from 0,648 up to 0,794 in 2014-2017.

As a result of above discussed we distinguish such main problems in Ukrainian HE and indicate possible ways of their solution (Table 6.4).

Table 6.4

Key problems of the Ukrainian HE and possible solutions

Problems	Solutions
<ul style="list-style-type: none"> - Relatively low competitiveness of the national education system. - Corruption. - Excessive hierarchy and bureaucracy. - Lack of universities real autonomy. - Low status and salaries of HEIs staff. - Outdated teaching and research methods not corresponding with the market and students’ needs. - Education and teaching dominate science and research. - The need to comply with complicated formal (and not necessarily logical) requirements of the Ministry of Education and Science for the educational process. 	<ul style="list-style-type: none"> - Political will for radical changes, especially overcoming corruption. - Full autonomy of HEIs. - Modernization of curriculum, teaching and research methods. - Adopting a visionary multidisciplinary / interdisciplinary and corporate/cross-industrial approach to education, promoting an education-research-industry synergy. - Improving teachers’ external motivation and status. - Improving conditions for students and teachers to conduct research. - Introduction of a set of measures to restore international reputation of Ukrainian HE. - Increasing participation of Ukrainian HEIs and individuals in European and world educational programs and events.

Source: developed by the authors

The mentioned problems along with the general political and socio-economical crisis in Ukraine predetermine educational migration from the country while growth of demand for high-quality educational services, their vast availability abroad, and harmonization of educational standards and reduction of transportation and communication costs enable and stimulate [7].

Modern waves of migration from Ukraine are young, since the decision on migrating abroad is often taken after secondary school graduation, when a HEI is being selected for further studies.

In total, over 70 thousand of Ukrainians study abroad, including around 50 thousand – in European HEIs. The most desirable countries for Ukrainian youth are: Great Britain (43%); the United States (38%); Germany (33%); Poland (26%); Canada (25%); France (14%); Czech Republic (10%); Russia (5%); Spain (5%); Israel (4%); Portugal (2%); Greece (2%); Hungary (2%) [4]. Popularity of Great Britain and the USA can be explained by the fact that their educational systems are most competitive and up to date, they also create best job opportunities for the graduates and contribute most to the learning of English and inspire considerable interest to their cultures. Poland is also popular. In 2015, according to the Statistics Department of Poland, there were 20.5 thousand Ukrainians in Polish HEIs. It should be noted that the data includes only students who participated in the programs implying international certificates and diplomas, not including those participating in internships and semester training programs.

The following key reasons for educational migration from Ukraine can be highlighted: 1) high quality of scientific and technical provision in foreign HEIs, 2) practical training programs; 3) possibility of internships and employment in foreign companies; 4) possibility to improve foreign languages skills; 5) opportunity to travel more with a student visa; 6) generally higher level of education with better work prospective.

Main motives for educational migration can be divided into three categories: 1) personal growth related; 2) future career factors; 3) academic motives [11]. Personal growth motives include learning new languages and acquiring new skills, getting acquainted with a different country, culture, and new people. Career motives are related to prospects through life related to qualification development, communication success and appropriate remuneration. Academic motives include access to institutions with high level of education, research, and improving personal performance in particular fields.

Many developing countries (e.g. Philippines and India) facilitate migration of their citizens abroad for studying. This can be explained by the fact that they cannot independently provide adequate level of education and are interested in improving the future economic, social and cultural development of the population this way. Even in developed countries, migration is not considered to be the main factor of the economy or human capital deterioration. Young people are looking for ways of personal development, finding new friends, cultural learning, improving the knowledge of foreign languages – and in many countries

of the EU they can find educational opportunities that are free and high-quality.

While taking the decision about migrating abroad, people assess relative costs and benefits associated with such step. However, educational migration is also considered as a type of self-investment. Therefore, we can distinguish the following cases/scenarios for young people deciding to study abroad: 1) limited possibility of studying at home, but high returns from obtained education. After graduation students return home; 2) unlimited opportunities for studying at home, but low returns from obtained education. After graduation students do not return home.

According to the policy of the European Union students can continue working in the foreign countries after completing their studies. In Italy, Spain and Hungary, young people can be employed after they were educated there, and they should only find an employer and get work permission. France and Austria allow their university graduates to stay in the country and work for half a year after graduation. Poland and Germany provide such an opportunity during a year and a half respectively, but the person is obliged to work according to the obtained specialty, and the employer must prove that a vacant post for a citizen of this country cannot be provided. In spring 2016, the European Parliament adopted the directive that obliges all EU member states to allow people who have received education there to stay on their territory for at least 9 months in order to find a job.

A number of countries including Austria, Czech Republic, France, Germany, Greece, Italy, Norway and Slovakia provide free education for Ukrainians. Often the certificate of knowledge of the official language of the chosen country is obligatory.

Another resource that facilitates studying of Ukrainian students abroad is the Erasmus+ program, which replaced its previous version (Erasmus Mundus) in 2014 [9]. According to the Delegation of the European Union to Ukraine data, in 2004-2014 as much as 1800 Ukrainian students and researchers took part in the program, and since 2014 – more than 1000 persons already. Ukrainian participants were expected to pay only the visa costs, while the costs for travel, studying and accommodation were covered by the European funds. It is expected that the program will be implemented during 2014-2020 and will cover the following main areas: 1) cooperation for the sake of innovation and development; 2) academic mobility; 3) policy support in the areas of education, training and amateur sport.

Unfortunately only a small number of Ukrainian students took part in the Erasmus Mundus program comparing for example with the neighboring Poland (42 thousand students since 1998). However, due to better access to information and opening of borders between countries, participation of Ukrainian students in Erasmus+ is increasing, although opportunities are still not used in full [18].

In 2014-2020, more than 2 Mio students from around the world, including 115,000 from non-EU countries, are expected to benefit from Erasmus+. The budget of the program is 14 billion Euro. With its increasing popularity, it is expected that the number of Ukrainian participants will constantly increase and cooperation between Ukrainian and European Union HEIs will strengthen [4].

Although educational migration from Ukraine is less in volume than the labor one, it plays an important and challenging role in socio-economic development of host and sending countries. Educational migration is a significant factor of the global redistribution of intellectual and labor resources in favor of developed host countries, as it provides significant investments in the national economy of recipient countries, including education system, consumption of goods and services. At the same time, in sending countries, including Ukraine, it causes aging of population and deterioration of labor resource potential, “brain drain”, thereby weakening economic security of a state. Because of educational migration and general decrease in the number of secondary school leavers, Ukrainian HE is already faced with a significant imbalance between demand and supply at the market of higher education.

Conclusions. Education is fundamental to development and growth of every country. Low competitiveness of Ukrainian education system due to corruption, excessive hierarchy and bureaucracy, lack of universities real autonomy, outdated teaching and research methods, low motivation of HEIs’ staff etc. causes intensive educational migration from the country and requires cardinal and consistent reforms. While experience and advice of foreign partners are welcomed, the reform of the Ukrainian HE is entirely within the sphere of internal state responsibility.

State policy in the field of HE development should aim at radical transformation in order to achieve the world quality level of services. The Ministry of Education and Science of Ukraine should become the subject of ensuring the quality of education and retain the role of the state funding distribution controller. It is necessary to provide full

autonomy of HEIs, which will enable them to develop faster and more qualitatively. Ukrainian HEIs should actively participate in the world educational and research processes learning from the best experience. Consequently, the main goal of the education – improving the intellectual and labor potential of the nation – will be implemented. However, for all these changes, political will and determination are needed.

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**EDUCATIONAL
INNOVATIONS IN
THE MODERN
WORLD:
PHILOSOPHICAL
AND
METHODOLOGICAL
ASPECTS**

Researchers describe the present stage of social development as a situation of cultural and civilizational transition. Its realities are marked by profound transformations in all spheres of social life, the destruction of stable and persistent structures, the lack of major directions of further development, the chaotization of processes and the self-organization of new local orders, etc. It is generally about mixtion the emphasis from the norms and values of the industrial society to the informational and communicative, the main resource of which is knowledge and educational capital. Modern society lives and develops due to innovations which have covered all spheres of its life, testifying their ability to reach a qualitatively new level of functioning and development. Innovative processes combine science, technology, economics, entrepreneurship, management and other spheres of a public life. They consist of using innovations and embracing the stages from conception to commercialization. It is clear that innovations are permanent and necessary concomitant of social progress of any historical epoch. However, in our time, the processes of innovation changes are extremely intensive. From the discrete ones, when the relatively short stages of reformation were replaced by long periods of simple functioning, they acquired signs of continuous and began to play an increasingly crucial role in the development of the society and man.

It should be noted that in scientific researches the term “innovation” first appeared in the nineteenth century. Cultural scientists used this concept to mark the process of introducing a part of the elements of one culture into another. The formation of theories of innovative development in its present form dates back to the beginning of the twentieth century, when the principles of technical innovations in various spheres of public life began to be studied thoroughly. The impact for the establishment of these theories was the views of the Austrian economist I. Schumpeter, who was the first to introduce the

term “innovation” into the scientific revolution and classified innovations on the criterion of novelty. In his work “Economic Development Theory”, he examines the issues of new combinations of changes in development (i.e. innovation) as “a change with the purpose to introduce and use of new forms of consumers of goods, new production vehicles, markets and organizational forms in industry” [16, p. 23] In its further development, the term “innovation” semantically means the introduction of a certain new substance and is a multi-valued concept. In particular, the dictionary of foreign words gives this term as: 1) novation, innovation; 2) a set of measures aimed at introducing into the economy new techniques, technologies, inventions, etc., modernization; 3) a new phenomenon in language (linguistic innovation), etc. [3, p. 231].

The problems of introducing of innovations into the practice of social life are the subject of scientific interest and research. In particular, D. Bell, Z. Bzhezynskiy, J. Wakk, V. Zombart, I. Masuda, V. Mitcherlikh, E. Toffler, I. Nesbit, I. Schumpeter, Kh. Shpinner and others. Common in the research is the understanding of the social nature of innovation processes, such as suggesting high-quality solutions to actual problems and assume a new component of a specific system despite the different conceptual framework of their considerations, the outlined problems and methodological approaches. Among the modern native philosophers and educators who made a significant contribution to the development of theoretical and methodological foundations of the innovations introduction into various spheres of social life and the creation of a new paradigm of education in the context of an innovative society, we should name V. Andrushchenko, K. Bakhanov, V. Bekh, V. Vashkevych, L. Horbunova, S. Klepka, S. Kutsepal, V. Liutaia, M. Mykhalchenko, I. Predborska, M. Romanenko, O. Sheiko and others.

Educational innovations are a part of the overall innovation processes in society. Education as a product and partner of the cultural and civilization advancement of humanity is intended to offer adequate answers to the demands of society, to determine the priority principles of personality development, to form certain socio-cultural values that define the “spirit of the era”. It manifests itself in new ways of perception of the world and worldview, in new technologies and forms of life that appear as a certain contradiction between new realities and established forms, ways of attitude to the world.

The purpose of the scientific research is to emphasize the philosophical and methodological aspects of the essence of innovative

development of education, which not only can meet the requirements of time, but also go ahead of its requirements, creating a “society of knowledge” and designing new social changes.

Education is a strategic factor in the survival of mankind and its further sustainable and safe development. It is as one of the most important factors of socialization of a person does not exist beyond reality, on the contrary, it acquires its characteristics and outlines in the context of requests of a certain historical epoch. In modern society, education is understood both as a social institution and as a system of personal self-formation. According to V. Kusherets, the intelligence of society determines its ability to produce and make practical use of new knowledge, devices and materials, as well as new technologies, that is, new forms and methods of organization of work. All this is closely connected with the level of education [12, p. 37]. Therefore, innovations in this system are extremely important reasons, factors that launch changes in society.

Changes in education, designed for the future, are adequate not only to the changes that are already taking place in society, but also aiming the society for new changes, projecting outlines of its future development. Not a society “tightens” education to its level of development, but education projects new horizons of a social progress. The development and implementation of the practice of Ukrainian society and the education sphere of the movement proactively will deprive the national society of the traits of “inferiority”, debility, uncertainty in its identity, reorient society not to “catch up with someone”, “look up to something”, but will determine the search for one’s own uniqueness and identity, and thus will provide the potential for the further development of the Ukrainian community. Today education and science become the priority factors for the development of socio-economic, spiritual and political life of the country. The innovative nature of education is determined by the fact what the given sphere can offer to the society, for humanity as a whole, how it reveals the ability to work proactively, outlining new horizons for further development.

It is necessary to pay attention to the peculiarities of the implementation of innovations in education. By their nature, they are social because they are closely related and predetermined by human social practices. Unlike economic and technological innovations that are becoming extremely popular in society, social are more inert. They “maturate” in the human mind for a long time. In addition, when born in

an individual or in a social group, these innovations have to be recognized in society and only after a positively adequate assessment are introduced into the practice of social life. Accordingly, very progressive and innovative ideas do not always find the opportunity to be realized in society, that is, there is no “on time”. However, finding a “response” in the practice of social life, social innovation is more global and significant. They, in fact, create the basis for technological, economic innovation, etc. Despite the innovation of the idea or discovery, their value and significance are determined by the degree of practical implementation. Thus, a number of innovative ideas and thoughts can be expressed in the teaching activity, but its innovative nature will depend on the ability to offer adequate responses to the challenges of society, to “keep pace with” its development, and to generate resources and opportunities for its innovative advancement. Requests for public life predetermine an innovative palette of educational changes. Accordingly, the innovative nature of education is determined by the fact what new a sphere can offer to a social life, how it shows the ability to work for “advance”, outlining the new horizons of its further development. As N. Kochubey notes, “innovation is an inclusive choice of new information as one of the options for its meaning. And since innovations take place in society, new or changed socio-cultural and cultural sensations that are caused by innovations are selected or changed by social models”[13, p. 148].

In general, an innovative society needs innovation education. Such education can offer new horizons of social progress through the creation and development of innovative qualities in subjects of educational interaction. Today, unfortunately, it is not enough for a person to know something and to be trained of something. A man becomes a person who can be successful in the realities of a changing world. She must have characteristic of initiative, curiosity, ability to make a choice from a variety of options, determine her responsibility for her own miscalculations and defeats, etc. Such a person must have the ability to adapt quickly and flexibly to changing realities, to demonstrate the ability not only to perceive a new one, to create it, but also to refuse it if necessary. She considers the world as a sphere of cognitive and practical uncertainty, which needs not only to be overcome, but must work and be successful. Uncertainty and changeability produce situations of variability of possibilities in building trajectory of one’s own life by a human, activity and success, and active cognition of the world. In this activity, she does not stop at any particular position, she does not give

anything of high-priority importance, and escapes something or even denies. Her attention and interest are aimed at considering as many options as possible for solving one or another problem. Among the priority areas of such consideration is the search for and implementation of proportional cultural forms, the preservation of balance in a dynamic and changing world that can be realized if a person creates an integral picture of herself and the world in which she lives.

The ability of a person to create an innovative environment determines her to nourish innovative features. Depending on the situation, she detects and produces a plurality of I-images, each of which corresponds to a certain aspect of its activity and internal individuality. According to V. Kremen, an innovative personality is not only a product of megalopolises and “mass culture”, but rather imagined as a project in the conditions of globalization and informational support. The researcher emphasizes that in the modern world the choice, development and realization of the project takes place at the first place, including the choice of a life strategy, formation, positioning and promotion of a certain reputation. He speaks of the need to form a person’s own inquired for demand for themselves in the labour market, as well as in social, cultural, political relations, and personal life [11, p. 19]. This position demonstrates both the complexity of the human person and the complexity of its manifestation. In general, such a person is innovative in its socio-cultural nature. She is in a state of searching for her own self, develops her multifaceted abilities and forms a multifaceted view of the world and herself in this world, realizes the ability to rethink universally accepted theories, truths, rules and norms of behavior in science, education, production, politics, culture, etc.

In the course of these considerations, Y. Kozeletskyi characterizes an innovative person as an independent subject open to new problems, “able to use her knowledge in a changing civilization, who can alternatively and flowingly think about the environment that carries risky and active actions” [10, p. 60]. The researcher distinguishes five characteristic features of the formation of an innovative person in the course of educational activities. First, it is the presence of a certain stable tendency of a person to seek an independent solution to the problems that constantly arise, that is, the research position. Secondly, she has a specific method of knowledge learning. It consists in the fact that the essential part of the information the individual acquires naturally, that is, she relates to personal experience, in direct contact with the reality that she learns in the process of reflection. Imagination,

fantasy, intuition and metaphor play a leading role in solving problems. Thirdly, the individual knowledge structure changes. The structuring of knowledge, their transcoding into larger units (schemes, meta-schemes) is natural, since solving problems and problems requires the use of information from various fields of science, that is, requires a synthetic view of the world. Fourthly, the person becomes the subject of processes and changes in a public life. Subjectivity is an orientation that assumes that a person is a source, but not a receiver of information. Fifthly, the awakening of motivation and the ability to self-education is of fundamental importance. In order to achieve the goal, we must develop the capacity for alternative, possible and global thinking, making the general art of choice by teaching multivariate selection programs [10, p. 55-58].

An innovative individual is an individual of creation. Freely and realized overcoming the scopes of the essence, she always makes a choice, acquires new characteristics. Opening the new planes of the life constantly, person transgresses outside of familiar and ascertained. Actually in the area of lack of knowledge and unknown for her an individual accumulates obtained knowledges, possibilities that are personality resources in order to find the decision of problem. Thus she bases upon meaningful in this situation knowledges and abilities. In creating a new product person depends on her own needs and experience. Actually the Polish researcher I. Kozielietski draws the attention to this fact in his researches. He offers a model of innovative man teaching, the fundamental idea of which is the recognition that in the perception a person depends upon his own experience, knowledge and understanding. On already acquired skills and experience she depends during the formulation of hypotheses or the delineation of a plan, a strategy of study. So, the innovation does not seem to be a kind of theoretical construction estranged from the realities of life and personal human experience, it provides their the most complete implementation [17]. Educational activity is considered as a process of self-knowledge, self-development those who study and social environment in which they are located. Such a person is a human-researcher, because she shows the ability to make a choice from many variants. Her success in life depends on the ability not only to study and acquire new competencies, but also be able to refuse from acquired knowledge, experience and habits. Habit to be without habits seems to be her main skill (Z. Bauman). The level of innovation of the studying depends on the ability to reveal the inner power and capabilities of man,

his individual nature. Thus, innovative learning is learning that promotes the development and opening of innovative traits of a person, so that she will have the opportunity to generate innovative environment in future. Innovative studying is designed to promote the production and diffusion of innovations in society. Depending on this case, Peter Drucker has identified a new innovative character of education as a “systematically organized step into the unknown”. “Unlike the science of yesterday, – the researcher notes, – which is built on the basis of the organization of knowledge, this science is based on organizing of our ignorance” [7, p. 187].

A new vision of the teaching nature requires a qualitative change in didactic methods and techniques of transmission of knowledge, producing original educational ideas and non-standard approaches in management, and so on. However, acquirement by education an innovative character by changing of the teaching content, direction of the educational process for learning throughout life, the transition from qualification to competence, so it is not necessary to carry through the denial, the refusal of the forms, methods and technologies already developed in the field of education, that is traditional, well-established for it. However, in the pursuit to innovation outlines of education, there is in part a disregard of the traditions that have developed in this field and have passed the test of time. Thus, some researchers interpret the tradition as a kind of antiquity, which does not allow offering adequate responses to the challenges of modernity. As the researchers consider, traditions are only an achievement of the past, to be gotten rid of to make modern education a truly innovative. This approach confirms the commonality and linearity of understanding of the modernization processes in this sphere, doesn't allow us to consider education as a complex, diverse and multi-functional social structure. At the same time, the synthesis of innovative and traditional potential in the educational practice contributes to the consideration of complexity of man and the world and outlines the prospects for further development.

It should be noted that there are various approaches regarding the explanation of the definition of tradition in the research literature. In a narrow sense, this concept is represented as a spiritual phenomenon and is interpreted as “ritual”, “ceremony”, “habit” and etc. This interpretation considers the tradition as a still, constant manifestation of the past and reflects in part the social stagnation and cultural stagnation. In a broad sense, the concept of tradition covers practically the whole field of social phenomena. It includes material and spiritual objects of

social and cultural heritage, the processes and methods of their inheritance. Accordingly, this term is interpreted as a universal form of fixation of ideas, opinions, tastes, orders, the rules of conduct, customs that historically developed in the society and provides for selective preservation and the transmission of social and cultural experience [3]. This explanation of the tradition provides a stable historical and genetic heredity in the socio-cultural processes. Obviously, those traditions are accompanied humanity throughout history and are presented in specific, historically transitional forms, such as determined norms, attitudes, defining specific behaviour program and define certain human actions. They are a social bond between individuals and groups in society. The baes of the tradition – is human relationships, mutual relation in the community. Its essence lies in the translation and reproduction of accumulated social and historical experience transferring from generation to generation to ensure continuity and stability in life. The result of a tradition is formation and functioning of social experience.

At the same time, tradition is a complex social phenomenon. It is a special form of fixation of social information. Any tradition (social and political, cultural, etc.) is inclined to the past, based on existing achievements. However, the peculiarity of its existence and vital activity in society is not only the ability to store and preserve but also to transfer information from generation to generation, the ability to accept and master something new. Traditions are enriched and supported in the society due to their actualization by new ideas. In order not to be sooner or later in a state of stagnation, and obtain signs of regressivity they must undergo a certain degree of innovation. Therefore, the tradition, on the one hand, is a certain completed result of a relatively constant, generally accepted, recurrent ways, forms and methods of activities, approved in society. It is a kind of static state in the realities of social existence. On the other hand, tradition is examined in the dynamics as a process, in this case its development in the system of society in the continuous quality improvement (as most of the tradition, and society in general) is taken into account. Actually the presence of dynamics and changes, and indicates the innovative potential of tradition. It is not considered as something outdated and anarchic because it is a bunch of social experience, which reveals the ability to regulate social processes and model changes. It appears as a productive basis on which a new, radically different from the established one grow. Analysing the nature and functional capacities of the tradition in social development, S. Arutiunov argues that “any tradition is the former innovation, and

every innovation is potentially a future tradition. In fact, none of the traditional feature is not inherent to any society since the dawn of time, it has its beginning, appeared from somewhere, therefore, was once an innovation. And what we see as an innovation neither will get accustomed to a place in the culture nor disappear and be forgotten or will get accustomed, after some time will not look like innovation and, therefore, will become a tradition” [1, p. 160]. The researcher expressed the belief that the level of interaction between traditions and innovations is connected with the peculiarities of civilizational development of society in a particular period [1, p. 160].

So, tradition and innovation do not exist separately. They are inseparable from each other and represent a sample of a twoness of philosophical categories, reflecting social progress. In this situation the tradition simultaneously performs a stabilizing and conservative function and creates opportunities for further development in the future. The difference between the traditional and innovative in society is to a greater extent in the forms of cultural elements that make up the system, but not in its underlying principles associated with the tradition. Tradition is a specific mechanism that gives the direction of social development.

The connection of innovation and tradition has ambivalent character. On the one hand, innovation does not occur in a vacuum, it is based on tradition, and on the other hand, it is not a duplication of the existing sample because it includes the creation of the object with qualitatively different, new features. Accordingly, innovation is not an opposition contrasting to the established forms and methods of transfer of knowledge and the spread of learning. Rather, they are understood as a product of the second thoughts of traditions, the partial denial of their established traits and characteristics through the creation of new which meet the demands of society. Innovations are interpreted as a new perspective of old ideas and meanings. The potency of cultural traditions is the basis of innovation. Traditions originate as flexible, dynamic systems on the basis of which various innovations appear. So, in order to be a stage in the progressive development of science, education, society on the whole, innovation should be mediated by the synthesis with the existing tradition. Paying attention to this fact, E. Kniازهva identifies the following approaches to the creation of innovation:

- as forgotten old, the ability to update historical traditions, to draw structures of historical and cultural memory;
- as the intersection of traditions. The intersection of the traditions

at the new point means the growth of mechanism;

- as a mutation and not only a simple intersection, as a spontaneous change of tradition [9, p. 231-232].

Using as a methodological duration guideline of the abovementioned approaches, we will consider the innovative potential of traditions in education. So, examining “innovation as forgotten old”, it should be noted that a necessary condition for the development of innovative education is the restoration of lost cultural values and traditions. Man is able to create a new one upon condition of constant contact with the realities of the world, using the existing cultural patterns and filling them with new social and cultural content. According to the available knowledge and practical skills are bases around to which new connections and relationships between phenomena are established. They serve as material for the creation of a new predetermining formation, and identifying the transformational nature of creative activity. For this reason H. Batyshchev noted that the problem of creativity requires in its formulation to appeal to the “universal – allgeneral principles of reality”, without mastering of which development, the process of formation of new things – innovation is impossible [2, p. 43]. In fact, creativity is impossible without interaction with objective reality.

To confirm the above-mentioned considerations we will refer to the philosophical and pedagogical heritage of Russian thinkers. Their research potential contains a powerful treasure house of ideas, orienting education to development and formation of the human being as the highest social value, the most complete mastering of abilities and meeting with her educational needs. It has not lost its relevance in our time and resonates with the leading pedagogical trends. So in the works of H. Skovoroda, P. Yurkevych, P. Kulish, S. Rusova, V. Zenkovskiy and other researchers the basic principles of education are reflected and developed: naturally harmony, culture development, development of creative abilities of the child and so on, which are the priority in modern education.

As an example, we should pay attention in this context to the arguments of philosophical and pedagogical views of V. Zenkovskiy. Central part of his research is the child, her individuality and searching for her education and development. The guiding principle of the concept of the researcher is homo-oriented (focus on person), since in its formation the teacher focused on a child, from her spiritual world. This position is relevant from the point of view of development and introduction in practice of modern educational technology of personal-

oriented learning. The role of educational institutions is the identification and determination of potential opportunities of the person that are designed by nature, creating the conditions for self-knowledge and self-motion of personality. Thus the learning process should be organised based on previous life experience, his study and coordination. Such ideas of the thinker contribute to the development of abilities to think creatively, ability to generate ideas, to work independently on the development of your own intelligence, morality and culture, the development of the innovative characteristics of modern man. It is worth noting that a lack of attention, and sometimes unjust oblivion of the traditions of national education, preserving significant intellectual potential and has not lost relevance in today's realities, was due to the prevalent totalitarian regime. Accordingly, the views of the thinkers of the past were rejected because it did not fit into the framework of an authoritarian style of education. As noted by B. Hershunsky, "we need to recognize that it is personal-oriented values of education, to which a significant role was given in the religious, philosophical and pedagogical works of scientists and thinkers of pre-revolutionary Russia, was later largely lost, and subjected to supernatural protuberant collectivist conceptions of teaching. Thus the human person was introduced to the level of a primitive "small screw" of the state-public mechanism with all the destructive nature for individuals and for society resulting from this" [4, p. 171].

The following approach determines the "innovation as the intersection of traditions". According to E. Kniazeva, point of intersection, ascent of traditions in the new point produces "creative growth" [8, p. 104]. It can be as an example of using of interdisciplinary approach in education. This approach allows going beyond the specific disciplines, thus responding to the fragmentariness of knowledge. Due to the interdisciplinary nature of the surrounding world, people, society, culture, nature, etc. are taught not as separate parts, but as a single integrated global self-organised system. This approach allows the individual to explore actively the world integrally, not in fragments, to form intellectually developed spiritual personality. Accordingly, there are intersubjective communications and integration of academic subjects according to other principles in the educational process, namely: study or research of phenomena, objects with a single methodological position; detection of their general property; the formation of a multidimensional vision of the characteristics of the objects that are studied. The educational technology "Ecology and development" can be

as an example, the content of which is based on the combination of knowledge of academic disciplines of the natural and human sciences, which represent an integral scientific picture of nature, people and society. Such integration in educational process opens the way to humanization of knowledge in natural sciences and has a huge developmental potential. The authors of technology s note that “in accordance with the principle of integration it is necessary to ensure that students understood the world not as a set of formal schemes, which operate according to specific rules, but as a set of a large variety of dialectically interrelated processes, that are developed and attenuated according to probabilistic laws” [15, p. 173]. They note that “the principle of integration is substantively beyond the limits of ideas between inter subjective communications because it requires a “binding” of each school subject to the realities of the world and thus confronts formalization and schematization of the subjects to characteristic to the traditional school” [15, p. 173].

The approach to “innovation as “mutation”, as spontaneous change of the tradition” affirms the fundamental role of creative potential in shaping of innovation. In the creative process a human being creates new meanings and configurations of ideas not only from unknown elements but known evidence, thus reducing its stereotypical understanding. It should be noted that creativity comes not from objective conditions, partly because it is beyond the possible for human and in virtue of this fact, is difficult for description, diagnosis, monitoring, prediction, and so on. The main part of the creative process – irradiation, creative intuition, insight possible through a process self-development, adding those parts of elements that complement and create an integral form, “building bridges” between the individual movements of thought, feelings and emotions that allow you to create “unity in diversity” and so on.

To create is not only the ability to create potentially new configurations of the unknown elements, but the ability to find and create new from the known, thus overcoming their stereotype, destroying the achieved structured unity and interdependence. Only the context for a person is outlined in the creative process. Therefore, she does not dwell on its individual parts, does not observe certain rules and regulations. The creation of new is considered as the ability to combine and interpret the meanings of the elements from the point of view of the whole. This process is not raised by the objective conditions, so far as it is situated partly beyond the possible for a person and because it is

difficult to be under description, diagnosis, monitoring, prediction, foresee and the like. Therefore, based on the educational methods that are able to develop the creative potential of personality, to produce creative ideas must be: chaotization of consciousness and thinking condition, and cultivation of diversity with the aim of breaking stereotypes of thinking and going out to new ways of search; awareness of the positive role of forgetfulness (it is important to forget in order to discover and create); training of perceptual thinking (designing of mental images and productive metaphors, collecting of integral images, that appear in the head); understanding that discovery comes unexpectedly, but not accidentally (focus on problems solving does not exclude, but foresee the existence of an important stage of incubation, ripening); practice of divergent thinking as a method of creative cognition and activity, allowing to move in different directions, to put forward a number of creative ideas and their combinations, which would allow to solve the problems [5, p 23-24]. As an example of the above mentioned position – use methods of “brainstorming” and synectics in educational activities. These techniques are based on psychoanalytic theory. Z. Freud, in accordance with the provisions which the controlled consciousness is just a thin stratification on the uncontrollable irresponsibility in which emotions, desires, feelings swirl. Methods of brainstorming and synectics help them to be released in the form of involuntary ideas, perceptions, associations, and therefore are appropriate for use at the stage of searching for and creating new information. Awareness of the genetic link of innovation with traditional forms of educational activities will provide conditions for creating of diversity of forms and methods of its implementation, and ultimately to the versatile development of human individuality.

So, traditions, symbolize the spirit of the age, and are formed for centuries. They are the basis of existence and development; there is no society and people beyond tradition. Traditions embody these elements of social reality as imitation, succession, accumulation, social regulation such. Preserving and enhancing the heritage of the past, they continue to complement, improve and upgrade in the context of requests of the particular historical era. So, accumulated knowledge, skills by humanity are the necessary basis for the development of creative potential of personality, because it does not exhaust it. They appear only as those grounds on which there are processes of thinking, understanding, imagination, the flow of which is impossible without a structured and systematic intelligence information. Product of internal development

and self-development of traditions are the innovations. Innovations do not appear in contrary to the existing knowledge, but basing on them. They are not deserted background of traditions and at the same time traditions, where changes occur slowly and almost imperceptibly with innovation potential. Keeping the potential in the future, the traditions show the ability to be a functional regulator of social life, as there are accumulated new opportunities of its development in them.

An innovativeness of education is the ability of traditional knowledge to produce new meanings, characteristics, to be capable of living and relevant in the context of the modern requests. Therefore, an adequate sense of tradition – is rather, according to E. MacIntair, “a vision of future possibilities which was created for our present by our past” [14, p. 45]. By its nature innovations are not an opposition contrasting to the established forms and methods of communication and emission of knowledge. Rather, they are understood as a product of the reinvention of traditions, the partial denial of their established traits and characteristics due to the creating of a new, which meet the needs of society. Innovation can be interpreted in some way as a new interpretation of old ideas and meanings. The authors of the book “Revolution in education” by G. Draiden and J. Vos argue that any innovation is the only combination of known old elements. “There are no new elements. There are only new combinations,” they say [6, p. 184]. The researchers give proofs of their position as follows: “All of history’s greatest ideas and inventions obviously have one common thing – all of them were made by the human brain. And if the brain has a fantastic capacity to retain information, it is also able to restore information in a new way – to create the idea” [6, p. 187]. Taking into account these considerations, the socio-cultural potential of traditions is the basis of innovation. Traditions appear as flexible, dynamic systems, providing a range of diverse innovations. So, in order to be a stage in the progressive development of science, education, society, innovation should be mediated by the synthesis with the existing tradition. Recognition of this link is a precondition for the analysis of the most significant – historically formed and proven by time – didactic theories, knowledge and interpretation which will contribute to overcoming of the crisis phenomena in educational sphere and in the Ukrainian society. Therefore, the modernization of education should be implemented not by the destruction of traditional forms, methods and technologies, and by preserving in them the positive and useful things that exist and can be productive. There are such approaches in the creation of innovation, as

forgotten old, the ability to update historical tradition; as the intersection of traditions, which in the mean mechanism growth; as mutation; as a spontaneous change of traditions. It is noted that changes in education should be implemented not by the destruction of traditional forms, methods and technologies, but by preserving in them useful that can be productive.

So, the society innovativeness is primarily in creation of opportunities for realizing the potential of every person, its permanent development and self-development. New information era of the humanity development actualizes the creation of new educational systems and developing of new learning models focused on human, her spirituality and creativity. There is a transition from education to enlightenment; the priority of thinking is recognized over the assimilation of knowledge in the field of education. Educational resource in the information environment is directed to the training of creative personality, who has the ability to approach innovatively to the proposed tasks. However, modern education is based on the dialectical unity of traditions and innovations as a factor of society self-development.

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**INNOVATIVE
INSTRUMENTS FOR
MANAGEMENT OF
EDUCATIONAL QUALITY IN
THE CONDITIONS OF
MARKET ECONOMY**

Introduction. In times of aggravation of the political and demographic situation, the stability, economic growth and the success of the reforms of the Ukrainian state related are to the efficiency of the activities of higher educational institutions (HEI). In this sense, universities act as enterprises in the production of high quality and competitive products, namely professionals in the most advanced areas of professional activity.

In the context of the globalization of the labor market and educational services, HEI become full participants in the process of formation of national economies based on knowledge (Knowledge Economy). Therefore, today special attention be should paid to solving

the problems of developing innovative and effective systems for managing the quality of educational services.

The trends of globalization have led to the transfer of modern universities into the sphere of market relations from the sphere of academic and fundamental training. These processes forced the leadership of higher education to understand that the time has come for hard competition in the educational services market. This type of service must meet quality standards, requirements for cross-border cooperation and meet the needs of modern society, the state, the economy and industry.

Foreign experience of university education, including engineering education, proves the expediency and effectiveness of economic approaches to the management of the activities of educational institutions. The practice of Ukrainian universities should include such fundamental and practical approaches as management, monitoring and marketing. This will allow our state to enter into global market relations, to preserve the human resources and intellectual capital of our country and to prevent the catastrophic outflow of youth abroad in search of high-quality professional education. On the other hand, this approach will preserve the best traits and will ensure the evolution of traditional administrative-state practice in the management of education.

1. Analysis of recent research and publications. Information search of the results of scientific research in the field of the management of the activities of educational institutions, their pilot testing and practical implementation shows that most of the world's best universities act as educational, scientific and practical complexes. This allows universities to actively integrate as a competitive player in regional and world labor markets and bring them into the category of successful business institutions.

These transformational changes in the field of educational services have enabled well-known scientists, economists and educators to join efforts aimed at creating innovative tools for managing HEI based on the use of fundamental management and marketing ideas. These innovative approaches implemented are with the preservation of the best pedagogical and fundamental principles of the educational system in a context of rapid reorientation to social needs.

It should be noted, that pedagogical studies of recent years are based on such fundamental and economic concepts as a systematic approach to the management of HEI. Researchers actively define criteria for assessing the quality of managerial activity of educational institutions and organization based on the theoretical foundations of pedagogical

management and instrumental capabilities of the academic value added model (AVA).

In the paper [1], a higher education institution considered is a key element in ensuring the training of future specialists in the relevant field of knowledge for a certain qualification in a complex integrated structure of the higher education system (HES). A modern specialist (a graduate of HEI) must have a set of systematized knowledge and practical skills, ways of thinking, professional, ideological and civic qualities, moral and ethical values and other competences. These competences should ensure the professional and intellectual growth of the individual throughout his life.

The authors of works [2, 3, 4] consider HEI in accordance with the classical economic concept of an organization that needs effective management. On the other hand, educational institutions must obey the values and laws of survival in the market, the rules of entrepreneurship, adapt to the requirements of the authorities. In this case, researchers rely on the classical definition of Chester Bernard: "An organization is a group of people whose activities are deliberately coordinated to achieve common goals and common goals. According to this definition, an organization is a dynamic social system in which formal as well as informal processes. At the same time, the institution as an organization must be effective in fulfilling common and private tasks that meet the individual needs of its members. These two aspects are mutually complementary categories [5].

The transition to the consideration of universities as special organizations - enterprises producing goods and services that require the society and the state, leads to the need to recognize their relative economic independence, legal rights, the availability of resources and property necessary for their activities [6]. On the other hand, the effectiveness of management of this enterprise is determined by the parameters set by the regulatory authorities of the government, requires appropriate management decisions and monitoring. At the same time, the main feature of an educational institution is the presence of a labor collective organized for entrepreneurship and profit, which for foreign higher education institutions received the foreign name AVA or the Added Value of the University.

The instrumental capabilities of the AVA model should be the basis of the processes for creating education management systems in accordance with the international standard "ISO 9001:2008. Requirements" in the interests of the internal and external stakeholders

of the university [7].

2. Modern University as a Competitive Enterprise. According to classical economic models and schemes, the quality of products and services determined by the internal and external quality of the enterprise or organization. The effectiveness of HEI based on the innovative concept of AVA.

HEI, as formal organizations, does leadership to achieve a common goal with conscious coordination create groups of people. In the theory of governance, a formal organization is defined as a model of behavior and relationships that is foreseen in advance and foreseen by law for members of the organization. Creation of an organization begins when there is an agreed and generalized procedure for the legitimization of the organization's activity plan. The manual creates the personnel of the organization in connection with the production necessity and divides the work horizontally (in Divisions) and vertically (at The Level of Management).

If universities are a special form of formal organization for providing educational services and training of competitive specialists in a particular field, they should have the following features:

1. Availability of resources: people, capital, materials, technology, information.

2. Dependence on the environment (economic conditions, civil society, international events, legislation, competitors, mentality of society, etc.).

3. Horizontal division of labor (the division of specific tasks), units arising because of horizontal division of labor.

4. Vertical division of labor, aimed at the coordination of work, that is, the implementation of the management process.

5. Necessity of management.

6. The presence of formal and informal groups.

7. Realization of certain types of activities (production, financial, investment, trade, research, etc.).

The formation of an effective university activity based on the ABA model should be based on the adaptation of the university to the following well-known components of the organization's success:

1. Survival. Most organizations periodically change goals and choose them according to changes in the external economic environment (market conditions, level of competition, the possibility of integration) and conditions of their own functioning (financial, material or production opportunities).

2. Completeness of the cycle of services or the production of goods.
3. Productivity as the ratio of the number of units at the output (produced products or services) to the number of units at the input (spent resources).
4. Efficiency and demand for outbound services or products.

In addition, modern university, from the point of view of domestic and foreign scientists, are considered open systems with the possibility of more effective access to information and resources and interaction with the external environment (suppliers, consumers, competitors, other institutions) [8].

Systems of this type have at least ten specific properties: applicability, emergence, synergy, multiplicity, stability, adaptability, centralization, isolation, compatibility, and the presence of feedback. These properties form certain factors of influence on the development of tools for quality management of HEI.

The main source of effective functioning of HEI and provision of AVA is the human capital (management and teaching staff), its intellectual level and professional abilities that can significantly expand or, conversely, reduce the potential and capabilities of the respective educational institution.

Figure 6.1 shows the model of the interaction of the organizational internal and external environment of a higher educational institution, taking into account the impact on this interaction of the human factor - consumers of educational services and stakeholders (individual and legal persons or organizations that are interested or able to actively influence the work of the institution) [2, p. 122].

When adapting the model of the open system and the concept of the organizational environment to the specifics of educational activities, one can conclude that the external environment of the higher educational institution goes beyond its boundaries and is located on the other side of the internal organizational environment.

The External Business Environment includes everything that directly related to the achievement of the organizational goals of higher education institutions. For example, it is the introduction of modern teaching methods and technologies, potential competitors and the structure of the educational services market, the network of clients for the education of graduates, the source of logistics from government agencies and various sponsors, the non-formal educational institutions and the staffing agencies, institutions for defining the rules of operation and information provision.

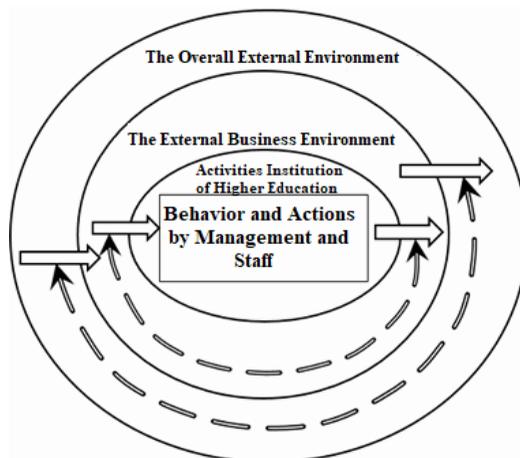


Figure 6.1 Model of interaction between the internal and external environment of the university

The Overall External Environment less is specifically related to the purpose or objectives of a higher education institution and includes the laws of the country, general state policy, public institutions, political relations, social stratification of society and anything else that can indirectly affect the activities the university.

3. Academic Value Added as an effective tool for improving the competitiveness of educational service providers. Unfortunately, in the Ukrainian literature and scientific publications, the concept of AVA not highlighted today. The provision of internal and external quality of professional education, the development of models, methods and algorithms for its evaluation remain the actual problems of domestic education. A National Agency for Quality Assurance in Higher Education established was in Ukraine. On the initiative of the Ministry of Education and Science of Ukraine (MES) of Ukraine a Public Council created is – a temporary advisory body to facilitate public participation in the formation and implementation of state policy in the field of education and science.

Participants of the portal of public experts “Educational policy” are actively discussing the issues of effective interaction between the MES of Ukraine and civil society institutes, ensuring the quality of vocational education and competitiveness of Ukrainian universities. By this time, there is no complete understanding and consensus on the question: Which universities be can considered competitive? An open problem

remains the classification of universities in the category of organizations that may qualify for the status of organizations with academic AVA. These are the universities that have the right to survive and develop in conditions of fierce competition with well-known European and other world educational institutions.

From the beginning of the XXI century, foreign scientists, including the countries of the former Community of Independent States (CIS), are solving the question of determining the AVA as the main indicator of the efficiency of universities at a serious academic and practical level. The authors of the scientific publication [9] note that in the conditions of increased interest in the efficiency of the education system in conditions of increased transparency to the state and society, being formed new tools for assessing the efficiency of the system of higher education. Each educational system or institution can be assessed from the point of view of the efficiency of public expenditure, quality and knowledge of alumni skills. The AVA can serve as a tool for assessing the degree in which students enhance their knowledge, skills and abilities during their education, the degree of critical and reflective thinking, and the ability to study throughout their lives (Long Life Learning).

The results obtained based on the AVA will provide an opportunity to compare the quality of educational institutions with different levels of student contingents. The concept of the AVA reflects the impact of external factors that are often unrelated to the educational process, on the level of educational achievement of graduates, raising the more serious issues of accessibility and quality of education in general than its effectiveness. This concept forces researchers in the field of education to move to the assessment of learning outcomes, rather than input parameters such as the amount of funding and the professional level of the teaching staff of the educational institution.

Scientists from the United States have achieved special theoretical results in determining the Value Added of educational institutions and their employees. The United States has created an E-dictionary portal for educational reforms to help journalists, parents, members of the educational community and all those interested in investing in American public schools to understand the key concepts of school reform. American teachers, researchers and politicians are now actively developing road maps for the implementation of educational reforms. Thus, American society proves that strong schools, progressive journalism and electorate awareness are the most important factor for any well-functioning democracy, and educators are encouraged to use a

glossary to deepen understanding of school improvement strategies in their communities. The pages of this portal are actively discussing the possibilities of organizing activities for quantification, forecasting change, ensuring the growth of the Value Added of individual teachers and schools, and studying this influential factor on the results of schoolchildren learning [10].

The author of the paper [11] discuss the unique problems of measuring Value Added in the HES, they study the possibilities and limitations of the use of publicly available administrative data at the level of students as the basis for such measures. It is useful to make a contrasting comparison of the HES environment with primary and secondary education. The school education sector characterized is by the practical use of annual standardized tests as the basis for determining the Value Added of individual teachers and educational institutions. According to the authors, significant differences in the systems of school and higher education make inappropriate and ineffective the full integration of the ideas of the school value added model into the HES. The publication also notes that colleges and universities around the world increasingly exposed are to public institutions and society to organize effective take action for the identification and disclosure of value added of educational services they provide to their students. This measurement based is on learning outcomes, taking into account the different levels of initial academic knowledge of students.

Today, government agencies in the United States, the United Kingdom and other countries use or consider the prospects for using the quantitative indicators of institutional activity in higher education to stimulate their achievements and targeted funding. For example, Tennessee (USA) is currently using a university funding formula based on practical learning and research results, while Texas is considering using one of the models of additional academic value. In the United Kingdom, there is a constant interest in using quantitative performance indicators for state colleges and universities to optimize targeted funding, but unfortunately, there is no systematic research to direct policy makers to the optimal strategy in this area.

Education and science are the main theoretical basis and structural factor in ensuring the country's economic development. Dynamism and the level of education are responsible for providing intensive economic growth in the transition to a "new" economy based on knowledge (neo-economics), both for economically developed countries, and for developing and underprivileged countries [12, p. 79].

Knowledge is becoming the main source of competitive advantage in the 21st century. At the same time, one can hardly speak of contemporary educational trends in Ukraine. The relatively low competitiveness of Ukraine's labor potential reflected is in the decline in productivity and inhibition of innovation in most industries, which indicates significant disadvantages in the work of vocational schools and, above all, higher education.

The field of educational services is an important tool and innovative stimulus for increasing Ukraine's competitiveness in the context of globalization of processes in the world and the formation of a knowledge economy with balanced markets for educational services and labor in the context of the transfer of innovative technologies.

Thus, in order to form the highly developed structure of the future knowledge economy in Ukraine, it is necessary to change the quality of education services. Improving the quality and competitiveness of the market of educational services market is associated with the introduction in the practice of HEI of innovative tools and capabilities of the model of added academic value, adapted to the realities of the Ukrainian state.

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**FINANCING OF HIGHER
EDUCATION IN UKRAINE**

Formation and effective use of financial resources of Ukrainian universities (hereinafter - Higher Education Institutions (HEIs)) in the context of a shortage of budget financing of higher education for increasing competition between HEIs both in the national and international markets of educational services has become one of the most important conditions for ensuring their economic security. This requires the search for effective mechanisms for diversifying funding sources and allocating available financial resources.

The reduction of budget financing and the expansion of

administrative and financial autonomy of the HEIs involves the search for new areas of HEIs activity with a view to further commercialization of educational services and results of scientific research. The need to carry out its business on a commercial basis does not deprive HEIs of their important social role as one of the main actors of the formation of human capital and intellectual potential of the nation.

Thus, in modern conditions, on the one hand, HEIs are full-fledged economic entity operating in a market economy on a competitive basis, and on the other hand, they are organizations that ensure the realization of the society interests.

Ensuring the balance of the economic and social aspects of the HEIs activities is a prerequisite for strategic development. Thus, the priority of a social function is possible only under conditions of sufficient budget financing of higher education. In modern Ukrainian realities – limited budget financing and the increasing level of autonomy of HEIs – excessive attention to the social function while leveling the economic one leads to a lack of financial resources. In its turn, it causes the aging of the material and technical base of universities, the reduction in payment and the prestige of the work as the professorial teaching staff, reducing the quality of educational services and research. Thus, it threatens the possibility of functioning of the HEIs in general, considering the difficult economic situation in the state.

At the same time, the priority of the economic aspects of the HEIs activities over social ones is now perceived by the majority of Ukrainian HEIs as a necessary condition for ensuring their activity.

In market conditions, this approach allows to take into account the requirements of the market of educational services, to expand the list of sources of financing HEIs, promotes the development of competition between HEIs (Robak, O.M., 2007, p. 8).

Indeed, the diversification of the spheres of activity, the expansion of the educational programs list, the provision of competitiveness, and the deepening of the activities commercialization provide modern HEIs with the necessary financial resources. However, an increase in attention to these aspects of HEIs activity is often accompanied by a disregard of the society interests, as attention is paid to marketing activities. At the same time, the creation of new educational programs is focused on the popularity of the popularity of relevant professions among applicants, rather than the real needs of the market; the use of marketing tools for attracting new students and partners is not always accompanied by the ensuring the appropriate quality of educational services and researches;

commercialization restricts the access of individuals to higher education.

Thus, there is an objective need to ensure a balance between the economic and social aspects of the Ukrainian ZOO activity, which makes it advisable to combine two main approaches to building a financing mechanism for HEIs, namely: an approach based on budget financing and another one based on the principle of higher education pay.

In the complex socio-economic conditions prevailing in Ukraine, the social function of higher education should be guaranteed by the state on the basis of a government procurement for the training of specialists, which are socially important, unpopular and, at the same time, necessary for the development of the professions economy, defined taking into account medium and long-term macroeconomic forecasts of socio-economic development of Ukraine. In addition, an important function of the state is to ensure access to higher education for all population segments.

At the same time, the necessary condition for ensuring the economic security of the HEIs is the attraction of additional financial resources, which form a special university fund and are directed to the implementation of the statutory activities in accordance with the procedure and on the terms established by the legislation. The correlation between budget and non-budget financing of higher education depends on a significant number of factors, namely: the stage and pace of economic development, the availability of budgetary resources for adequate state policy in higher education, the forms of ownership of HEIs and the management efficiency.

The financing sources of HEIs in Ukraine, except for Budgeting Fund, are (Balyihin, G.A., Romanov, P.V. & Chebotarevskiy, Yu.V., 2003):

- a) funds received from additional educational services;
- b) sponsorship;
- c) funds of charitable foundations;
- d) funds received from commercial services;
- e) tuition fee;
- f) attracted funds: means of bank and non-bank lending; state lending (scholarship), studying in leading Ukrainian and foreign HEIs;
- g) funds (grants) received from participation in international HEIs cooperation (international projects);
- h) international assistance.

Analysis of the scientific literature allows us to conclude that the

experience accumulated by universities of developed countries in the formation of financing mechanisms should be a guideline for the HEIs of countries with a transformational economy, including Ukrainian ones. Differences in existing higher education financing mechanisms caused by the specifics of the macro-, meso-, and microeconomic conditions of the HEIs activities of Ukraine determine the choice of subjects (individuals, economic entities, public organizations, state, international organizations), stakeholders (students, teachers, employers, society in general) and objects of financing (students, individual projects or studies, HEIs).

International experience shows that in conditions where the right for education at the expense of budget funds is for a limited category of citizens (recognized as requiring state support), individuals as the main consumers of educational services, lacking sufficient income and savings have to attract long-term credit resources (Solyannikova, S.P.). Thus, educational lending contributes to the support of solvent demand for educational services and accessibility of higher education.

In general, the creation of a modern mechanism for managing financial support of higher education is aimed at achieving positive dynamics of its development in order to fully meet the needs of the Ukrainian population for high-quality and affordable education, as well as the needs of economic entities for qualified specialists (Robak, O.M., 2007, p. 71). An effective financing mechanism for certain HEIs is a prerequisite for ensuring their economic security.

The guarantor of human rights to receive a quality higher education is the state. Taking into account the current stage of the socio-economic development of Ukraine, which is characterized by profound changes in all spheres, including the educational one, the present and future of the Ukrainian society depend on the effectiveness of the educational system reform.

The end of 2013, when Decree of the President of Ukraine dated June 25 № 344/2013 approved the National Strategy for the Development of Education in Ukraine for the period until 2021, should be determined as the beginning of the education system reform in Ukraine (About national strategy for the development of education in Ukraine for the period up to 2021, 2013). On November 12, 2014 “The Strategy of Higher Education Reform of Ukraine 2020” developed by the working group at the Ministry of Education and Science was presented for discussion (Strategy of reforming higher education of Ukraine 2020 (project), 2014)). In 2014, the Strategic Advisory Group

“Education” developed the Draft Concept for the Development of Education in Ukraine for the period 2015-2025 (Concept of development of Ukrainian education for the period of 2015-2025 (project), 2014). The analysis of these documents made it possible to conclude that they are aimed at achieving common goals, namely (Tarasenko, I. O., Tsymbalenko, N.V. & Tarasenko, O.S., 2018):

1) ensuring the availability of quality education for all population segments in order to ensure social mobility and reduce socio-economic differentiation in society;

2) covering the current and future needs of the economy and social sphere in specialists with the necessary qualification, promoting the development of continuing education;

3) promotion of the active participation of HEIs graduates in the economic, social, political and cultural life of society;

4) development and effective use of scientific and engineering potential;

5) intensification of innovation;

6) creating conditions for youth consolidation in the spheres of science, education and high technologies;

7) formation of effective economic relations in education;

8) formation of effective mechanism for managing the education development on the basis of the distribution of responsibility among subjects of educational policy, etc.

Defining the goals of state policy in the field of higher education allows to formulate the main macroeconomic tasks of improving the financial mechanism of this sphere, namely:

- reduction of budget financing of higher education requires increasing efficiency of using available funds, which means the use of mechanism of budget financing of higher education in accordance with the principles of targeted and effective use of funds, publicity and transparency in decision-making (About Higher Education, 2014);

- the need to ensure affordability of higher education for all population categories of Ukraine has led to the creation of a system of public crediting of citizens for higher education (About approval of preferential crediting for vocational and higher education, 2013);

- the need to diversify sources of financing higher education necessitates the development and approval of corporate and commercial lending procedures for obtaining higher education.

Thus, the mechanism of budget financing of higher education from 2015 is being modernized by the Ministry of Education and Science

(MES) of Ukraine in accordance with the specifics of the current stage of socio-economic development. Before the modernization of the higher education financing mechanism, the funds of the state budget of Ukraine aimed at financing the higher education seeking by citizens were distributed among HEIs. The competition was held among the applicants of a particular HEI. During 2015-2018 MES of Ukraine has introduced and gradually expanded the use of a “broad competition” among HEIs applicants. The method of “broad competition” ensures the fairness of budget funds distribution, which were aimed at financing of obtaining higher education. The entrants with the highest competition points receive an opportunity to obtain higher education at the expense of the state budget funds. These points are counted taking into account the results of the External independent testing, the average point of the document on full secondary education, the point about the successful completion of HEI Cram school (About Higher Education, 2014; OSVITA.UA, 2018).

It should be noted that, according to the Law of Ukraine “On Higher Education”, the total amount of government procurement for training specialists in the degrees of junior bachelor, bachelor (Master of Medicine, Pharmacy and Veterinary) is at least 51% of the number of graduates of general educational institutions that completed general secondary education during the lasting year. The total volume of the government procurement for the preparation of master’s degree specialists is not less than 50% of the number of students who have received a bachelor’s degree on the government procurement during this year. The total volume of the government procurement for the training of Ph.D. is not less than 5% of the number of students who received a master’s degree in the government procurement (About Higher Education, 2014).

In addition, the legislation of Ukraine provides the possibility of getting state-subsidized loans for vocational and higher education in full-time and part-time form of study on the basis of agreements concluded between the school and the natural or legal person (About approval of preferential crediting for vocational and higher education, 2013).

Thus, the modernization of the financing mechanism of higher education in Ukraine led to the opportunity for the most successful applicants to choose a specialty and HEIs. In the conditions of constant reduction of the share of budget expenditures on higher education in the structure of expenditures on education and, accordingly, in the structure

of total expenditures of the consolidated budget, this is an incentive to improve the quality of education, the active use of marketing tools, the expansion of forms and methods of funding higher education for individual HEIs. In addition, conditions for obtaining higher education for citizens belonging to privileged categories of the population (children of deceased defenders of Ukraine, persons with disabilities, combatants and their children, internally displaced persons, etc.) were created. At the same time, the “Procedure for preferential crediting for vocational and higher education” (About approval of preferential crediting for vocational and higher education, 2013) was developed and approved, according to which citizens of Ukraine have the opportunity to receive preferential state loans for vocational or higher education.

At the same time, the practice of financing higher education on the basis of public-private partnership and commercial educational lending has not been widely spread in Ukraine.

Thus, according to the Law of Ukraine “On Public-Private Partnership”, public-private partnership in Ukraine is defined as cooperation between the state, the Autonomous Republic of Crimea, territorial communities represented by the relevant state bodies and bodies of local self-government (state partners) and legal entities, except for state and communal enterprises or private entrepreneurs (private partners), which is carried out on the basis of the agreement (About public-private partnership, 2010).

The provision of social services, the management of a social institution is defined as one of the areas of public-private partnership. Thus, the provision of educational services and other HEIs services is one of the types of economic activity in which implementation public-private partnership can be used under condition of detailed justification of its socio-economic and environmental efficiency (About public-private partnership, 2010). The introduction of public-private partnership in Ukraine in the areas of vocational and higher education was initiated by the Ministry of Education and Science of Ukraine in 2016, however, this practice has not been sufficiently disseminated due to the lack of a clear mechanism for organizing cooperation between public and private actors.

As for commercial loans for higher education, it should be noted that in Ukraine payment for studying in HEIs is lent by banks on the basis of consumer credit. The adoption of the Law of Ukraine “On Consumer Lending” (About consumer lending, 2016) became a step towards the spread of norms and standards applied in the EU and the USA. At the

same time, the system of consumer lending in Ukraine does not envisage increasing the availability of credit funds for citizens intending to obtain higher education.

In general, the state policy in the sphere of diversification of sources of financing higher education is effective in terms of its budget financing and at the same time requires improvement of the financing mechanism of the HEIs, in particular, by spreading the practice of public-private partnership and increasing the availability of credit for citizens.

The creation of an effective mechanism for financing higher education (HEIs) which is capable of meeting the needs of all all interested persons (students, HEIs, employers and society in general) provides for a combination of credit methods (state and commercial), budget financing, public-private partnership, attraction of public funds, public organizations, international funds.

The main subjects of the financing mechanism of the HEIs and higher education in general are:

- international organizations that take part in the formation and implementation of international social policy, in particular on target financing of higher education of individual countries, educational and scientific projects, HEIs, students;
- the state, namely: its legislative bodies, which create the legal and regulatory framework for the formation and implementation of social, budget, investment, credit, tax and employment policy; as well as executive bodies of state power implementing the policy of the state, in particular in matters of regulation and financing of the system of higher education;
- public organizations, charitable foundations, endowment funds, private organizations, financial institutions, individuals whose activity as subjects financing higher education largely depends on socio-economic policies, in particular from legal norms, conditions and incentives for such activities in the state.

The analysis of the state of financing of higher education in Ukraine allowed to reveal the main directions of improvement of the state policy in the field of financing higher education, namely:

- 1) development of the system of public-private partnership in the field of higher education and the partnership of HEIs and private organizations in general, which envisages improvement of the regulatory framework and development of an effective mechanism for the dissemination of public-private partnership practice; use of the tax

incentive mechanism for private partners;

2) the development of commercial educational lending, which requires adjustment of the state regulation of banking activities in order to provide financial support and popularize lending by financial institutions (banks) to obtain higher education.

It should be noted that according to foreign experience such methods of funding higher education as fundraising, charity and endowment-related finance are effective in economically developed countries. However, in our opinion, the use of these methods in today's socio-economic conditions in Ukraine to finance higher education is inappropriate. Thus, the insufficient amount of charitable contributions and financial resources available at the disposal of non-governmental organizations determines their direction to solve more urgent problems in comparison with the development of the higher education system, such as the assistance to orphans, refugees, participants in the military conflict in the East of Ukraine, etc. At the same time, the possibility of using endemic funds to finance higher education in Ukraine is also limited due to the unfavorable investment climate in the country, given the crisis in the socio-economic and political spheres.

In general, according to World Bank experts, one of the four key conditions for the formation of a knowledge economy is education and training that characterizes the availability of an educated and professionally trained population capable of producing, distributing and using knowledge. Solving the problems that higher education system in Ukraine face, in particular ensuring the economic security of the HEIs, requires a significant increase in the financing of education on the basis of diversification of funding sources. This will ensure the dynamic development of the educational sector, stimulate the processes of commercialization of knowledge, contribute to strengthening the market positions of state HEIs, growth of their competitiveness, because only with the availability of reliable and stable sources of funding education will fulfill its mission to develop human capital of the country.

The protracted economic crisis in Ukraine and, as a result, the deterioration of the investment climate, the complication of lending in Ukraine do not facilitate the rapid transition to the use of new sources of funding, including in the sphere of higher education. At the same time, the development of educational crediting, improvement and development of forms of cooperation between private educational institutions and private organizations with the aim of creating internal university investment funds, solving the problems of self-financing of

individual curricula and research, support for individual students should be considered as important promising directions for improving higher education financing mechanism in Ukraine.

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CONCLUSION

Currently, the stable functioning of economic entities is based on the strategic goals of sustainable development, since the institutional transformation of the global environment adversely affects on the activities of economic entities by increasing competition, reducing consumer demand due to the economic crisis, and expanding the process globalization of the economy. In this regard, the question of formation and implementation of sustainable development goals is hardly predictable, since there is always a risk of a destabilizing situation.

In order to prevent negative influence from the global environment, as well as to improve the efficiency of economic entities it is necessary to periodically conduct economic diagnostics of the level of sustainable development. According to the author's research in a collective monograph, the analysis of sustainability development is carried out in several areas of activity. The main ones are economic, social, environmental, and global, since the main factors affecting sustainable development are the stable functioning of an enterprise's economy, social development, ecological situation, and relationships with the external environment.

It should be noted that the task of management sustainable development of economic entities is that it is possible to management this process only in a comprehensive way, without dividing the sustainability into separate types. Since each economic entity is a complex socio-economic system, management its sustainable development implies the creation of conditions for the balanced functioning of the constituent elements.

The effectiveness of management sustainable development of economic entities depends on its ability to adequately and timely respond to the impact of external and internal factors. External factors affect on economic entities regardless of their activities. On the internal factors of economic entities may affect. One of significant internal factors on which the sustainability of an enterprise's development depends is its organizational structure, qualification personnel, management methods. Thus, there is a need to develop an effective mechanism for management sustainable development, that is, certain techniques and methods of influence that allow economic entities to carry out an adequate response to influence from the external and internal environment, while developing along the vector of set strategic goals.

The mechanism of management sustainable development is a complex multidimensional economic phenomenon, which includes a complex of heterogeneous socio-economic interactions between the subjects and objects of management arising in the process of moving towards achievement the objectives of sustainable development. Consequently, the mechanism of management sustainable development appears to be a certain system of various methods influence of the subject on the control object, with the help of which the subject coordinates his goals with the goals of the object, which at the same time carries out the activity, guided by these methods. Management methods here act as a specific set within which interaction takes place.

Sustainable development of economic entities is impossible without the development of environment in which it operates, that is, global sustainability. If by sustainable development of economic entity we understand the stable state of its structure and the movement towards increasing the efficiency of its activity, then global stability should be understood as the stability of the external environment, the determinism of influence the factors establishing its main components. To achieve global sustainability is needed effective management mechanism of the economy by macroeconomic level.

The economic factors of external environment that influence the sustainable development of economic entities include the conditions for carrying out economic activity, the level of development the technique and technology, the level of effective demand, the effectiveness of economic policy in the country, legislative regulation of the economy and others. A special impact on the sustainable development of economic entities has phase of the economic cycle on which the country's economy is located, since during the crisis all economic processes slow down – the level of production decreases, investment decreases, sales volume decreases and, accordingly, profits. In view the impact of these factors during a crisis a large number of economic entities are subject to bankruptcy. In addition, on the market due to a decrease in effective demand, competition is sharply increasing, which entails further destabilization of the position of economic entities.

The solution of these problems lies in building an effective system of management sustainable development, which allows economic entities to adapt to the negative impact of external factors and quickly make decisions aimed at increasing the sustainability development.

Based on the application of a systematic approach to management development is achieved a harmonious combination and consistency of

management actions and decisions that ensure the operation all business processes of economic entities; generated need development with future benefits in mind; certain development strategies are being developed. In this regard, the introduction of a modern management mechanism for economic entities is not in doubt and is an important component in solving problems of overcoming crisis phenomena, problems of destabilization relations and relationships at the level of economic entity, industry, country, problems of achieving the efficiency reproduction processes on a stable long-term basis.

**Management mechanisms and development
strategies of economic entities in conditions of
institutional transformations of the global
environment**

Collective monograph
edited by M. Bezpartochnyi

**Ekonomisko vienību vadības mehānismi un
attīstības stratēģijas globālās vides institucionālo
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