

University of Security Management in Košice

**N.G. Zdyrko
O.L. Polova
T.O. Mulyk
O.F. Tomchuk
Ya.I. Mulyk
A.Y. Kozachenko
L.I. Fedoryshyna
A.A. Mashevskya**

**FINANCIAL CONTROL, ANALYSIS AND AUDIT AS
TOOLS OF AN EFFECTIVE MANAGEMENT SYSTEM:
STATE, PROBLEMS, PROSPECTS**

Collective monograph

Košice – 2022

UDC: 336.02:338.242:657.6(02.064)

E-45

Authors: N.G. Zdyrko (4.1, 4.2, 4.3), O.L. Polova (1.1, 2.3.), T.O. Mulyk (1.2, 1.3), O.F. Tomchuk (1.4, 3.1), Ya. I. Mulyk (2.1), A.Y. Kozachenko (2.2), L.I. Fedoryshyna (3.2), A.A. Mashevska (3.3)

Recommended for publication by the Editorial Board of the University of Security Management in Košice (No. 05 of 27 September 2022)

Reviewers:

Igor Britchenko – Doctor of Economics, Professor, University of Security Management in Košice, Slovakia

Maria Borowska – prof. dr hab., State Vocational Academy School Memorial of Prof. Stanisław Tarnowski in Tarnobrzeg, Poland

Maksym Bezpartocnyi – Doctor of Economics, Professor, Lviv Polytechnic National University, Ukraine

Financial control, analysis and audit as tools of an effective management system: state, problems, prospects / collective monograph / N.G. Zdyrko, O.L. Polova, T.O. Mulyk, O.F. Tomchuk, Ya.I. Mulyk, A.Y. Kozachenko, L.I. Fedoryshyna, A.A. Mashevska. Košice: Vysoká škola bezpečnostného manažérstva v Košiciach, 2022. – 291 p.

The monograph summarizes theoretical, methodological and organizational aspects of financial control in the enterprise management system, considers financial control in the management system and ensuring the economic security of enterprises; an analysis of the efficiency of using the resource potential of agricultural enterprises was carried out; attention is paid to it as an effective form of financial control in Ukraine. Designed for scientists, employees of controlling, tax, financial and accounting services, students, as well as to all those who are interested in financial control issues.

© Collective of Authors

© Vysoká škola bezpečnostného manažérstva v Košiciach, 2022

UDC: 336.02:338.242:657.6(02.064)

ISBN 978-80-8185-051-6

CONTENTS

INTRODUCTION	5
1. THEORETICAL, METHODOLOGICAL AND ORGANIZATIONAL ASPECTS OF FINANCIAL CONTROL AND ANALYSIS IN THE ENTERPRISE MANAGEMENT SYSTEM	
1.1. Theoretical and methodological foundations of financial control in the management system	6
1.2. Organization and types of economic analysis in the enterprise management system	26
1.3. The value of control and analytical work of the enterprise for making managerial decisions	49
1.4. Experience in the development of financial control in economically developed countries and the possibility of its use in Ukraine	64
CONCLUSIONS TO PART 1	92
2. FINANCIAL CONTROL IN THE ECONOMIC SECURITY MANAGEMENT SYSTEM OF THE ENTERPRISE	
2.1. Financial control as a tool of the management system to ensure the economic security of business entities	94
2.2. Effective use of modern tools of financial control in the economic security management system of the enterprise	119
2.3. Improvement of the economic security management system of the enterprise	138
CONCLUSIONS TO PART 2	159
3. ANALYSIS OF THE EFFECTIVENESS OF USING THE RESOURCE POTENTIAL OF AGRICULTURAL ENTERPRISES	
3.1. Methodical approaches to ensure effective use of resource potential of enterprises	161
3.2. Current state and effectiveness of the resource potential usage of enterprises	193
3.3. Directions of strengthening and increasing the efficiency of using the resource potential of enterprises	214
CONCLUSIONS TO PART 3	234

**4. ENERGY AUDIT IN ENSURING ENERGY
INDEPENDENCE OF THE REGIONS OF UKRAINE**

4.1. Necessity of implementing an energy audit in Ukraine and its regulatory support	236
4.2. Arrangement and methodology of independent energy audit in Ukraine	251
4.3. Some aspects of state energy audit in Ukraine	272
CONCLUSIONS TO PART 4	291

INTRODUCTION

The formation of an effective mechanism of financial control of business entities is a mandatory and important task of the financial policy of the state. Thus, obtaining reliable and complete information about the activities of individual economic entities control allows you to exercise control over their work, forming promising directions of development. In addition, the data obtained in the accounting and control system make it possible to increase the reliability and completeness of information about the financial and economic activity of production systems with in order to increase the efficiency of acceptance management decisions and achieving high results

Along with what the realities show today, the existing system of financial control has a number of shortcomings and contradictions. One of the reasons for the emergence of crisis phenomena in the domestic economy and ineffective spending budget funds is precisely underestimation of the importance of financial control. Because of that, the problem of financial research control of business entities is now available relevant, and therefore needs further work study and formation of ways of promotion efficiency of its functioning.

In this monograph, the authors summarized and supplemented the results of many scientific justifications and developments. Considerable attention is paid to the study of financial control issues in the enterprise management system in the context of modern trends in the development of society and the economy; application of new forms of financial control such as energy audit, its understanding and interpretation and the need for implementation in the conditions of energy independence of the country.

The materials of the monograph reflect the results of research carried out in the framework of the research project “Development of the concept of ensuring energy security and energy efficiency as priority areas for sustainable development of rural areas” (state registration number: 0120U109443); “Analysis of the effectiveness of the use of the resource potential of agricultural enterprises in the conditions of ensuring the economic growth of the agro-industrial complex” (state registration number 0118U100586) and “Financial control in the economic security management system of economic entities” (state registration number 0118U100563).

1. THEORETICAL, METHODOLOGICAL AND ORGANIZATIONAL ASPECTS OF FINANCIAL CONTROL AND ANALYSIS IN THE ENTERPRISE MANAGEMENT SYSTEM

1.1. Theoretical and methodological foundations of financial control in the management system¹

The transformations taking place in the country prove the need for rational management and creation and functioning of an effective system of financial control both public and state. One of the reasons for the crisis situation in Ukraine is precisely the underestimation of the role of state financial control, which led to a lack of funds State budget of Ukraine.

In domestic science, state financial control is considered as a type of financial control, which is carried out by the relevant bodies of state financial control and consists in establishing the actual state of affairs regarding compliance with the requirements of current legislation at the controlled facility, aimed at ensuring legality and financial discipline and rationality in the course of formation, distribution, possession, use and alienation of assets belonging to the state, as well as the use of funds remaining with the financial entity legal relationship in connection with the benefits provided for payments to budgets, state off-budget funds and loans received under guarantees Cabinet of Ministers of Ukraine (Gutsalenko, 2009).

Stefaniuk I., looking at the state financial control at the macro level, comes to the conclusion that it is “a tool for increasing the efficiency of the economy, ensuring the amount of financial resources in accordance with the parameters defined by law, the completeness of the payment of taxes and mandatory payments, blocking activities that threaten national security, monopolizes markets, is aimed at organizing the forbidden the state of production of goods and provision of services, carries significant social threats that affect interests of large groups of citizens, violates the legitimate interests of the state, business entities and society as a whole” (Stefanyuk, 2011).

¹ Polova O.L.

Financial control is a tool for ensuring compliance with the rules of accounting and financial reporting, social guarantees and timely payment of wages, pricing standards and setting tariffs, payment discipline, prevention of fictitious financial operations and facts of money laundering, prevention and elimination of facts of illegal, non-targeted and inefficient use of budget funds transferred to business entities, financial resources that these entities additionally receive from tax benefits, as well as ensuring compliance with the order and state and communal procurement procedures, detection of non-targeted and ineffective use of state and communal property, non-targeted use of credits and loans received under government guarantees.

Financial control carried out by authorized bodies authorities, plays a key role in the implementation of all of the above types of state control. This is due to the fact that the holding provides necessary control measures in each of the areas mandatory verification of financial and economic documentation controlled organizations, legal entities and individuals.

Depending on the sphere of competence, for a long time the subjects of state financial control in Ukraine included the Verkhovna Rada of Ukraine, the Accounting Chamber of Ukraine, the National Bank of Ukraine, the State Tax Service, the State Customs Service, the State the Treasury, the Ministry of Finance of Ukraine, the State Financial Monitoring Service and their structural subdivisions. The reduction of all financial and control powers to one body of state power is extremely risky due to the emergence of a kind of “financial control” in the state. However, legislative changes in this area turned out to be insufficiently justified, and to some extent even absurd First of all, every state body of financial control acted on the basis of a separate law, however, the Law of Ukraine “On State Control and Audit public service in Ukraine” was presented in a new version and was named “On the basic principles of state financial control in Ukraine”.

The State carries out state financial control over:

- use and preservation of state financial resources, non-current and other assets, the correctness of determining the need for budget funds and making commitments, the effective use of funds and property, the state and reliability of accounting and financial reporting in ministries

and other bodies executive power, state funds, foundations mandatory state social insurance, budgetary institutions and subjects management of the public sector of the economy, as well as at enterprises, institutions and organizations zations that are received (received in the period which audited) funds from budgets of all levels, state funds and mandatory state social insurance funds or use (used during the audited period) state or communal property, for compliance with legislation at all stages of the state and local budget process budgets;

- compliance with state legislation purchases;
- the activities of economic entities, regardless of the form of ownership, which are not classified by legislation as controlled institutions, according to a court decision adopted on the basis of a petition investigator, prosecutor to ensure investigation during criminal proceedings.

In order to ensure the legality and efficiency of the use of state budgetary and extra budgetary funds and state property, it is necessary to implement full financial control: budgetary, currency, banking, and tax. That is why there is an urgent need for a draft basic law on state financial control and by-laws that would separately define the tasks, rights, obligations and procedure actions of state financial control bodies.

According to the analysis of the definitions of the concept of financial control, can be stated that the content of the definition of this definition changed with the development of society.

So, for example, in most scientific sources of the socialist period, financial control was interpreted as one of the spheres, links, forms, branches of control over social production and distribution products. In connection with the beginning of the process of nationalization of property, this concept was associated only with state control. It is also characteristic identification of financial control with the control function of finance. As for the present, taking into account the changes that have taken place over the last decade, including in the economic sphere, things have changed somewhat approaches to defining the concept of financial control (Bazas, 2014).

Based on the analysis of the interpretation of the concept of financial control all approaches can be conditionally combined into five groups, depending on the aspect in which they consider the concept of financial control (Table 1.1).

Table 1.1

**Approaches to the interpretation of the concept of
“financial control”**

Group	Definition
1	2
As a function of the system financial management relations	<p>“... financial control in its economic essence is control function, which includes a set of observations, checks on the activity of the management object for the purpose of assessment reasonableness and effectiveness of decision-making and of the results of their implementation” (Vasylyk, 2004)</p> <p>“... as an element of control is a complex process, directed to check compliance of control objects with requirements, set parameters” (Zhovnirenko,2020)</p> <p>“... is a general management function that is responsible for supervision and verification of compliance of the object’s functioning adopted management decision, definition results of their implementation, detection of allowed deviations from relevant regulatory documents (laws, standards, orders) and principles of organization and regulation activities to which the inspection is directed” (Pihotsky, 2014)</p>
As a control function	<p>“... is a system of supervision and verification of compliance of the process the operation of the object of management is accepted management decision, establishing results, detection of deviations made in the process of such decisions” (Bilukha, 2014)</p> <p>“... financial control is based on using the control function of finance and acting as one from the manifestations of its important importance in extended reproduction” (Kalyuga, 2012)</p>
As the activity of various control bodies and their supervision system	<p>Financial control is one of the types of state control, which is carried out specially created for of this by state bodies and services, their territorial representative offices, executive bodies authorities, control and audit services of enterprises, institutions, organizations, subjects of independent financial control on behalf of the state authorities or independently according to their status, functions and powers with the aim checking the legality and effectiveness of formation, possession and use of funds of the Consolidated Budget of Ukraine, other financial resources, state property, financial activity of enterprises (Melnychuk, 2015)</p>

continuation of table 1.1

1	2
As one of the types of state control	Financial control is one of the elements of management finances; special validation activity value distribution of the gross national product, formation and spending of cash funds (Danchevska I, 2017)
	“...financial control as a form of state control according to the formation, distribution and use of all resources link of the financial system” (Hrabchuk, 2016)
As a set of activities carried out by controlling bodies	Financial control is a system of active actions that are carried out by state authorities, bodies of local self-government, business entities and by citizens of Ukraine to monitor its functioning of any object of management in the part of the formation distribution and use of financial resources by him for the purpose of assessing the economic efficiency of the economy activity (Stefanyuk, 2011)
	Financial control is a set of measures that are carried out subjects of control for verification of financial and related to operations and actions of state and municipal authorities entities, enterprises, institutions, organizations, as well as population using specific forms and methods organizations (Oleksich, 2017)

Modern financial relations require highly professional management by state and local authorities, which must ensure efficient, effective, transparent management of public finances. For such conditions, effective financial control is necessary as an important link of the national economy management system. The presence of financial control is objectively determined by the fact that finance as an economic category is characterized not only by distribution, but also by control functions.

Therefore, the use of finances by the state and administrative-territorial entities to solve their tasks necessarily involves control over their implementation. Financial control is carried out in accordance with the procedure established by law by the entire system of state bodies authorities and local self-government, including special ones controlling authorities. Financial control is one of the final stages of financial management and at the same time it is a necessary condition for efficiency financial relations in general. The special place of financial control in the general system of control as an element in the system of public management processes is determined by its specificity, which is manifested in the control function of finance

itself.

The ability to express is objectively characteristic of finance a specific side of production and economic activity in any field makes financial control comprehensive and comprehensive. At the same time, in order to so that from potentially possible financial control became real, in practice it is necessary to distinguish basic and superstructure elements of financial control.

If the control function of finance is a property of finance itself and serves as the basis of financial control legal relations, then financial control itself is the activity of the relevant bodies and organizations that carry it out.

The category “financial control” should be interpreted as an activity carried out by state and local self-government bodies, economic entities and citizens of Ukraine to ensure legality, financial discipline and expediency in the mobilization, distribution and use of funds and related material resources values from for the purpose of assessing the economic efficiency of economic activity, identifying and blocking deviations in it that prevent legal and rational the use of property and funds, expanded reproduction of production, satisfaction of state, collective and private interests and needs, and management of the economy.

Therefore, there is a different interpretation of the concept of “financial control”, in particular as a complex category, in which two types of it are combined: state and non-state. The existence of many definitions of financial control can be explained by the general methodological basis for defining the concepts that are used in any field of knowledge.

Financial control is characterized by features that are generally inherent control activities, namely:

- efficiency;
- purposefulness;
- immediacy;
- reasonableness;
- effectiveness.

Effective financial control contributes to acceleration economic and social development of the country, rational organization use of all available resources, ensuring preservation state-owned and communal property. Speaking of features of financial control, it should be noted

that it is taking place today complication, its multifacetedness is becoming more and more clear, since the sphere control activity is increasingly expanding, covering non-state ones enterprises, citizens engaged in entrepreneurial activities (Chernyavska, 2015).

The essence of financial control is revealed in the main tasks, placed before him, namely:

- checking the timeliness and completeness of execution by the controlled subjects of financial obligations to the state and local self-government bodies;

- verification of implementation by state and local authorities self-governance of the functions entrusted to them for the formation, distribution and use of monetary funds;

- verification of compliance with the correctness of financial transactions, preservation of funds and material resources;

- detection and elimination of violations of financial discipline;

- prevention of violations of legality in the field of financial activity, provision of compensation for material damage, identification of guilty persons and bringing them to justice;

- identification of internal reserves of production – improvement of its efficiency, the most economical use of material and monetary resources.

It is necessary to understand the subject of financial control the activity of objects of financial control – business entities, all legal entities and individuals whose activities are related to the use of public property, and its separate aspects – financial transactions and processes that are considered from the standpoint of legality, credibility, expediency and economic efficiency, preservation of property, correctness of formation and use of capital. At the same time, it should be borne in mind that each business entity, depending on the peculiarities of functioning, form of ownership, etc., has its own activity. Let's consider the subject of financial control using the example of business entities engaged in the production of goods, works and services.

At the same time, we note that the delineation of this category must be approached in accordance with the cycle of their activity (Table 1.2).

Financial control forms are being implemented by applying various methods. The method of financial control is a set of techniques, tools

and methods of the most appropriate collection and processing of data during the implementation control measures, with the help of which the financial and economic is studied activities of enterprises, institutions and organizations. At the same time, it should be noted that the methods of financial control are chosen depending on a combination of factors: the subject and the object of control, goals and tasks facing the subject of financial control, grounds the occurrence of controlling legal relations, as well as from other circumstances. Financial control uses the two most general groups of methodical methods and techniques: general scientific and special.

Table 1.2

Subject of financial control

Cycle stage	Subject of financial control
Production	Financial operations and processes related to the production process: actually production, objects and means of production, which are studied by inspection compliance with the rules of rationing, tariff rates, assessments, positions salaries, conditions and labor protection, correctness and timeliness of calculations with workers and employees, compliance with the order of shelter formation, storage, use of means of production and other elements production processes.
Distribution	Financial operations and processes related to the reproduction of the means of production, distribution and redistribution of the newly created product.
Exchange	Financial operations and processes related to the sale of products.
Consumption	Financial operations and processes related to production and personal consumption, reproduction and expansion of productive funds and pleasure social needs

Source: grouped by the author based on literary sources

General scientific methodological methods and techniques include analysis and synthesis, induction and deduction, analogy and modeling, abstraction and concretization, system analysis, functional-value analysis. Special methodological techniques include techniques developed practice based on the achievements of economic science. These techniques used to obtain evidence in the process of control actions during audits or thematic inspections. They are classified according to the following groups: documentary, factual, chronology of receipt of written documents explanations.

Financial controlling involves the formation and implementation

of a justification system, making, implementing and monitoring the implementation of operational financial decisions in order to achieve current (short-term) financial goals of the enterprise. The basic components of operational financial controlling is a system of annual budgets and budgetary control. Interconnection budgeting and budgetary control characterizes the main content of operational controlling, which consists in a systematic comparison of the actual performance indicators of the enterprise with the planned ones and further analysis is rejected

In Fig. 1.1 shows the special elements and methods of the system of state audit of the effectiveness of implementation of budget programs.

A debatable issue is the classification of “legislative authorities of various levels” to financial entities owl control. According to Art. 75 of the Constitution of Ukraine as a single body of legislative power Ukraine has a parliament – the Verkhovna Rada of Ukraine, whose main purpose is lawmaking, and one of the main powers is acceptance laws (clause 3 of Article 85 of the Constitution of Ukraine), and by no means not financial control. Control is on behalf of of the Verkhovna Rada of Ukraine upon receipt of funds to the State Budget of Ukraine and their use it is carried out by the Accounting Chamber (Article 98 of the Constitution of Ukraine) (Lysiak, 2015; Vygovska and Steblyanko, 2012).

Therefore, control as a management function is a set of forms, methods, control tools and procedures, with the help of which the subject of control receives information about the indicators that characterize the actual state of the subject of the object, establishes the deviation of these indicators from the target, set or regulations, identifies the causes of such deviations and takes measures aimed at them elimination, prevention and prevention in the future, in order to improve effectiveness of preparation, adoption and implementation of management decisions.

Financial control is a set of forms, methods and control tools with which financial entities legal relations receive information about the actual state of affairs regarding processes of formation, distribution and use of financial resources for all levels of the state’s economic system, compare the obtained data with the target data or regulatory requirements, determine the size and causes of the detected deviations,

take measures aimed at their elimination, prevention and warning in the future, in order to improve the effectiveness of training, making and implementing management decisions in the field of management financial resources.

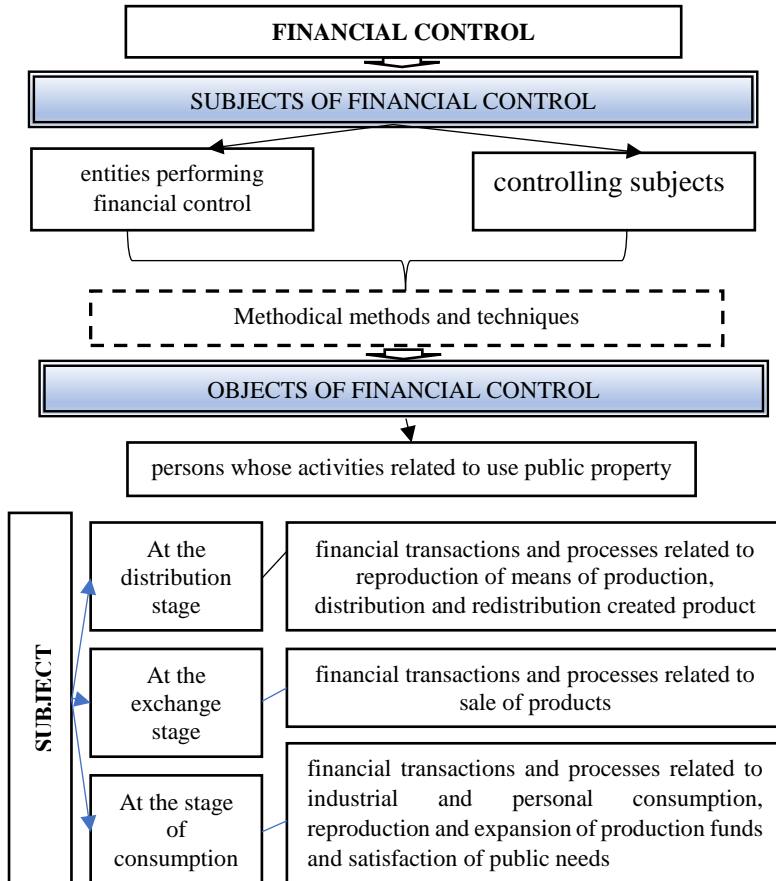


Fig. 1.1. The main elements of the financial control system

Source: grouped by the author based on literary sources

State financial control is a set forms, methods and tools of control with the help of which bodies state financial control receive information about the actual state of affairs regarding the processes of formation, distribution and use of public financial resources at all levels of the public sector of the economy, compare the obtained data

with the target data or regulatory requirements, determine the size and causes of the detected deviations, take measures aimed at their elimination, prevention and warnings in the future, in order to improve efficiency preparation, adoption and implementation of management decisions in the field management of state financial resources (Zhadan, 2017).

Discussions about the functioning of the financial control system in Ukraine often boil down to the issue of the distribution of powers between its various bodies and the search for answers to questions such as: how to improve the work of the current financial control system. Undoubtedly, this issue deserves serious attention. In modern conditions, state financial control plays a great role, the importance of which in the economy of the state is due to its place and role in all spheres of social reproduction. In addition, state financial control is a mandatory condition for the successful functioning of the financial system topics of any state and its main function management.

In fact, today the system of state control is a simple set of ministries, departments and institutions, which perform uncoordinated, disjointed and disorganized control functions. These functions, status and spheres of control activities are determined by various laws, decrees of the President of Ukraine, government resolutions and other legal acts. Legislation and legal acts are often mentioned not only do not ensure the system of the state financial control, and, on the contrary, cause duplication and parallelism in its implementation. All that indicates that there is an urgent need to create a unified system of state financial control in the country.

In today's conditions of Ukraine's desire for European integration, the issue of improving state financial control in accordance with the requirements of the European community in the system of government activity arises, these issues became the subject of discussions between the Cabinet of Ministers and international financial institutions (Shevchuk, 2013).

Having carried out diagnostics of the functioning of modern of the system of state financial control in Ukraine, it was found that the system of state financial control that currently functions in Ukraine only partially takes into account the main principles of the state financial control systems of the EU countries, however it should take into account the country's traditions in the field state administration,

existing state and administrative-territorial system and process its improvement, to be coordinated with the general ones principles and priorities of financial (in particular, in the budget process) and property policy, as well as with the process of reforms taking place in this area.

The concept of implementation of state policy in the field of reforming the system of state financial control – determination of directions and mechanism of development of the system of state financial control at the state, regional and local level and strengthening of the institutional capacity of the bodies of the State Audit Service:

- problems that need to be solved (imperfection of regulatory, financial, information and methodological support of the system of state financial control, insufficient level of reorientation of inspection on significant financial violations, lack of cooperation with European bodies for combating financial and economic crimes, the need to increase the level of public awareness of the directions and results of the bodies' activities);

- ways and methods of solving problems (increasing the efficiency of the function inspection by focusing the efforts of the State Audit Service are at their greatest financial risks, perfection of information ensuring tau normalization of the mechanism interaction and exchange of information, the formation of a system of fuses during implementation of decentralization and implementation proper local control and regional level).

For the budget system of Ukraine, which is in the process of reform, the issue of creating an effective system of state financial control is important and urgent. The first legislative act of Ukraine, which established the principles of creation system of state control in the budgetary sphere, became the Budget Code of Ukraine. The Code provides for control over compliance with budget legislation and defines the norms of responsibility and measures impact for violations of budget legislation. In addition, the powers of the budget control bodies of the regulations are regulated by special laws, Decrees of the President of Ukraine and other legal acts.

State financial control in the budgetary sphere is carried out by state authorities, local self-government bodies and covers financial movements flows from the budget system to managers and recipients of budget funds and the use of the received funds for the purposes

destination

The purpose of control is to ensure compliance by all participants of the budget process with legal relations established by legislation in the sphere of business and use of state and local financial resources. Its main tasks should be: control over the timely execution of income and state and local expenditure items budgets; determining the efficiency and expediency of spending state and local financial resources; analysis of identified deviations from established budget indicators and preparation of proposals aimed at their elimination; revenue control to the budget; assessment of the effectiveness of the use of budget funds; control over the implementation of the mechanism of interbudgetary relations; control over formation and distribution target budget funds of financial support of regions; financial detection abuses in the field of budgetary relations.

To the main principles on which financial control in the budget should be based sphere, including: objectivity and reasonableness, reflection of discovered facts of committing offenses in the budgetary sphere, unity of the legal framework and standards in the field of financial control, publicity of control results, responsibility of control bodies and officials for their actions during control (Mykytiuk, 2018).

In recent years, under the conditions of the budget reform, there is a danger of increasing the amount of non-targeted or ineffective budget funds, therefore, it is especially important the task of further improving the treasury control system, which is characterized by potential opportunities for ensuring the effectiveness of use, becomes a task budget funds, compared to other types of state financial control. These opportunities are connected, first of all, with the need to authorize budget expenditures by the treasury authorities, which turns treasury control into current operational control, and makes it possible to timely identify and prevent possible spending of budget funds with low effectiveness.

Determination of the place and role of state financial control bodies in a unified system, general principles and mechanisms of their organization and functioning should ensure unification and consistency of control over the administration of tax revenues and spending of budget funds, comparison of indicators of the economic efficiency of the use of state financial resources as a whole.

In the conditions of reforming local self-government, the issue of

control over the formation of local budgets is important state funds provided to one or another region. Control over the funds of local budgets according to their purpose contributes to the successful implementation of the financial policy of the state as a whole, ensures the process of formation and effective use of financial resources of a specific territory. The results of the study testify to the deterioration of the general state of financial and budgetary discipline and failure financial control systems to effectively perform state control functions at the regional level. A number of key ones remain outside the control of the state issues of the activities of local self-government bodies directly related to the budget and the use of communal property (Chechulina, 2014).

To the main problems of the state financial control in Ukraine should include: the fiscal nature of the vast majority control procedures; lack of systems- control, when the main one is the subsequent one control, and the pre- and post- of precise control are rather weak and non- regulated; not awareness is important internal financial control as in the state financial management system we, as well as heads of enterprises, institutions, organizations; low level of effectiveness of mechanical of administrative fines, when the amount fine for unintended or illegal use budget funds are much smaller for the amount of budget funds that the state loses due to abuse of officials and cannot provide full compensation blowing these losses; growth of financial violations in the sphere of use of budgeted funds; unsettled activity and the intersection of functions of financial control subjects.

The formation of the mechanism for the implementation of state financial control should be based on a set of principles that reflect the main properties of the created system in scientific and methodological, legal and organizational aspects. Such a hierarchy of structuring is justified and rational. To the group of scientific and methodological principles include the following: systematicity, complexity, purposefulness, continuity. The set of legal principles includes: legality, unity, prerogative of national interests. We include the following organizational principles: parity, objectivity and competence, budgetary efficiency, preventive measures, interaction of state authorities and local self-government (Lysiak, 2015).

The solution of the main problems can be achieved only thanks to the developed strategy of improvement, which must meet the

requirements of modernity and be based on the standards accepted throughout the world. In the activity of state financial control bodies, it is worth improving such areas of work as:

- wider introduction of a risk-oriented approach to conducting a remote audit of budget efficiency, which is aimed at organizing financial control not over all objects, but over the most risky ones;

- strengthening the staffing of financial control bodies, developing training programs and certification programs employees according to international standards;

- improvement of material, technical and financial support for the functioning of the state financial system control;

- settlement of the issue of proper compensation of financial resources for committed financial violations, in vol including for the embezzlement of state funds;

- activation of cooperation with international specialized organizations in this field, borrowing and adapting the best world practices (Koren, 2012).

In addition, the adaptation of the best world experience regarding the functioning of the state financial control system will make it possible to significantly increase the effectiveness of the control system activities, to create a more powerful tool for providing the state and society with high-quality, objective information necessary for increasing the efficiency of public administration and making important management decisions at all levels of government.

In the conditions of a high level of integration and globalization of the economy, quite different options for the distribution of duties and responsibilities between the financial manager and the controller, as well as financial and non-financial services of the enterprise, have arisen. The most common situation is when the financial director acts as the chief financial controller and also performs administrative management of the controlling system at the enterprise. In general, financial and non-financial management at the enterprise determines the directions of management, and with the help of controlling, its information and service support.

Controlling should change when strategic directions change and tactical approaches in achieving the set goal. To achieve the goal set by the company, financial management and financial controlling perform a number of tasks (Table 1.3).

Table 1.3

The main priority tasks of financial management and controlling

Financial management	Financial controlling
1. Ensuring the required amount of financial resources in the corresponding financial period	1. Monitoring of conditions for attracting financial resources
2. Effective use of the generated volume financial resources	2. Distribution and use of resources in accordance with real needs
3. Optimization of cash flows of the enterprise	3. Definition and use of traffic control methods cash flows
4. Ensuring profit maximization	4. Creation of profit responsibility centers and implementation of activities aimed at achieving strategic goals of the enterprise
5. Reduction of risk level	5. Creation of an integrated risk management system
6. Support of financial balance	6. Use of a balanced system of indicators for the purpose of optimizing the defined business prospects enterprises

Source: grouped by the author based on literary sources

The system of optimizing funding sources and more effective use of own financial resources is of particular importance. In this process, the role of the financial controller is quite important, since in this situation there are two parallel tasks – on the one hand – the possibility justification of the feasibility of attracting a financial source, and on the other hand, the ability to negotiate with an investor, creditor. Today, there is no problem with making financial calculations, but there is a problem with the ability to prove the company’s position to future investors or creditors. In market conditions, these can be banking institutions, leasing companies, other enterprises, shareholders, etc the controlling service faces an important task – the presentation of relevant and reliable information in the necessary volumes and at the appropriate time.

The main reasons for this situation are the authors consider the following:

- in directive economy, coordination was replaced by control;
- the concept of controlling is an innovation of the late 20th century;
- lack of the necessary level of knowledge and short-term orientation of the new owners perspective.

This is not an exception for Ukraine either. Despite the fact that

controlling has become integral a component of the general management system of the enterprise and covers all areas of its activity practical use has not gained significant and systematic use in Ukrainian enterprises. The implementation of financial controlling became the most widespread in banking sector. The real sector of the economy does not use the controlling system so widely management, although he does not deny the need for its use (Kartseva, 2017).

At the enterprise level (micro level), financial control is one of the management functions, without which the management process is incomplete. It is aimed at monitoring and checking the functioning and actual process the state of the managed object in order to assess the validity and effectiveness of the adopted management decisions and the results of their implementation, to identify deviations from the requirements these decisions, elimination of adverse phenomena and reporting on them. It does not absorb other functions, does not serve them as an auxiliary function, but interacts with them, exerting a significant influence on the effectiveness of their application.

Horizontally, each function, namely: planning, organization, accounting, analysis, control and regulation is characterized as a process that is complex a sequence of operations of analysis and synthesis, which are intertwined many times are repeated The content of each function determines the method of information collection, its processing and according to their results of management decisions. This allows to characterize accounting, analysis and control as organizational and information systems.

The composition and scope of internal control depends on many factors. Among them, the main ones can be considered: the object of management, the purpose of control, the stage of the enterprise's development, the peculiarities of its business, the size of the enterprise, its activities, etc. The enterprise independently selects the key, essential elements of key control points to which it pays constant attention. Such points can be: "business activity cycles" – "income generation cycle", "acquisition cycle" and "production cycle"; operating or financial lease; foreign economic activity; operational, investment or financial activities; control over activities of branches or separate units; enterprise taxation, etc. Individual control points are determined when the enterprise conducts various types of activities at the same time.

The main problems of the introduction of intra-household control at large enterprises become the consistency of the work of various bodies and levels of management and control, as well as the use of special controls methods. Bodies of internal economic control can be permanent active inventory commissions, audit commissions, internal audit departments enterprises, individual controllers in structural subdivisions, etc. Necessary there is coordination of the efforts of services and control units, the technical department of (technological) control, groups of economic analysis, wide application methods of operational and strategic management accounting. On such it is expedient for enterprises to create a special coordinating body with of internal economic control, which can be called “auditing committee”.

If necessary, the internal controller should be delegated to other technological divisions – for example, to the tender committee, investment management unit, accounting department, budget committee, etc. At large enterprises, it is necessary to develop and fix in a separate document its own control policy and comply with its requirements. Medium-sized enterprises are in more (Smorzhanjuk, 2018).

Therefore, the organization of financial control of the enterprise should take into account, in particular, such requirements as its size and types of activities. It is appropriate to take into account the adequacy of control measures to the operating conditions of a particular enterprise. At large enterprises, the problems of financial control become coordination of the work of various bodies, as well as levels of management and control, application of special control methods. At medium-sized enterprises, difficult situations may arise, related to the requirements for the control of complex objects and significant changes in the scope of activities. When separate management and control functions are combined, the problems of ensuring coordination of control vectors appear. In small enterprises, important aspects of control are competence of personnel, selection of new personnel and improvement of qualifications of employees. When calculating the cost of products of enterprises of the non-financial sector of the economy, the regulatory documents highlight the main provisions of control – such as the purpose, objects and subjects of control, direction of control, communication relations.

References to section 1.1

Shevchuk O.A. (2013) State financial control: issues of theory and practice: monograph. K.: UBS NBU. 2013. 431 p.

Zhadan T.A. (2017) Economic essence and content of the concept "state financial control". *Black sea economic studies*. Issue 16. P.161-168.

Lysiak L.V. (2015) Development of state financial control in Ukraine. *Economic Bulletin university*. Issue 26 (1). P. 200-206.

Vygovska N. Steblyanko O. (2012) State financial control in the land relations regulation system. *Galician Economic Bulletin*. № 4 (37). P. 104-111.

Britchenko I., Lysiuk O. (2020). The Influence of migration on the financial circulation in the economy of Ukraine. *VUZF review*. № 5(4). P. 9-14.

Britchenko I., Lysiuk O. (2021) Social entrepreneurship as an instrument of development of small and medium entrepreneurship in Ukraine. *VUZF review*. № 6 (1). P. 38-48.

Bezpartochnyi M., Britchenko I., Bezpartochna O. (2021) Ensuring the financial safety of Ukrainian agricultural enterprises in the context of export products and the impact on macroeconomic indicators. *VUZF Review*. № 6(3). P. 186-195.

Брітченко І.Г., Момот О.М. (2011) Особливості використання скорингових систем у банківському кредитуванні фізичних осіб. *Збірник наукових праць КНЕУ "Фінанси облік і аудит"*. Вип. 17. К: КНЕУ. С. 31-37.

Chernyavska L.V. (2015) Nature and essence of state financial control. *Financial Space*. № 2 (18). P. 279-282.

Oleksich Z.A. (2017) Formation of a unified state system of financial control. *Electronic scientific specialist publication "Efficient Economy"*. № 7. URL: <http://www.economy.nayka.com.ua>

Stefaniuk I.B. (2011) State financial control: classifications characteristics. *Bulletin of KNTEU*. №. 4. P. 42-51.

Hrabchuk O.M. (2016) Financial control in increasing efficiency budget process in Ukraine. *Investments: practice and experience*. №. 16. P. 15-17.

Danchevska I.R. (2017) Organizational principles of state financial control in Ukraine. *Scientific and practical magazine "Infrastructure of the Market"*. №. 13. URL: <http://www.market-infr.od.ua/uk/13->

2017.

Melnychuk V.G. (2015) Economic growth and problems of State Financial Control. *Economy Ukraine*. № 12. P. 18-21

Kalyuga, E.V. (2012) Financial and economic control in the management system: monograph. K.: Elga, Nika center. 320 p

Zhovnirenko O.V. (2020) Methodological regulations for efficiency evaluation of internal financial control. *Scientific World*. URL: <http://www.sworld.com.ua/konfer20/205.htm>

Pihotsky V.F. (2014) System of state financial control in Ukraine: monograph. Lviv. 334 p.

Bilukha M.T., Mykytenko T.V. (2014) Customs control: organization and methodology. *Scientific bulletin of the National University of the State Tax Service of Ukraine (economics, law)*. № 1. P. 181-187.

Danchevska I.R. (2017) Final stage of management activity, which allows compare the achieved results with the planned ones Prospects for the development of state financial audit implementation of local budgets. *Scientific and economic journal "Intellect XXI"*. № 5. P. 107-110.

Shashkevich O.L., Mashko A.I. (2014) Conceptualization of financial resources as of the object of financial control. *Electronic scientific specialist publication "Efficient Economy"*, № 6. URL: <http://www.economy.nayka.com.ua/?op=1&z=3151>.

Mykytiuk I. (2018) Increase of stimulant influence remittances from abroad. *World of Finances 1 (54)*. *World of Finances*. № 1 (54). P. 59-69

Yukhymenko P. I., Fedosov V. M., Lazebnyk L. L. and others.(2010) Theory of finance: Textbook. K.: Center of Educational Literature, 576 p.

Vasylyk O.D. (2004) Theory of finance: Study guide. K: Center for Educational Literature. 480 p.

Gutsalenko L.V., Derii V. A. and Kotsupatrii M. M. (2009) State financial control: education. Manual. K.: TsUL. 424 p.

Stefanyuk I. (2011) Methodological principles of the functioning of the system of state internal financial control in Ukraine. *Finances of Ukraine*. №. 6. P. 84-102

Bazas, M.F. (2014). Methodology and organization of financial control. textbook for students. higher education closing. K.: MAUP. 440 p.

Cechulina, O.O. (2014). World trends and perspectives of development of state financial control. *Finansy Ukrainy. Finance of Ukraine*. №2, P. 49-56.

Lysiak, L.V. (2015). Development of state financial control in Ukraine. *Economic Bulletin of the university*, № 26/1, P. 200–206.

Koren, N.V. (2012) Conceptual Principles of the Formation of the System of Public Financial Control in the Conditions of Economic Reforms. *Formation of market relations in Ukraine*, № 8, P. 21–25.

Kartseva V.V. (2017). Financial control in the system financial management. sustainable development of the economy. *All-Ukrainian scientific and industrial journal*
<http://dSPACE.puet.edu.ua/bitstream/123456789/778/1/195.pdf>

Smorzhanjuk T.P. (2018) The inner king in the process of management by production: education manual. K.: Condor, 254 p.

1.2. Organization and types of economic analysis in the enterprise management system ²

Operational and reliable information support for the adoption of management decisions depends on the stability and correctness of the formation of information flows at the enterprise. A modern enterprise should be studied as a system in which many different processes that are interconnected and complement each other flow (Mulyk, 2019).

One of the mechanisms for ensuring the formation of an appropriate information base for the enterprise management system is the system of economic analysis. The rational organization of economic analysis ensures the proper organization and development of effective mechanisms for performing analytical work at the enterprise and the appropriate design of the results of the calculation of analytical indicators.

Analysis as a function of internal production management has its own methodological basis: principles, functions, organizational structure, methods and tools, information base. Analytical activity is aimed at studying, accounting for demand and market requirements

² Mulyk T.O.

for a reasonable orientation of production for the release of competitive products in previously established volumes that correspond to certain technical and economic characteristics, realization that can ensure the company to obtain the highest profit.

Under the new economic conditions, a characteristic feature of which is instability, it is vitally necessary for enterprises to carry out a constant systematic collection and processing of information data in order to adapt to the conditions of the external environment and achieve competitive advantages. Aware of this undeniable fact, generated by harsh economic conditions, domestic enterprises, using modern methods of obtaining and analyzing information, gradually create a solid information and analytical base for a well-founded and effective management decision.

A properly adjusted and organized system of analytical business processes at the enterprise allows to minimize cases of distortion and distortion of information provided for management needs. Today, in various scientific articles and publications, you can find different interpretations of the concept of “organization of economic analysis”, which is due to the presence of different points of view regarding the procedure for its implementation. In order to eliminate asymmetry in the interpretations of this term, approaches to its interpretation are systematized (Table 1.4).

Analyzing the data presented in Table 1.4, it is possible to conclude that there is no unanimity of scientists’ opinions regarding the interpretation of the concept of “the organization of economic analysis”. The organization of the analysis is considered from the point of view of the procedural aspect and is considered as a set of rational and coordinated actions in the process of analyzing the indicators of the economic activity of the enterprise. In particular, in this direction, the authors consider the organization of economic analysis as the organization of an analytical service (as the subject of economic analysis) and the organization of the direct performance of analytical work (Novichenko, 2022).

As it is well known, the main feature of the analysis of the economic activity of an enterprise is a complex, systematic study of economic phenomena, processes, factors and reasons that determine them. The study of economic phenomena requires the study of the manifestation of economic laws and categories of the market economy

in the conditions of various types of enterprises and associations, their specifics at each stage of the development of market relations.

Table 1.4

Interpretation of the concept “the organization of economic analysis” in various scientific sources

Author	Interpretation of the concept
Stetsyuk L. S. (Stetsyuk, 2015)	The organization of analysis at the enterprise covers a wide range of issues, which include the organization of the analytical service; organization of analytical process technology; development of general principles and procedure of analysis; organizational, methodical, material and technical support; general management and reception of performed analytical works; development and improvement of economic analysis
Zorina O. A., Ryabinina O. V. (Zorina, Ryabinina, 2016)	At the same time, the organization of the analysis is a concept that exists in two planes: first, the organization of the analytical service as a separate structural unit and ensuring the analysis; secondly, the organization of analytical work carried out in the process of analysis
Derii V. A. (Derii. 2016)	The essence of the rational organization of analytical work in a functioning enterprise is to correctly set up the mechanism for selecting input information for conducting analytical procedures, its grouping and transformation, and obtaining initial analytical data in order to provide management personnel, investors, employees of commercial banks and others with them in a timely manner users of such information
D. V. Maksymenko (Maksymenko, 2010)	The organization of analytical work should be understood as a system of rational, coordinated actions in the process of studying the object of observation in accordance with the defined tasks
Mulyk T.O., Fedoryshyna L.I (Mulyk, Fedoryshyna, 2020)	The organization of the analysis is a system of rational coordinated actions aimed at a comprehensive study of the economic activity of the analyzed enterprise and its individual structural units. The complexity and systematicity of the organization of analytical work is ensured through planning, which consists in drawing up a comprehensive plan for the organization of all analytical work at the enterprise and plans for a separate type of analysis in particular.
Novichenko L. (Novichenko, 2022)	The organization of economic analysis should be understood as a set of ordered actions for the creation of an analytical system, which includes the selection and coordination of the activities of the subjects of analysis, the organization of the technology of analytical processes, the appropriate security, improvement and rationalization of information processing for the purpose of its further use, taking into account the requests of management personnel.

Source: formed by the author based on literary sources

The most important features of the analysis, without which it is practically impossible to talk about it, are certain theoretical concepts, a style of thinking, a planned approach to making production decisions from the standpoint of the most complete satisfaction of the consumer's requirements. The philosophy of the analysis is simple: the manufacturer must produce such products that have sales and can reach the planned level of profitability and for which a certain amount of profit can be obtained. Taking this into account, the manufacturer purposefully sets tasks in the field of scientific and technical developments, puts forward requirements for them, tentatively calculating production costs, price level and profit (Mulyk, Fedoryshyna, 2020).

Business analysis is a link between accounting and management decision-making. In the process of analysis, the accounting information undergoes analytical processing: the achieved production results are compared with the data of the current and prospective plan, past periods, other enterprises, average industry data; the influence of various factors on the value of performance indicators is determined, shortcomings, errors, unused opportunities, prospects, etc. are revealed (Podolyanchuk, 2010).

With the help of the analysis, the problem is identified, the causes of its occurrence are determined, its development is predicted, and the possibilities of solving the problem are revealed. Based on the results of the analysis, management decisions are developed and substantiated. Economic analysis precedes decisions and actions, justifies them and is the basis of production, ensuring its efficiency. It allows to reduce uncertainty when making a management decision based on assumptions and intuition (Savytska, 2007).

Analysis of economic agricultural activity is a comprehensive study of the work of enterprises and structural divisions with the aim of identifying opportunities for increasing the efficiency of their activities.

The subject of the analysis is the cause-and-effect relationships of economic phenomena and processes, the knowledge of which allows for a comprehensive study of the results of activities, their sensitivity to management influences in order to prepare information for making optimal management decisions aimed at increasing the efficiency of the enterprise's functioning and strengthening its market positions

(Mulyk, Materynska, Plyonsak, 2017).

The object of analysis of economic activity is the results of economic activity of enterprises, which are approximated by a system of interrelated indicators reflecting its individual aspects and segments.

The main purpose of the analysis of economic activity is the preparation of information for making optimal management decisions and for substantiating current and prospective plans aimed at achieving short-term and strategic goals of the enterprise (Mulyk, Materynska, Plyonsak, 2017).

The implementation of this goal of the analysis of economic activity provides assessing the current situation, diagnosing and forecasting its development, and finding ways to achieve the desired results in the most effective ways. Accordingly, three functions of analysis are distinguished: evaluative, diagnostic, search (Fig. 1.2).

The tasks of economic activity analysis can be distinguished as follows:

- ✓ study of the state and trends of economic development of the enterprise in past periods;
- ✓ forecasting of activity results based on existing development trends and expected changes in the future;
- ✓ scientific substantiation of current and prospective plans (target program of the enterprise);
- ✓ control over the implementation of plans and management decisions;
- ✓ use of the economic potential of the enterprise in order to identify shortcomings, errors and operational impact on economic processes;

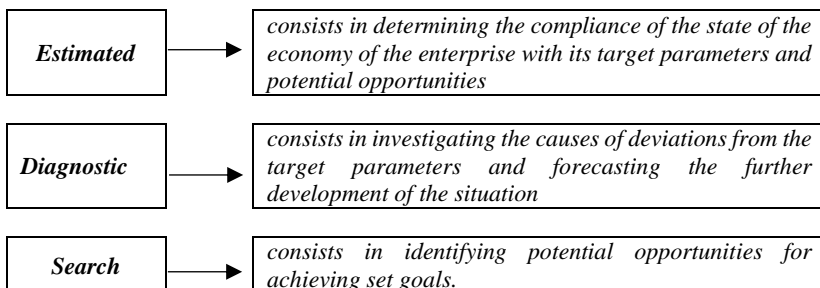


Fig. 1.2. Functions of analysis of economic activity

Source: (Mulyk, Materynska, Plyonsak, 2017)

✓ study of the influence of objective and subjective, external and internal factors on the results of economic activity, which allows to objectively evaluate the work of the enterprise, to make a correct diagnosis of its condition and forecast its future development, identify the main ways of improving its efficiency;

✓ search for reserves to improve production efficiency based on the study of best practices and achievements of science and practice;

✓ assessment of the results of the enterprise's activities in order to achieve the set goals – implementation of plans, the level of effectiveness and efficiency of the business, the use of available opportunities, the position on the market of goods and services;

✓ assessment of the degree of financial and operational risks and the development of internal mechanisms of their management in order to strengthen the market position of the enterprise and increase business profitability;

substantiation of measures to eliminate identified shortcomings and develop reserves to increase the efficiency of the enterprise's functioning in order to increase its competitive advantages (Ehorova, Dorogan-Pysarenko, Lytvyn, 2016). The users of the analysis are the recipients of its results. They can be internal and external (Fig. 1.3).

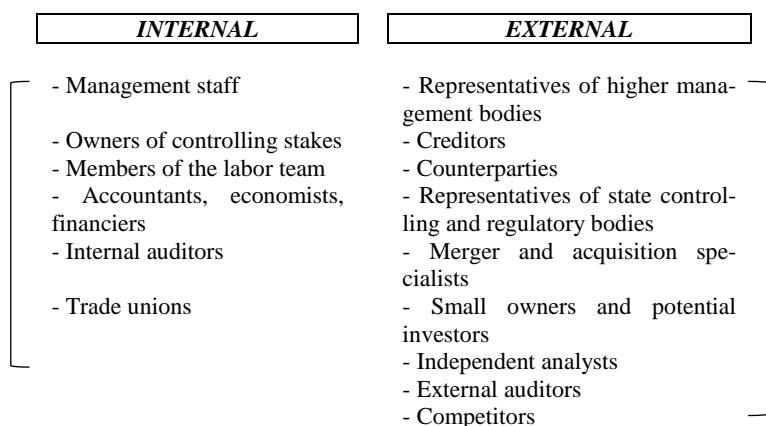


Fig. 1.3. Users of analytical information

Source: (Mulyk, Materynska, Plyonsak, 2017)

More often, the users of the analysis are heads of various levels of management, authorized to make management decisions, chief specialists, specialists, owners (shareholders, private individuals,

creditors). In addition, analysis data can be provided to members of the labor team.

Performers of economic analysis, and directly, analytical work at the enterprise, are either individual employees of the enterprise, if it is a small or medium-sized enterprise, or entire structural units at large enterprises (Mulyk, 2020)

To ensure high efficiency and expediency of the analysis of economic activity, the following principles should be observed:

- ✓ complexity – coverage the maximum of structural subdivisions and areas of activity, comprehensive study of cause-and-effect dependencies of the development of the main activity of the enterprise;

- ✓ systemicity – understanding the object being studied as a complex dynamic system, containing elements related to each other and to the external environment;

- ✓ objectivity – use of verified information that reliably reflects objective reality;

- ✓ accuracy – substantiation of conclusions with accurate analytical calculations;

- ✓ effectiveness – active influence on the results of the company's activities, timely identification of shortcomings and adoption of appropriate management decisions;

- ✓ planning – carrying out according to a plan and systematically, which causes the need for planning and control over the conduct of analytical work at the enterprise, determines the distribution of responsibilities between executors;

- ✓ efficiency – quick and clear analysis of situations, generation of appropriate management decisions and their implementation in the life of the enterprise.

Therefore, the organization of economic analysis should provide optimal structuring and regulation of the technology of its implementation with further decomposition of the order of performance of analytical work and should include the following elements (Fig. 1.4). It is advisable to consider the organization of economic analysis as a system consisting of interconnected elements that are in constant contact. The main elements of the organization of economic analysis as a system are subjects of analysis (subjects that initiate the organization of economic analysis; subjects that organize the analysis; subjects that perform analytical functions) and objects of

analysis (economic activity of the enterprise). Depending on the purpose and tasks of the economic analysis, sources of information and methodical support for conducting analytical procedures will be chosen in the future (Novichenko, 2022).

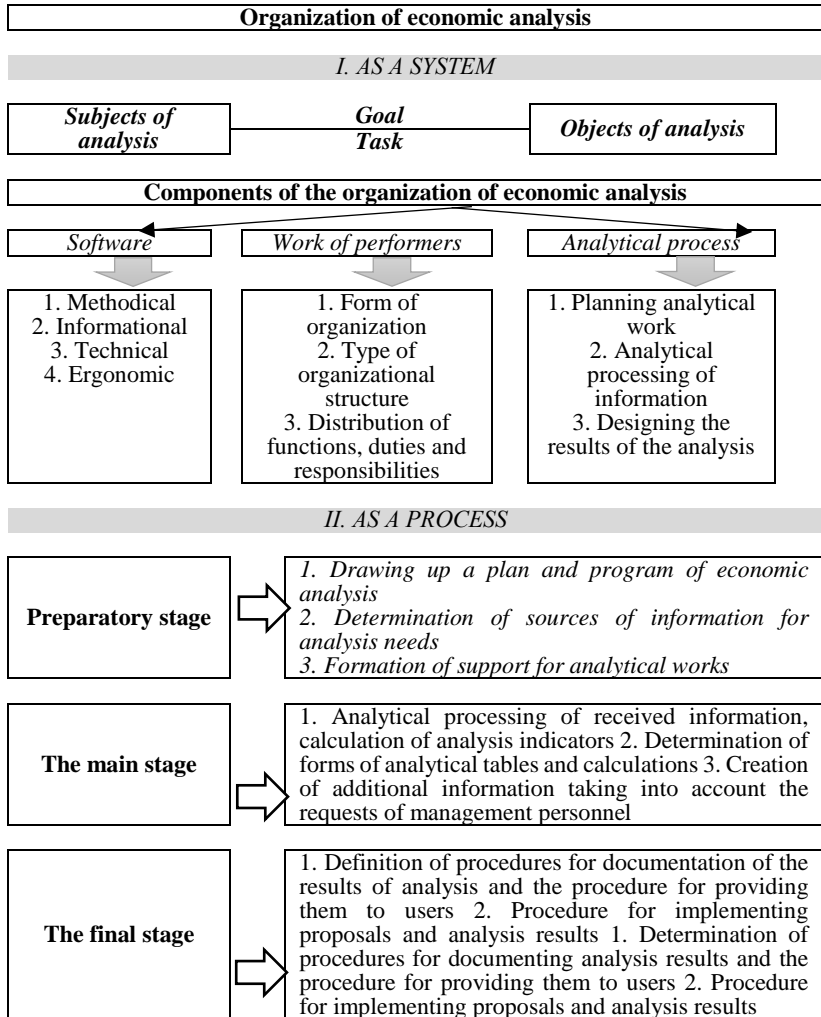


Fig. 1.4. Content and organizational components of economic analysis

Source: (Novichenko, 2022)

An important component of the organization of economic analysis is various types of provision. The methodological support of the organization of economic analysis is formed from a set of techniques and methods that are used at the enterprise when performing analytical procedures and calculating the main analytical indicators. The person responsible for managing the analytical work may develop and approve methodological recommendations for the analysis of the economic activity of the enterprise, including the thematic analysis. The main elements of methodological support of economic analysis should be the goal and task of economic analysis; a set of indicators that are calculated during the analysis; interrelationship of indicators and the procedure for making calculations; frequency of analysis; sources of information; procedure for generalization and registration the results of economic analysis (Novichenko, 2022).

Information provision of the organization of economic analysis consists in the use of various types of data and information. In particular, in the process of building a system of analytical research at the enterprise, data from regulatory documents, planning and regulatory materials, financial reporting indicators and information from the accounting system, information about the internal and external environment of the enterprise can be used. Technical support of the organization of economic analysis is a complex of technical means and methods that ensure the functioning of the enterprise's analysis system. Technical support includes technical means (software for performing analytical calculations, means of information transmission, means of accumulating and processing information), methodical recommendations on issues of economic analysis approved at the legislative level. Ergonomic support of the organization of economic analysis is based on the creation of appropriate working conditions in the analytical service or department, the formation of an appropriate microclimate and lighting (Novichenko, 2022).

One of the elements of the organization of the economic analysis of the enterprise is the organization of the performers' work. In this direction, the business entity must choose the form of organization, namely centralized, decentralized or mixed. The choice of the form of organization depends on the size and branch specifics of the activity, needs and capabilities of the enterprise.

A characteristic advantage of a decentralized system is the maximum proximity to the management process, which is a favorable prerequisite for increasing the efficiency of the performed analytical work, as well as the possibility of using personal computers. In such a system, a specialized department is not created, instead, analytical work is distributed in the existing organizational system of enterprise management. The decentralized system of organizing economic analysis is the most common in the antiques market, since the vast majority of entities operating in it are small enterprises (Kovalchuk, 2011). A mixed form of organization of economic analysis is a combination of centralized and decentralized forms.

The distribution of functions, duties and responsibilities between economic analysis subjects is carried out on the basis of developed internal regulatory documents, job instructions. Business entities should develop and approve an internal. Regulation on the organization of analytical work, which should regulate the main issues of the distribution of responsibilities and analytical functions at the enterprise, the procedure for carrying out analytical procedures and the registration of the results of economic analysis. The specified position should be developed taking into account the specifics of the enterprise's activities, the objects of economic analysis and the periodicity of its implementation (Novichenko, 2022).

The expediency and effectiveness of the internal regulation of the organization of economic analysis in corporations are noted by O. A. Zorina and O. V. Ryabinin, who note that the use of the developed standard position for the organization of economic analysis will ensure the structuring the elements of organizational support for the analytical work system in the corporation, which will increase its efficiency by implementing the concept of systematicity and regularity (Zorina, Ryabinina, 2016).

The next component of the organization of economic analysis is the analytical process, which is revealed in more detail when studying the organization of economic analysis as a process. The process of organizing an economic analysis consists of three stages: preparatory, main and final stages. At the preparatory stage of the organization of the economic analysis, it is necessary to carry out the planning of economic analysis activities at the enterprise.

Usually, in the practice of domestic enterprises, a plan and program

of economic analysis is drawn up based on planning results. The plan for conducting economic analysis is the embodiment of the technology of performing analytical work at the enterprise and includes the sequence and order of conducting analytical studies (Novichenko, 2022).

The plan of analytical work takes into account the work of people and the movement of resources (material, financial), has the force of an order for the persons and structural units specified in it. The plan specifies the purpose of the analytical service, its structural units and individual employees regarding analytical research for the planned period, means of achieving the goal, methods and terms of coordination of means and purpose, stages and terms of analytical work, executors of the plan by terms and types of work, methods, stages and means of controlling the implementation of the plan as clearly and in detail as possible (Kupalova, 2008).

Therefore, the planning of analytical work is a way of achieving the goal based on the balance and sequence of execution of all analytical operations. In addition, the plans must provide for the availability and rational use of the following various resources: labor (people, time); scientific and methodical (scientific methods, recommendations for analysis); informational (statistical, operative accounting, planning data, sample survey materials, etc.); financial (funds for analyst salaries, conducting research, production experiments, monographic, sociological surveys, sample observations, etc.); material and technical (office supplies, technical means of information processing, etc.) (Mulyk, Fedoryshyna, 2020).

At the main stage of the organization of the economic analysis, it is necessary to determine the mechanisms and order of payment of analytical information, to approve the forms of analytical tables, schedules and document templates, which are drawn up in the process of performing analytical work. Also, at this stage, the procedure for creating additional information based on the requests of management personnel, the procedure for its accumulation, processing and providing should be streamlined.

At the final stage, the results of the analysis are summarized and aggregate production reserves are calculated, a final assessment of the enterprise's activity is given; constructive measures to improve the work and use of identified production reserves are being developed

(Mulyk, Materynska, Plyonsak, 2017).

The multifacetedness and importance of the organization of analytical support and analytical work at the enterprise determines the allocation of its sequence at the stages of enterprise activity with the corresponding directions of economic analysis (Fig. 1.5).

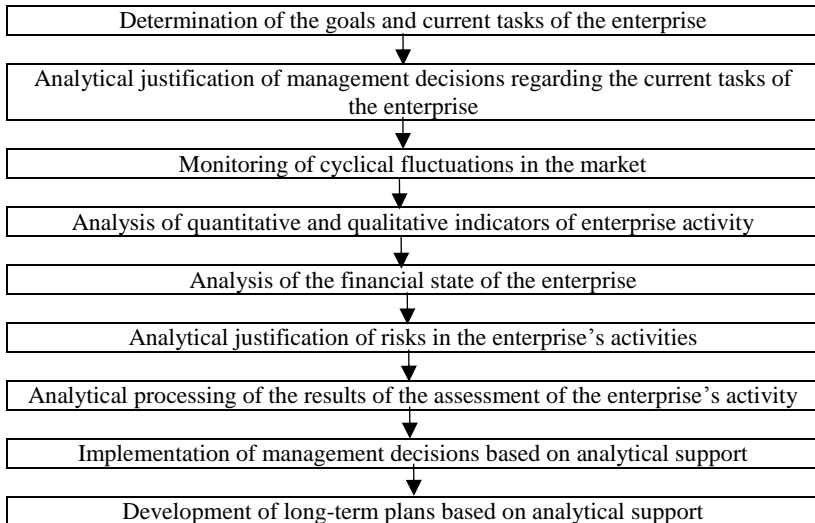


Fig. 1.5. Areas of analytical support for enterprise activity

Source: (Tomchuk, 2019)

The materials collected during the analysis, completed tables, calculations of the influence of factors and reserves are summarized and written in the form of certificates, inspection reports, analytical and report notes, explanatory notes to the reports at the last stage. Employees of external institutions practice drawing up the results of the analysis in the form of a conclusion.

An independent or additional document that displays the results of the analysis is a draft order.

It gives a general assessment of the work and determines the measures, their start and end dates, necessary material and monetary resources, performers, responsible and controlling officials or divisions of the enterprise. This document, approved and signed by the managers of the enterprise, is mandatory for the implementation of the measures proposed by the analyst (Ivakhnenko, 2000).

After the implementation of measures based on the results of the analysis, effective and day-to-day control should be established, otherwise the same defects in the work will be repeated in the materials of subsequent inspections and analytical conclusions.

So, analytical work at the enterprise is a study and evaluation of the use of all types of economic resources and the results of the enterprise's work with the aim of increasing its efficiency. In the process of analytical work, economic and social factors affecting production efficiency, which is the basis for the selection and justification of management decisions are revealed.

The organization of an effective system of analytical support will allow to create a more effective and stable management system with the help of the following procedures: putting the documents in order; reduction of time for manual processing of information and its search; reducing the term for making management decisions; data protection against unauthorized access.

In economic literature, economic analysis is classified according to various features, which is important for a correct understanding of its content and tasks (Fig. 1.6).

So, for example, according to the branch sign, which is based on the division of labor, economic analysis is divided into sectoral, the methodology of which takes into account the specifics of individual sectors of the economy (industry, agriculture, construction, transport, trade, etc.), and intersectoral, which is the theoretical and methodological basis of the analysis of economic activity in all sectors of the economy.

The objective necessity of branch analysis of economic activity is determined by the specifics of various branches of production. Each of them, due to the different nature of work, has its own characteristics and, as a result, characteristic economic relations.

According to the subjects of the analysis, there is a distinction between intra-household and inter-household analysis. Intra-household analysis studies the activity of only the investigated enterprise and its structural subdivisions. Inter-household analysis compares the results of two or more enterprises. Such an analysis is aimed at finding innovations and identifying the reserves for increasing the efficiency of the analyzed enterprise.

A sign of classification	Types of analysis	A sign of classification	Types of analysis
<i>By subjects of analysis</i>	Internal External	<i>According to the sign of time</i>	Promising Retrospective
<i>By the level of coverage of the objects of analysis</i>	Solid Selective	<i>By volume of research</i>	Complex Thematic
<i>By the time management decisions are made</i>	Promising Retrospective	<i>According to the content of the program</i>	Complex Thematic
<i>By branch</i>	Industry Interdisciplinary	<i>According to the method of object research</i>	Qualitative analysis Quantitative analysis Express analysis
<i>By nature of object research</i>	Comparative Factorial Diagnostic Marginal Economic and mathematical Functional and valuable	<i>By objects of analysis</i>	Marketing Industrial Financial analysis Analysis of labor resources Analysis of innovation and development

Fig. 1.6. Types of economic analysis

Source: grouped by the author based on literary sources

According to the functional purpose, the analysis can be:

- managerial – studies the dynamics and movement of available resources at the enterprise, the effectiveness of their use and searches for ways to improve them, and it is also a type of internal analysis and confidential information;

- financial – assessment of the financial results of the enterprise,

analysis of their dynamics and factors based on financial reporting, is a type of external analysis and public information;

– strategic – assessment of the company's potential, analysis of internal strengths and weaknesses, as well as external opportunities and threats in order to forecast the company's activities and form its strategy for the future (Mulyk, Materynska, Plyonsak, 2017).

According to the time, the analysis of economic activity is divided into preliminary (prospective) and further (retrospective, historical).

A preliminary (prospective) analysis is carried out before the implementation of economic transactions. It is necessary for the justification of management decisions and forecast plans, prevention of undesirable consequences based on the assessment of the sensitivity of performance indicators to changes in external and internal factors.

Further (retrospective, historical) analysis is carried out after the implementation of economic transactions. It is used to study development trends, monitor the implementation of operational and strategic plans, objectively assess and diagnose the results of the enterprise's activities and the level of business risks.

Prospective and retrospective analyzes are closely related. It is the retrospective analysis that makes it possible to see the perspective and is the basis of prospective analysis. The analysis of labor results over the past years makes it possible to study the trends and regularities of economic development, to reveal the consequences of previously made management decisions, to identify untapped opportunities, best practices, which are important when justifying the level of economic indicators for the future. Understanding the past is a necessary prerequisite for predicting the future. However, the results of the retrospective analysis depend on the depth and quality of the preliminary analysis. If the planned or forecast indicators are not sufficiently substantiated and real, then their further analysis generally loses its meaning (Mulyk, Materynska, Plyonsak, 2017).

Retrospective analysis, from its side, is divided into operational and final. Operational analysis is carried out immediately after the implementation of economic transactions or changes in the situation for short periods of time (shift, day, decade, etc.). Its purpose is to assess quickly the changes in given parameters, identify undesirable deviations and their causes, and timely take corrective measures to eliminate them. It should be conducted during the period of time in

which the causes that cause these deviations arose and continue to operate. The market economy is characterized by the dynamism of the situation, of both the production, commercial, financial enterprise activity and its external environment. Under these conditions, operational analysis becomes especially important (Mulyk, Materynska, Plyonsak, 2017).

The final analysis examines the results of work for the reporting period (month, quarter, year). Its value is that the activity of the enterprise is studied comprehensively according to the reporting data for the relevant period. This ensures a more complete and objective assessment of the enterprise's activity in the use of available opportunities.

Operational and final analyzes are interconnected and complement each other. They enable the management of the enterprise not only to promptly identify and eliminate deficiencies in the production process, but also comprehensively summarize the achievements, performance results for the relevant periods, to develop measures aimed at increasing production efficiency.

Prospective analysis, depending on the length of the time horizon, is divided into short-term and long-term (strategic).

Short-term analysis covers a period of up to one year, long-term - over a year. Short-term predictive analysis is used to develop tactical, and long-term - strategic policy of the enterprise in the field of business. The second type is less detailed than the first. It provides answers to the most general questions, but its role is much higher. If the right strategy for the development of the enterprise is chosen, it is easier to make tactical decisions (Mulyk, Fedoryshyna, 2020).

In the conditions of market competition, strategic analysis becomes an integral part of management activities. According to its content, this analysis is a stage of pre-planned research, at which the internal and external factors of the enterprise's functioning are systematically studied (Mulyk, Tomchuk, Fedoryshyna, 2019).

According to the frequency of the analysis, it is divided into periodic and one-time.

Periodic analysis is done regularly at appropriate time intervals (shift, day, month, quarter, year). One-time analysis is carried out in connection with various circumstances of a one-time nature (transition to a new technology, change in the structure of production, etc.).

According to subjects (users of the analysis), internal and external analysis are distinguished. Internal (management) analysis is carried out directly at the enterprise for the needs of operational, short-term and long-term management of production, commercial and financial activities. Its results are a trade secret. External analysis is carried out on the basis of financial and statistical reporting by economic management bodies, banks, financial bodies, shareholders, investors, business partners (Mulyk, Fedoryshyna, 2020).

According to the degree of coverage the studied objects, the analysis is divided into continuous and selective. In the case of continuous analysis, conclusions are made after studying all objects without exception, and in the case of selective analysis – based on the results of the examination of only part of the objects, which allows to speed up the analytical process and the development of management decisions based on the results of the analysis.

According to the methods of object study, the analysis is divided into:

Comparative – a comparison of the reported data with the data of the plan, of the previous reporting period, with the data of advanced enterprises, as well as with the data of competitors is carried out. The following types of comparative analysis are distinguished:

- horizontal – is used to calculate the absolute and relative deviations of articles (or groups of articles) compared to the beginning of the reporting period, with the previous period;

- vertical – is used to study the structure of funds and their sources by calculating the specific weight (in percentages or coefficients) of individual items in generalized indicators;

- trend – is based on the calculation of relative deviations of indicators for a number of years from the level of the base year, for which all indicators are taken as 100% (Mulyk, Materynska, Plyonsak, 2017).

By the amount of research or the content of the program, the analysis can be complex and thematic. In the case of a complex analysis, the activity of the enterprise is studied comprehensively, and in the case of the thematic analysis, only certain aspects that are of greatest interest at a certain moment are studied, for example, the issue of the use of material resources, the production capacity of the enterprise, the reduction of the cost of production, changes in the

assortment of products, etc.

Economic activity (managed system) consists of several subsystems: operational (technique, technology, organization of production), financial, investment, marketing, social, environmental protection, institutional, etc. The aspect of the analysis can be shifted towards some subsystems of economic activity at the request of the governing body. In this regard, according to the research aspects, the following aspects are distinguished: financial, technical-economic, marketing, investment, socio-economic, economic-ecological, functional-cost, logistic, institutional and other types of analysis (Mulyk, Fedoryshyna, 2020).

An important place among all types of analysis of economic activity is occupied by the financial one, which can be characterized as the process of researching the financial mechanism of the functioning of economic entities. External financial analysis is carried out by banks, audit firms, investors, etc. Its main purpose is diagnostics and forecasting of the company's financial condition. Internal financial analysis is carried out by the company's financial services. It is aimed at studying the processes of formation, placing and effective use of capital at all stages of its circulation. Its main goal is to find reserves and develop a program of specific measures to increase profitability and increase the amount of equity capital, strengthen the company's financial condition and reduce financial risks. Its results are a trade secret (Mulyk, Tomchuk, Fedoryshyna, 2020).

The technical and economic analysis is focused on the study of the organizational and scientific and technical level of the enterprise, the search for innovations in the field of improving equipment, technology and production organization in order to increase the efficiency of operational activities and strengthen the competitive advantages of the enterprise. The subject of its study is the cause-and-effect relationships of technical and economic phenomena, their influence on each other and on the final financial results. It is conducted jointly by the technical and economic services of the enterprise.

Socio-economic analysis studies the cause-and-effect relationship of social and economic processes, their influence on each other and on the economic results of management. Its purpose is to identify opportunities for further development of the social sphere, improve

working conditions and increase the level of its motivation, aimed at increasing the efficiency of the enterprise's functioning.

Economic-ecological analysis is an integral part of the management of environmental protection activities of the enterprise, the main content of which is the study of the interaction of ecological and economic processes related to the preservation and improvement of the environment and costs for ecology. Its purpose is to justify tactical and strategic policy on environmental protection, creation of ecologically clean products, safe production and improvement of the effectiveness of environmental protection measures (Mulyk, Materynska, Plyonsak, 2017).

Marketing analysis is used by the marketing service of an enterprise or association to study the external environment of the enterprise's functioning, markets for raw materials and sales of finished products, its competitiveness, supply and demand, commercial risk, formation of pricing policy, development of marketing tactics and strategies.

Investment analysis is used to develop a program and assess the efficiency of investment activities of business entities, to substantiate the optimal option of an investment project.

Functional-cost analysis (FCA) is a method of systematic research of an object at the design stage, aimed at optimizing the relationship between the consumer properties of the product and the costs of its development, production and operation. The subject of its research is the functions performed by the object and the costs of providing them (Mulyk, Fedoryshyna, 2020).

The search for more efficient and cheaper ways of performing the main functions of a product or process (through technical, technological, organizational and other changes in production) while simultaneously eliminating unnecessary functions allows to reduce significantly the costs of manufacturing a product and improve its consumer properties (reliability, serviceability, design and etc.). The main task of FCA is to create such a version of the product that would most fully satisfy the basic functional demands of the consumer and would be the most economical from the point of view of the manufacturer (Mulyk, Fedoryshyna, 2020).

In recent years, logistics analysis has become more widely used, with the help of which product flows are studied, starting from

suppliers of raw materials, passing through the enterprise and ending with buyers. Logistics coordinates such functional areas of the enterprise as supply, production, sales, and promotes the acceleration of material and cash flows. With its help, enterprises get the opportunity to reduce costs due to the organization of supply, production and sales on the principles of “just in time”. Logistics is becoming a condition for success, an important strategic tool for supporting the competitiveness of an enterprise in markets with strong competition (Mulyk, Materynska, Plyonsak, 2017).

In the course of the institutional analysis, the organizational, legal, and political environment in which the company will operate is evaluated, the regulatory framework, relations with local authorities, business partners and counterparties are studied, and the strategic and tactical policy of the company in the field of business cooperation with them is developed, which also contributes to increasing the efficiency of the enterprise’s functioning.

According to the method of object study, qualitative and quantitative analysis, express-analysis, fundamental analysis, situational analysis, marginal analysis, economic-mathematical analysis, SWOT analysis, ABC analysis, etc. are distinguished.

Qualitative analysis is a method of research based on qualitative comparative characteristics and expert assessments of the studied phenomena and processes.

Quantitative (factorial) analysis is based on quantitative comparisons and research on the degree of sensitivity of economic phenomena to changes of various factors.

Express-analysis is a method of diagnosing the state of an enterprise’s economy based on typical signs characteristic of certain economic phenomena. For example, if the rate of growth of gross output is ahead of the rate of growth of marketable output, this indicates an increase in leftovers of unfinished production; if the rate of growth of commodity products is higher than the rate of sales of products, this is a sign of overstocking (work in the warehouse) (Mulyk, Fedoryshyna, 2020).

Fundamental analysis is an in-depth, complex study of the essence of the studied phenomena using mathematical apparatus and other complex tools.

Marginal analysis is a method of evaluating and substantiating the

effectiveness of management decisions in business based on the study of the cause-and-effect relationship of the volume of sales, cost, profit and distribution of costs to fixed and variable. With its help, critical values of sales volume, prices, fixed and variable costs are determined, upon reaching which the financial result will be equal to zero. The optimal level of production is found at the point of intersection of the marginal cost and marginal revenue curves. Knowledge of critical and limiting values allows for more effective management of business processes (Mulyk, Fedoryshyna, 2020).

SWOT analysis is used in strategic planning. Its purpose is to establish potential internal strengths and weaknesses of the enterprise, potential external opportunities and threats to the business.

Potential internal strengths are the availability of the necessary financial resources for business development, a positive image among consumers, a position of recognized leadership in the market, the ability to avoid strong pressure from competitors, cost advantage, effective advertising measures, advanced technologies, large production capabilities, etc.

Potential internal weaknesses are outdated equipment, low profitability, low professional level of management and production personnel, low image on the market, poorly developed enterprise development strategy, poor organization of marketing activities, weak sales network, high cost of products, lack of resources to finance the necessary changes in strategy, etc.

Potential external opportunities are the ability to serve additional groups of consumers, the opportunity to enter new markets, expand the range of products, rapid development with a sudden increase in market demand, the emergence of new technologies, etc.

Potential external threats are the entry into the market of foreign competitors with a lower production cost, slow market growth, unfavorable currency or customs and legislative policies of the governments of other countries, changes in consumer needs and tastes, increased demand for substitute goods, etc.

Thus, the analysis of economic activity as a science is a system of special knowledge related to the study of trends in economic development, scientific substantiation of plans, management decisions, control over their implementation, assessment of achieved results, search, measurement and justification of the value of

economic reserves for increasing production efficiency and development of measures for their use.

References to section 1.2

Mulyk, T. O. (2019) Organization of diagnostics of enterprise activity and its business processes: theoretical and methodological approaches. *Modern Economics*. № 17. P. 158-164. DOI: [https://doi.org/10.31521/modecon.V17\(2019\)-25](https://doi.org/10.31521/modecon.V17(2019)-25).

Stetsyuk, L. S. (2015) Organization of analytical work at agricultural enterprises. *Accounting and finance of agriculture: accounting portal*. URL: <http://magazine.faaf.org.ua/organizaciyaanalitichnoi-roboti-napidpriemstvah.html> (application date 09/08/2022).

Lošonczi, P., Kováčová, L., Vacková, M., Mesároš, M., Nečas, P. (2016) Системи за сигурност: Калъф на CAD програмата за създаване на 3D модели. Security systems: Case of the CAD program for creating 3D models In *Journal of Security and Sustainability*. SSN 2029-7017. Vol. 6, № 1, P. 137-144.

Zorina, O. A., Ryabinina, O. V. (2016) Organization of analytical work in corporations. *Scientific Bulletin of the National Academy of Statistics, Accounting and Auditing*. № 3. P. 71-76.

Derii, V. A. (2016) Organization of analytical work in the enterprise: essence, plan of measures, directions. *Accounting, control and analysis in the management of entrepreneurial activity: materials of the XIII International Scientific and Practical Internet Conference: Cherkasy*, P. 99-100.

Maksymenko, D. V. (2010) Organization of analytical work as a basis for making effective management decisions at the enterprise. *Scientific Bulletin of Uzhhorod University*. 2010. Special issue 29. Part 1. P. 238-240.

Mulyk, T. O., Fedorishyna, L. I. (2020) Organization of analytical work in agricultural enterprises: teaching manual. Kyiv: Center of Educational Literature, 236 p.

Novichenko, L. (2022) Organization of economic analysis at the enterprise. *Economic analysis*. Vol. 32. №. 1. P. 199-207.

Podolyanchuk, O.A. (2010) The essence of accounting and analytical information and its role in the control system of an agricultural enterprise. *Economy of agro-industrial complex*. № 3.

P.54-57.

Valueva, O., Syvolap, L., Pryimuk, O., Lošonczy, P., Britchenko, I., Popova, Yu. (2022) Осигуряване на иновативно развитие на системата за управление на морския транспорт в контекста на формирането на глобалната цифрова икономика. Ensuring Innovative Development of the Marine Transport Management System in the Context of the Formation Of the Global Digital Economy. In: *AD ALTA: Journal of Interdisciplinary Research*. Vol. 12, Issue 1, Special Issue XXV. Hradec Králové, Czech Republic: Academic Association MAGNANIMITAS, P. 88 – 92.

Savytska, G. V. (2007) Economic analysis of enterprise activity: teaching manual. K.: Znannia, 668 p.

Mulyk, T. O., Materynska, O. A., Plyonsak, O. L. (2017) Analysis of economic activity: teaching manual. Kyiv: Center of Educational Literature, 288 p.

Yehorova, O. V., Dorogan-Pysarenko, L. O., Lytvyn, O. Yu. (2016) Analysis of economic activity: teaching manual. Poltava, 308 p.

Mulyk, T. O. (2020) Organizational and methodical aspects of the analytical service of the enterprise. *Efficient economy*. № 8. URL: <http://www.economy.nayka.com.ua/?op=1&z=8115>. DOI: 10.32702/2307-2105-2020.8.72 (application date 19/08/2022).

Kovalchuk, T. M. (2011) Theory of economic analysis: study guide. Ch.: ChNU, 544 p.

Kupalova, G. I. (2008) Theory of economic analysis: teaching manual. K.: Znannia, 639 p.

Брітченко І.Г., Момот, О.М., Сасенко, В.Г. (2012) Економічні проблеми розвитку підприємницької функції в секторах економіки національного господарства / під наук ред. проф. Брітченко І.Г. Донецьк-Полтава: ООО “Техсервіс”, 640 с.

Ivakhnenko, V. M. (2000) Course of economic analysis: teaching manual for independent study of the discipline; Kyiv National University of Economics K.: KNEU, 2000. 263 p.

Tomchuk, O.F. (2019) Theoretical aspects of the analytical support system. *Market infrastructure*. № 35. P. 484-492.

Мікловда, В.П., Брітченко, І.Г., Кубіній, Н.Ю., Дідович, Ю.О. (2013) Ефективність стратегічного управління підприємствами: сучасні проблеми та перспективи їх вирішення. Полтава: ПУЕТ.

240 с.

Mulyk, T.O., Tomchuk, O.F., Fedoryshyna, L.I. (2019) Management analysis: essence and significance in decision-making. *Economics, finance, management: topical issues of science and practice*. № 4. P. 144-154.

Брітченко, І.Г., Чайка І.П. (2011) Маркетинг як чинник підвищення ефективності функціонування вищого навчального закладу. *Наук. вісник УжНУ. Сер. Економіка. Спецвипуск*. № 33/2011. Частина 2. 2011. Ужгород: УжНУ. С. 299-302.

Mulyk, T., Tomchuk, O., Fedoryshyna, L. (2020) Analysis of financial stability of the enterprise. *The scientific heritage*. № 43. P. 46-55.

Polova O., Podolianchuk O, Gudzenko N., Koval N., Ishchenko Y., Pravdiuk M., Mulyk T., Tomchuk O., Mulyk Ya., Kozachenko A., Mashevskaya A. (2022) Current issues of accounting, taxation, analysis and audit development in modern challenges condition: collective monograph. Košice: Vysoká škola bezpečnostného manažérstva v Košiciach, 282 p.

Бритченко, И.Г. (2003) Управление банковским рынком. Донецк: ИЭПИ НАН Украины. 200 с.

1.3. The value of control and analytical work of the enterprise for making managerial decisions³

The modern management system is a complex and multifaceted process. In order to prepare and make effective management decisions, it is necessary to receive comprehensive information on the internal and external conditions of the management object on time. The content of specific management decisions almost always depends on the variability of the complex of these conditions. As Kaletnik G.M. notes, the main feature of the subject of management is the presence of certain competence and authority, which enable him to implement his will in the form of management decisions, management teams, which are mandatory for implementation. The authoritative influence emanating from the subject to the object of management allows subordinating the will and activity of the latter to

³ Mulyk T.O.

the will of the former, which is a necessary condition for achieving goals and solving tasks defined by the subject of management (Kaletnik, Mazur, Kubai, 2011). In this context, the problem of making timely and effective management decisions becomes especially relevant.

An important task of the enterprise in such conditions is management based on the analysis of the economic situation and control, taking into account the setting of strategic goals of the enterprise, adequate to market conditions, and the search for ways to achieve them by solving tactical tasks (Mulyk, Gordienko, 2017). It should be noted that under such circumstances considerable importance is attached to anti-crisis management.

The anti-crisis management system should provide a proper approach to the company's debt in order to manage it effectively, ensure the optimal ratio between receivables and payables, prevent overdue debts from arising, systematically monitor payments, etc. In order to effectively manage the activities of the economic entity, it is necessary to carry out systematically its analytical assessment and control over the changes occurring in the field of the enterprise (Mulyk, Tomchuk, Fedoryshyna, 2019).

Therefore, the importance of analytical and control work at the enterprise is quite significant in making effective management decisions. Carrying out qualitative analysis and control provides answers to questions related to solving problems related to increasing the efficiency of activities and ensuring the competitiveness of the enterprise on the market (Honcharuk, Starosud, Mulyk, 2018).

The need for control and analysis as management functions is determined by the following factors:

- the uncertainty of the environment (changes in laws, policies, technology, the market, the composition of the enterprise's employees, etc.);
- the danger of crisis situations in the services market;
- the need to achieve success in the company's activities, to determine its components;
- pressure from competitors;
- the struggle for control of the sales markets of hotel services and culinary products.

Control and analysis are necessary in view of the fact that natural

factors act on the controlled object and there is a need for broad awareness for adequate response to the new situation. Control and analysis are carried out to achieve consistency and synchronization of the performers' efforts, to identify disagreements and contradictions in their activities, to assess the situation, etc.

Control is carried out in order to comply with the legality of business operations, the implementation of certain rules regulating the activities of enterprises and the expenditure of funds, raw materials and other resources. Control and analysis can perform not only an educational role, but also a preventive and protective one. They contribute to the preservation of property, proper spending of resources, compliance with financial, executive and labor discipline.

The use of analysis methods in the anti-crisis management of the enterprise is presented in the Table 1.5.

So, paying attention to the importance of control and analytical work at the enterprise, Tomchuk O.F. notes that the analytical support of management plays a very important role, both for the formation of the decisions themselves and for compliance with the requirements that are put forward to them (Tomchuk, Tomchuk, 2015). It is control and analysis and control and analytical work organized at the enterprise that serve as a guide between accounting and management. Control and analytical work are necessary at all stages of preparation and decision-making, especially at the stages of goal formation, decision development, selection of the best option, etc.

It should be noted that in modern conditions the role of analytical and control activities is constantly growing. These specialists are more and more influencing the development of humanity, all spheres of social life. In many, especially in economically developed countries, information and analytical or control services are massively created in various state authorities, enterprises, private structures, etc.

Monitoring and analytical work on information protection is of great importance nowadays. The 21st century is not so much about the value of real estate owned by the company, but about the protection of information that will be processed by it. Loss of certain information can lead to various negative consequences. From the leakage of the client base, which unscrupulous competitors can use at their own discretion, to the illegal seizure of the company's property (the so-called raider seizure).

Table 1.5

Use of analysis methods in anti-crisis management of the enterprise

The stage of development of the crisis situation	Symptoms of a crisis situation	Objects and methods of crisis diagnosis	The purpose of anti-crisis management	Anti-crisis management measures
Stable operation of the enterprise	Absence of signs of a crisis situation	Analysis of production and economic indicators of the company's activity by the method of comparison, study of dynamics, with the help of drawing up analytical tables and graphs	Observation of the production and economic indicators of enterprises for prevention and detection of deviations	Support and development of production and economic activity of the enterprise
Local crisis	A slight decrease in the most important technical and economic indicators of the activity of separate structural units, centers of responsibility	Analysis of deviations of production and economic indicators of the enterprise, factor analysis of deviations	Elimination of identified deviations in production and economic indicators of the enterprise	Adaptation of the company's activities to new business conditions: review of norms and regulations; increasing control over the use of resources
Strategic crisis	Deterioration of solvency, liquidity and financial condition of the enterprise, destructive changes in the management system	Vertical and horizontal analysis of the company's balance sheet, assessment of the company's financial condition using coefficients, simulation modeling, construction of a decision tree	Getting out of the financial crisis, improving the company's financial condition	Mobilization of internal and search for external resources for getting out the enterprise from a crisis situation
Bankruptcy	Lack of assets of the enterprise to ensure obligations and carry out current activities of the enterprise	System analysis of the external and internal environment of the enterprise, SWOT analysis	Prevention of bankruptcy and liquidation procedure of the enterprise. Development and implementation of enterprise rehabilitation measures.	Passing the bankruptcy and liquidation procedure of the enterprise with minimal losses.

Source: [Balanyuk, Pylypiv, Yakubiv, 2014]

At the same time, an important role is assigned to control work at the enterprise, because preventive measures play a significant role in the system of control over the flow of information at the enterprise. Such measures may include:

- development of confidentiality policies, which must be brought to the attention of all employees;
- signing confidentiality agreements with clear requirements for fixing the consequences of information leakage (not sky-high fines, as most employers like to point out, but a clear system for establishing the monetary amount of damage);
- use of licensed software to work with business operational tasks;
- formation of practices for storing operational documents in “cloud environments”;
- introduction of electronic document flow;
- other measures in the field of IT aimed at preventing information leaks and hacker attacks on the enterprise (Borys, Demchuk, 2020).

With the support of the company’s IT department, it is necessary to form an appropriate technical base that will ensure the confidentiality of the entire document flow of the enterprise. While the legal department and the personnel management department should develop policies for handling confidential information, rules for using the company’s equipment outside its territory, and prepare confidentiality agreements.

Control and analytical work are of great importance in the field of human resources management.

Among the consequences of a careless attitude to the selection of employees at the enterprise are corporate fraud, espionage for commercial information and know-how, providing assistance to external attackers to raid the business, mobbing and bullying among the employees.

HR departments and security services of most companies consider the polygraph to be an effective candidate selection tool.

The process of passing a polygraph is not regulated by law. The main thing that is required by the current legislation is permission to collect and process personal data in case of its passage. It is also necessary to obtain the employee’s consent to undergo a polygraph examination.

Other control and analysis systems in the field of human resources

include:

- maintenance and assessment of the psychological atmosphere in the team (analysis of possible complaints of employees, especially about improper payment conditions, such complaints can become an alarm bell for corporate fraud);

- analysis of business correspondence carried out by employees at the corporate mail (with advance notification of the employees themselves), individual words may indicate fraud or appropriation of resources;

- systematic training of employees about corporate security systems, rules for handling information resources, rules for communication with clients;

- the presence of constant feedback from the client about the quality of services provided by the company (perhaps the employee provides services “by passing” the company’s main accounting) (Borys, Demchuk, 2020).

In fact, in matters of human resources, it is quite difficult to form written documents that would determine the standard rules for the behavior of employees, because human relations are difficult to formalize. At the same time, it is recommended to develop and bring to the attention of all relevant employees the company’s employee code of ethics, rules of business correspondence, rules of communication with clients, basic positions on corporate fraud prevention systems.

The behavior of individual employees can lead to the application of criminal legal measures to the enterprise, so it is necessary to treat this seriously and scrupulously.

It is not a secret that some corrupt actions may take place at the enterprise that negatively affect its activity and reputation.

Not all legal entities are required to develop anti-corruption policies. However, this does not mean that a business that is not related to the state form of ownership should ignore this European trend.

The measures of the anti-corruption complex include the development of certain policies regarding behavior with state bodies, law enforcement agencies, the inadmissibility of “secret communication” with employees of these bodies for “expedited consideration” of issues on which the company’s activity depends.

These documents should not only be developed at the enterprise.

They should be brought to the attention of all employees, and a system of their implementation in the company's daily activities should also be prescribed. Evaluating the realities of the national market, one can be skeptical about the active introduction of the practice of the existence of protected channels of information, where an employee of an enterprise will report to an authorized officer information about the suspicious actions of his manager or another colleague. At the same time, world practice is moving in this direction. We believe that the business owner should be interested in such steps.

Moreover, failure to comply with certain anti-corruption rules or company policies can have significant consequences:

- initiation of criminal prosecution for corruption crimes;
- searches on the territory of the enterprise and temporary access (withdrawal) of documents constituting a commercial secret;
- application of criminal law measures to a legal entity (confiscation of property, fine and liquidation of the company) (Borys, Demchuk, 2020).

Thus, the main document that determines the direction of internal control at the enterprise is the anti-corruption program, which includes a description of the entire system of the anti-corruption complex of the company or enterprise with the distribution of responsibilities among structural divisions and officials.

No less important assets of a business entity are its real estate and corporate rights. They can constitute the main production facilities of the enterprise, and therefore their actual (and legal) loss can lead to the cessation of business activities.

We are talking about raiding in various forms: from the physical “squeezing” of a business to the use of shortcomings in statutory documents and the conflict of business co-owners. Thus, with the help of legal disputes, it is possible to change the distribution of shares in the authorized capital and re-register real estate.

This can lead to the lack of proper accounting of movable property, non-commissioning of real estate, an imperfect system of storing founding documents and seals of the company, the existence of the practice of affixing the signature of the manager instead of him by other persons.

What should the company do to protect against risks in this part of the control system:

- take care of the availability of a “spare airport” (a copy of the notarized founding documents, alternative bank accounts, which only the founders of the company will know about);
- track information about the company in open data registers;
- make changes to the statutory documents regarding the possibility of terminating the powers of the top management of the firm with minimal business risks (the presence of legal grounds for terminating the contract) (Borys, Demchuk, 2020).

In the context of raiding, providing the physical protection of the enterprise is no less important. After all, even with the successful legal work of lawyers (cancellation of illegal registration actions regarding the property and corporate rights of the enterprise), it is usually quite difficult to restore actual control over the business.

An important role in the process of enterprise management is assigned to the analysis of counterparties and competitors. With the availability of modern counterparty analysis tools, only the lazy do not talk about the necessity of its implementation. This is justified not only in the context of negligent implementation of agreements in the future, but also in the context of potential criminal prosecution of the head of the company for financing terrorism, tax evasion and other unpleasant things.

The main policies that can be aimed at preventing this category of risks are the purchase of paid programs for the analysis of counterparties, the development of internal instructions that will regulate the procedures of internal analysis of counterparties and the documentary recording of checks for each counterparty (Borys, Demchuk, 2020).

A special role in the activity of the enterprise must be paid to the quality of claim and lawsuit work.

First of all, the debt must be indicated in separate types of financial and tax reporting. On the other hand, a negligent attitude to receivables (especially if these are calculations in areas related to the development of the state budget) can lead to well-founded suspicions of law enforcement officers about involvement in the appropriation of budget funds.

Of course, entrepreneurship is a risky activity, and each business owner decides independently which debts should become the subject of legal proceedings and which should not. However, if the company

performs certain works (or provides services) for public funds, then any negligent attitude to the control of the execution of subcontracts can be blamed on the head of the company.

Another issue is the company's business reputation. Of course, it is difficult to attribute public communications to those spheres of activity that require certain legal mechanisms. However, when there is some negative and unreliable information about the company in the Internet space, it should not be ignored by the management. In this case, it is necessary to file lawsuits to protect the business reputation of the company.

In order to ensure this component of the control system, the enterprise must develop a regulation on contractual work, which will not only include the procedure and responsibility for the development of draft contracts, but also the procedure for monitoring their implementation. Regulations on job duties of employees of the legal department will allow to clearly allocate areas of responsibility and protect the company from risks in this area.

Despite the Government's desire to reduce the regulatory pressure on business, there remains a considerable number of laws and by-laws that must be observed in one or another industry. Their non-compliance can quite realistically threaten a criminal case against the manager or a certain official of the enterprise (Borys, Demchuk, 2020).

Regulatory, financial and accounting discipline also affects the organization of control and analytical work at the enterprise.

The most common example is criminal offenses against production safety. These include violations of labor protection rules that caused certain consequences for the health of employees. The first detail that officials pay attention to is the presence of signed instructions on compliance with labor protection rules at the enterprise (this is especially relevant for enterprises that belong to the sector of high-risk work). Therefore, the company must be audited for compliance with regulatory legislation. During the audit, the range of regulatory acts that must be followed by the enterprise will be assessed, specific violations identified, as well as measures to be taken to prevent possible detection of violations by the State Labor Service, the State Production and Consumer Service and other state bodies.

It should be noted separately about compliance with financial and

accounting discipline. Not so long ago, there was a debate among criminologists about the possibility of appointing by investigating judge to conduct a tax audit, which usually became the main argument for criminalizing tax evasion. At the same time, we should not forget that criminal proceedings may be initiated as a result of a scheduled or unscheduled tax audit (in case of violations in tax reporting) (Borys, Demchuk, 2020).

The methods of law enforcement agencies in the investigation of tax crimes are quite harsh and “programmed” to block business operations. Therefore, it is necessary to pay close communication with tax authorities, timely appeal of tax notices-decisions with which the company does not agree (Borys, Demchuk, 2020).

Practice shows that among the reasons for the development of control and analytical services at enterprises, it is possible to distinguish the following:

- systematic objective growth of the mobility of social, economic, and political processes on a global scale with their structuring, dynamic development, but with unpredictable behavior. It is clear that there is a need to evaluate these processes that are changing all the time;

- in social management, modern man has encountered problems that require meaningful solutions. The complication of social systems (this is an objective process) leads to the growth of their instability and crisis phenomena. Trying to avoid losses forces managers to look for optimal solutions with minimal risks. For this, a comprehensive analysis of the situation with the following conclusions is necessary, which will allow to achieve the desired result;

- the intense growth dynamics of social processes gives rise to huge uncontrolled, contradictory flows of information, which require appropriate research, analysis, control, which cannot be done without effective modern analytical technologies;

- the growth of competition, confrontation between states for possession of influence zones, economic levers, natural resources, etc. Analytical services make it possible to make such management decisions that prevent conflicts, monitor and predict crisis phenomena. In modern conditions, information and analytical activity becomes a necessary need of society, one of the most important and influential factors of stability and vitality of any state (Varenko, 2014).

Summarizing the information presented in literary sources, the following problems of analytical work at enterprises can be identified:

- lack of standardized methods for calculating enterprise activity indicators;
- low quality of analytical work and inadequate setting of tasks by the subjects of its organization;
- the possibility of distortion of information provided for the purposes of analysis due to its manual transmission and failure to take into account information about the external competitive environment;
- failure to take into account information about new objects when conducting an economic analysis, not applying various types of economic analysis, but limiting only the assessment of the financial condition;
- low-quality methodical support for economic analysis due to the failure to develop a document regulating the analytical process and the absence of persons responsible for its organization and implementation;
- failure to establish a relationship between the internal management reporting system and the analytical system of the enterprise (Mulyk, Gordienko, 2017).

Regarding control work at the enterprise, it should be noted that characterizing the state of internal control, it should be noted that it is unsatisfactory. This is evidenced by numerous studies of scientists and statements of practitioners (Mulyk, 2020).

The following violations are most common:

- abuse of official position (not embezzlement and misappropriation of money;
 - excessive withdrawal of money at the cash register;
 - appropriation of fixed assets recorded on the enterprise's balance sheet other etc;
- non-performance or poor performance of official duties (documents are formally signed without understanding their content, inventory is conducted only on paper, purchases are made not where it is beneficial for the company, but where the official responsible for this will receive personal benefit, etc.);
 - incorrect assessment of procurement operations, production or sales operations from the point of view of expediency and economy

(Yatsenko, Pron, 2009).

The main reason for the emergence of all problems is that the owners of enterprises, not understanding the essence, purpose and tasks of internal control, do not pay due attention to the construction of an effective system for its implementation. These violations should be detected at the level of internal control, and now they are detected at the level of state control. This is due not only to the poor organization of internal control at enterprises, but also to the presence of certain problems at the state level, which create trends in the number and volume of major financial violations (Yatsenko, Pron, 2009).

Along with the existing methodical and organizational foundations of the organization of internal control at the enterprise, it is necessary to carry out measures aimed at its improvement and development.

Taking into account the above, we believe that the most promising areas of analytical work at the enterprise are:

- deep study of market needs, consumer requirements regarding product competitiveness;

- determination of priority areas of foreign economic activity;

- application of computer technologies in analytical work;

- development of standardized forms and formats of internal management reporting, its adaptation to the needs of enterprise managers;

- development of strategic analysis;

- development of methodological support for such analytical studies: assessment of reengineering processes of the main activity of the enterprise; analysis of the effectiveness of innovations and investments; assessment of the relationship between the competitiveness of products and the enterprise as a whole; analysis of social development of the enterprise; marketing analysis, comprehensive analysis of the efficiency and full use of the enterprise's resource potential, etc. (Mulyk, Gordienko, 2017)

There are also relevant recommendations and directions for improvement regarding the organization of control work at the enterprise. Such authors as Yatsenko V.M. and Pron N.O. recommend creating an internal audit department. The advisability of creating such a department at enterprises can be proven by the fact that it will allow the management to exercise effective control over individual

divisions, identify production reserves and the most promising areas of development, as well as give recommendations to the financial, economic and accounting departments regarding the improvement of their work results. Every enterprise should have a guarantee that the internal audit is properly controlled (Yatsenko, Pron, 2009).

In order to strengthen control, special attention should be paid to checking the economic efficiency and expediency of enterprise operations, because the heads of individual structural divisions sometimes do not understand the essence and effectiveness of decisions. The control of current economic activity should be carried out comprehensively, therefore specialists who know the economy and production technology should be engaged in this. To increase the efficiency of control at enterprises, the correct organization of quantitative and total accounting of values in places of product storage, the rational implementation of operations during the receipt and sale of products, and the effective use of funds are of great importance. For this, it is necessary that the managers of enterprises thoroughly know the essence and content of business operations, comprehensively analyze them and influence the execution of contracts for the supply and sale of products (Yatsenko, Pron, 2009).

We believe that these measures will increase efficiency and effectiveness, operativeness and objectivity of control and analytical work.

Therefore, the efficiency of the economic activity of any enterprise depends on its ability to correctly assess the situation and promptly respond to it. This is possible only if there is systematic information about the economic processes carried out, their nature and volumes, about the availability of material, labor and financial resources, their use, about the formation of costs and financial results of activities, etc. (Mazur, Tomchuk, Branitskyi, 2017).

The effectiveness of the functioning of each enterprise also depends on whether management decisions correspond to the real state of the market business environment (taking into account the enterprise's own potential). Effectively organized control and analytical work of the enterprise should be the basis for substantiating and making optimal management decisions (Mulyk, 2019).

Control and analytical work at the enterprise is also increasing in connection with globalization and integration processes in the

economy, reforming accounting and reporting in accordance with international financial reporting standards. With their help, the company's development strategy is developed, the choice of optimal options for management decisions is substantiated, their implementation is monitored, the results of the company's activities are evaluated, and the causes of problems and available reserves are identified.

References to section 1.3

Kaletnik, G. M., Mazur, A. G., Kubai, O. G. (2011) State regulation of the economy: teaching manual K.: Hi-Tech Press, 428 p.

Mulyk, T. O., Gordienko, M. I. (2017) Methodical approaches to management analysis in the conditions of integration processes. *Economics, finance, management: topical issues of science and practice*. № 7. P. 7-19.

Mulyk, T.O., Tomchuk, O.F., Fedoryshyna, L.I. (2019) Analytical assurance of the company's debt in the context of anti-crisis management. *Economics, finance, management: topical issues of science and practice*. № 1. P. 146-160.

Accounting and analytical maintenance of economic activity (2014): Monograph / edited by I. F. Balaniuk, N. I. Pylypiv, V. M. Yakubiv. Ivano-Frankivsk: Publisher: Foliant Printing House, 292 p.

Honcharuk, I. V. Starosud, V. I., Mulyk, T. O. (2018) Financial results of agricultural enterprises: mechanism of formation and analytical evaluation (on the example of Yaltushkiv research and selection station of IBC and SB of NAAS of Ukraine). *Economics, finance, management: topical issues of science and practice*. № 3. P. 18-34.

Tomchuk, O.F. Tomchuk, V.V. (2015) Management decisions and their analytical support. *Development of accounting: theory, profession, interdisciplinary connections*: a collection of materials of the 1st international science and practice conf. Reply For issue B.V. Melnychuk. K. P.445-448.

Брітченко, І.Г., Чайка І.П. (2011) Маркетинг як чинник підвищення ефективності функціонування вищого навчального закладу. *Наук. вісник УжНУ. Сер. Економіка. Спецвипуск*. № 33/2011. Частина 2. 2011. Ужгород: УжНУ. С. 299-302.

Borys, S., Demchuk, P. (2020) Control systems at the enterprise:

what should a business owner know in order not to lose it? URL: https://biz.ligazakon.net/aktualno/8081_sistemi-kontrolyu-na-pdprimstv-shcho-var-to-znati-vlasniku-bznesu-shchob-yogo-ne-vtratiti (application date 12/08/2022).

Бритченко, И.Г. (2003) Управление банковским рыноководением. Донецк: ИЭПИ НАН Украины. 200 с.

Varenko, V.M. (2014) Information and analytical activity: teaching manual K.: Ukraine University, 417 p.

Mulyk, Ya. I. (2020) Methodical and organizational approaches to the system of internal control at the enterprise. *Agroworld*. No. 17-18. P. 28–38. DOI: 10.32702/2306-6792.2020.17-18.28

Lošonczi, P., Kováčová, L., Vacková, M., Mesároš, M., Nečas, P. (2016) Системи за сигурност: Кальф на CAD програмата за създаване на 3D модели. Security systems: Case of the CAD program for creating 3D models In *Journal of Security and Sustainability*. Vol. 6, №1, P. 137-144.

Yatsenko, V.M., Pron, N.O. (2009) Internal control at enterprises of Ukraine: problems of development and ways to solve them. *Collection of scientific papers of the Cherkasy State University of Technology*. № 22. P. 3-7.

Mazur, V.A., Tomchuk, O.F., Branitskyi, Y.Yu. (2017) The method of analyzing the financial state of the enterprise in accordance with the requirements of internal and external users. *Economics, finance, management: topical issues of science and practice*. № 3 (19). P. 7-20.

Balueva, O., Syvolap, L., Pryimuk, O., Lošonczi, P., Britchenko, I., Popova, Yu. (2022) Осигуряване на иновативно развитие на системата за управление на морския транспорт в контекста на формирането на глобалната цифрова икономика. Ensuring Innovative Development of the Marine Transport Management System in the Context of the Formation Ofthe Global Digital Economy. In: *AD ALTA: Journal of Interdisciplinary Research*. Vol. 12, Issue 1, Special Issue XXV. Hradec Králové, Czech Republic: Academic Association MAGNANIMITAS, P. 88 – 92.

Mulyk, T. O. (2019) Organization of diagnostics of enterprise activity and its business processes: theoretical and methodological approaches. *Modern Economics*. № 17. P. 158-164. DOI: [https://doi.org/10.31521/modecon.V17\(2019\)-25](https://doi.org/10.31521/modecon.V17(2019)-25)

Нлазов О., Kalashnikova K., Zolotarov V., Levchenko Ia., Britchenko I., Lošonczí P. (2021) Между̀териториално съ̀трудничество в контекста на укрепване на нейната икономическа сигурност. Inter-Territorial Collaboration in the Context of Strengthening Its Economic Security. In *IJCSNS International Journal of Computer Science and Network Security*, Vol. 21 № 12, P. 675-683. DOI: 10.22937/IJCSNS.2021.21.12.92.

Polova O., Podolianchuk O, Gudzenko N., Koval N., Ishchenko Y., Pravdiuk M., Mulyk T., Tomchuk O., Mulyk Ya., Kozachenko A., Mashevskа A. (2022) Current issues of accounting, taxation, analysis and audit development in modern challenges condition: collective monograph. Košice: Vysoká škola bezpečnostného manažérstva v Košiciach, 282 p.

Ostapenko, T., Britchenko, I., Lošonczí, P. (2021) Изследване на интелигентната ресурсна сигурност на иновационната парадигма на наноикономическото развитие. Research of the intelligent resource security of the nanoeconomic development innovation paradigm. In: *Baltic Journal of Economic Studies. Riga, Latvia : Baltija Publishing*, Vol. 7, № 5. P. 159 – 169. DOI: <https://doi.org/10.30525/2256-0742>

1.4. Experience in the development of financial control in economically developed countries and the possibility of its use in Ukraine ⁴

The problem of the effectiveness of state financial management and implementation of financial control is extremely important for every state. The system of state financial control, which has developed in a certain state, has its own characteristics related to the historical aspects of the development of society. Moreover, in world practice, state financial control institutions have long become an integral part of a democratic society and a mandatory element of public finance management.

The study of foreign experience in the implementation of financial control is of considerable interest to our country.

⁴ Tomchuk O.F.

Therefore, the outlined problems were and are the subject of research by many famous scientists, among them M. Bilukha, I. Basantsov, L. Dikan, I. Drozd, N. Dorosh, H. Dmytrenko, O. Kovaliuk, A. Malyshev, Ya. Mazur, N. Syniuhina, I. Stefaniuk, V. Shevchuk, S. Yurhelevych and other.

A special place in the system of financial control of each developed state is occupied by the higher institutions of control of state finances (SAI), which is distinguished by its independent status, the broadest range of controlled objects, inspection methods, and reporting form.

In Ukraine, according to the Constitution of Ukraine, the highest institution for controlling public finances is the Accounting Chamber (AC).

The SAI is an attribute of a democratic state, and the corresponding legislative provision of its legal status is evidence of the existence (development) of a legal state with a compelling state administration system.

State audit institutions in foreign countries, by the assigned tasks, exercise control over the implementation of budgets, spending of state funds, and use of state property. Expenditures for the maintenance of state administration institutions and the implementation of state development programs are subject to control. Although the Supreme Accounting Offices do not audit political and economic acts, they assess the validity of such decisions, their impact on state finances, assets, and debt and determine the consequences (Ivanova, 2017).

It is a generally accepted practice in foreign countries that accounting institutions conduct audits of the revenue part of the budget along with state expenditure audits (Bardash, Osadcha, 2020). At the same time, the supreme institutions of state financial control do not exercise fiscal control over compliance by economic entities with tax legislation and in no case replace tax services here. The income audit is conducted in the course of financial and economic analysis of the implementation of consolidated and municipal budgets, the formation of state and federal funds, profits of state enterprises, etc. (Derii, 2011). A similar income audit scheme is used in the Netherlands, Great Britain, Germany, Switzerland, Turkey, Korea, etc. (Romaniv, Honcharuk, Prymak, Danylyuk, 2015).

The task of this system is to identify deviations from current laws, and standards, as well as violations of the principles of legality,

efficiency, expediency, and economy of resource management, and to take measures that would prevent the recurrence of these violations in the future.

The owner (and in this case the owner is the state), to implement the obligations assigned to him regarding property management, is obliged to carry out financial control and audit of objects of ownership: property and financial resources.

In addition, in the conditions of the formation of market relations, the state changes the nature of its activities in the social and economic sectors, which requires corresponding changes in the sphere of state financial control and state audit.

In Art. 1 of the Lima Declaration of INTOSAI – an international organization that operates under the auspices of the UN and unites independent, similar to the Accounting Chamber of Ukraine, financial control institutions, it is said: “The organization of control is the main element of the management of public financial funds because such management entails a responsibility to society”.

According to Art. 5 of this Declaration “The existence of the highest institution of financial control and the necessary level of its independence must be laid down in the Constitution, the details can be determined by the relevant laws”.

The Accounting Chamber of Ukraine, meeting the specified international standards, is an independent constitutional institution that exercises financial control over the active and legal spending of state funds. This was confirmed by its adoption in the fall of 1998 in INTOSAI, and in 2000 – in EUROSAI.

The audit of management activities in the public sector is of particular importance in the activities of the Accounting Chamber. It should be aimed primarily at identifying the effectiveness and efficiency of the use of state financial, labor, and other resources and state property, as well as at confirming their use by current legal norms and other regulatory decisions (Khmelkov, 2017).

Let's consider the main stages of the development of institutions of control and audit work in foreign countries.

At the beginning of the second half of the XX century in the process of continuous reform of public administration in the international arena, significant transformations have also taken place in the field of public financial audit, in particular in matters of raising

its authority in management processes and the effectiveness of the performance of state control functions. The International Organization of Supreme Audit Institutions (INTOSAI – International Organization of Supreme Audit Institutions) was created in 1953 to implement the ideas and experience of the world's highest audit organizations, which includes more than 170 members, and the general secretariat is located in Vienna (Austria). The INTOSAI Congress is held once every three years. The results of INTOSAI's work are published in the quarterly publications of the International Journal of Government Auditing (the International Journal of Government Auditing) and on the official website on the Internet (www.intosai.org).

INTOSAI regional working groups provide professional support for public sector audits by sharing experience and ideas, as well as creating professional standards, methodological recommendations, methodologies, and other practical materials in the field of financial and administrative audits (Bardash, Osadcha, 2020).

Currently, the legislation of foreign countries, and especially EU countries, tends to unification. Therefore, to determine the single general principles that could be acceptable for all states, regardless of the form of the state system, state government, and at the same time without violating the traditions of higher financial control, which were developed in individual states for centuries, in October 1977 at the Congress of the SAI (INTOSAI) in the city of Lima (India) the corresponding Declaration (Lima Declaration, 1977) was adopted. Although from the point of view of international law, the Lima Declaration is not mandatory, it proclaimed the primary provisions for the development of state control in democratic countries (Bardash, Osadcha, 2020), in particular:

- peculiarities of the organization of control as an element of management;
- scope of control;
- principles of building a financial control system, principles of independence and accountability of supreme audit institutions, their powers, etc.

Along with this, the Lima Declaration defines generally accepted principles of control of independent state control institutions (Lima Declaration, 1977), which include:

- 1) institutional independence;

- 2) financial independence;
- 3) personal independence of auditors-controllors;
- 4) own responsibility for the inspection program;
- 5) sufficiency of powers to obtain information;
- 6) the right to take measures.

These principles are general and may be acceptable in any democratic legal state, as they are not political, but are aimed at determining the guarantees of ensuring the effectiveness of financial control, both for the information display of the real state of conducting financial affairs for the state and the implementation control in the middle of the state itself, i.e. inspection of all state institutions and institutions that perform the functions of state power.

The legal basis for the organization of accounting offices and ensuring their functioning in the vast majority of countries are constitutions and laws adopted on their basis, which determine the place, functions, and rights of controlling institutions (Bardash, Osadcha, 2020).

Comparing the normative, legal, and institutional features of control and audit work in different countries, one should emphasize different approaches to determining the place of accounting institutions in the system of state administration departments (Bardash, Osadcha, 2020).

One of these approaches determines that the organizational scheme of control and audit work is the allocation of two levels of hierarchy (Fig. 1.7):

– at the first level is the highest institution of state control, which is subordinate to the parliament or the president and is entrusted with control over the spending of state budget funds;

– at the second level - state control and audit units of ministries and institutions are subordinate to both the highest institution of state financial control and the corresponding ministry or department. They exercise full control over the correctness of spending public funds.

At the same time, the levels of the organizational scheme of control and audit work are also defined: accounting tribunals and control institutions.

Ya. Mazur refers to collegial control institutions independent of the government, called courts (or acting as courts), to accounting tribunals, which control calculations and make decisions regarding the

prosecution of guilty officials (the accounting chamber of Italy; the accounting tribunals of France, Belgium, and Spain), and other collegial non-governmental institutions not endowed with similar judicial powers (Federal Audit Chamber of Germany). Controlling institutions are other institutions in which decisions on conducting inspections and results are made either directly by the head (monocratic - the National Audit Office of Great Britain) or by a panel headed by the head of the control institution (Supreme Control Bureau of the Czech Republic).

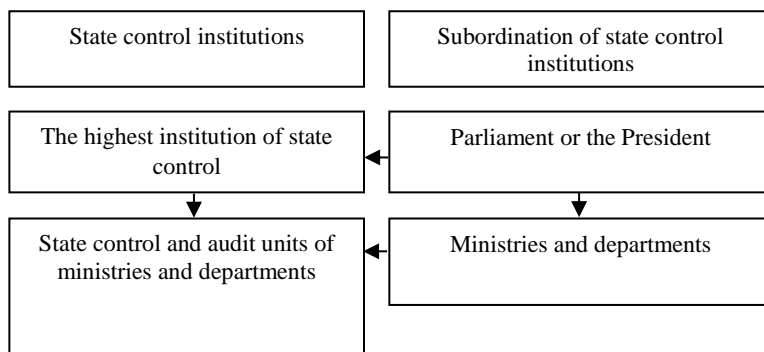


Fig. 1.7. A two-level scheme for the organization of control and audit work in foreign countries

Source: (summarized by the author)

V. Melnychuk points out that there are four main types of state financial control institutions in the EU countries (Melnychuk, 2002):

1) audit courts (France, Belgium, Luxembourg, Portugal, Spain, Italy) or judicial institutions that are components of the country's judicial system (Greece, Portugal);

2) collegial institutions that do not have judicial functions (Netherlands, Germany);

3) independent control institutions headed by the Comptroller General (Great Britain, Ireland, Denmark);

4) control institutions in the government structure (Sweden, Finland).

For example, N. Dorosh draws attention to the following organizational scheme of control in foreign countries: the first category – the highest institution of state financial control is

subordinate to the parliament or the president and is entrusted with control over the spending of the state budget funds; the second category is the state control and audit units of ministries and departments that are subordinate to both the highest institution of state financial control and the corresponding ministry or department. They exercise full control over the correctness of spending public funds (Dorosh, Fesai, 2018).

The generalization of this is the definition of the organizational scheme of control and audit work in foreign countries by place in the system of state administration subjects of the relevant supreme institutes of financial control. Accordingly, the levels of control organization can be defined as follows:

1) accounting tribunals (courts) – neutral authoritative collegial institutions for the examination of financial transactions and administrative decisions (Germany, Portugal, Italy, the Netherlands, France, Brazil, Belgium, Spain, Romania);

2) accounting (control) chambers – institutions that control budget implementation and compliance with financial and budgetary discipline on behalf of the parliament (Austria, Hungary, Poland, Bulgaria, Japan);

3) national audit offices (offices of the Auditor General) are independent collegial (Czech Republic) and monocratic (Canada, Denmark, Great Britain, Iceland, Australia, Israel) public institutions authorized to conduct financial and administrative audits of the public sector, but also under the patronage of the supreme elected department (Bondar, 2012).

The organizational scheme of state control of foreign countries also provides for the presence of their audit institutions in line ministries, which ensures internal control over the correctness of spending state funds in the system of a certain institutions. In particular, in Germany, the control and audit units of the relevant federal structures perform internal audits in agreement with the federal audit chamber (Zhovnireno, 2016).

In addition, the legislation of several countries allows the executive power to have its autonomous control structures (Administrative Budget Management under the President of the Forces, the Audit Commission of Great Britain, the National Audit Office of Sweden), whose mission is to perform the financial and economic control

function of the government (Zhovnirenko, 2016). In most countries, the supreme audit institutions have the right of access to the entire array of information and documents related to the performance of duties. In addition, objects of control cannot refuse audit institutions to satisfy their legal requirements. At the same time, individual accounting audit institutions have no levers of direct influence on violators and are authorized in any case to transfer materials on detected misuse to the prosecutor's office and other competent authorities (Bardash, Osadcha, 2020).

At the same time, the legislation of several countries authorizes accounting agencies to audit not only the public sector, but also the financial activities of charitable funds (Austria), the private sector of social insurance (France), monopolies (Switzerland), and political parties (Hungary) (Bardash, Osadcha, 2020).

However, as a rule, each country has its special regulations on the selection of the leadership of supreme control institutions and the implementation of their activities. For example, the president and vice-president of the German Federal Chamber of Accounts are elected by the Bundestag on the proposal of the Federal Government and appointed by the Federal President for a term of 12 years. The state controller of Israel is elected by the parliament (Knesset) and approved by the country's president for a term of 5 years, a maximum of two terms (Bardash, Osadcha, 2020).

Despite the differences in approaches to the definition of categories in the organization of state control of foreign countries, all authors objectively point to the presence of diversification of their types given power, status, and functional independence (Audit of administrative activity, 2000).

A common element in the legal status of modern supreme control institutions is the constitutionally established accountability of the parliament, institutional independence from the executive authorities, and independence in matters of planning and execution of audits. Independence is based on the principles of openness and accessibility of audit results, independence in decision-making regarding the publication of research results, etc. (Bardash, Osadcha, 2020).

From a political and professional point of view, the degree of autonomy of the accounting institution is characterized by the features of the procedure for appointing and dismissing members of the control

institution, as well as the legitimate length of stay in the position of the head of the department (Kaletnik, Zdyrko, 2021).

The high efficiency of budget and financial control in foreign countries is ensured by the fact that the heads of supreme institutions of state financial control are appointed and approved by parliaments for a longer period than the terms of office of the parliaments themselves, and they can be dismissed from office only by a decision of the parliament in case of professional inadequacy or abuse (Dorosh, Fesai, 2018). In the USA, this term is 15 years; in Germany, Australia, and Hungary – 12; in Canada – 10; in Bulgaria – 9; in Mexico – 8; in Turkey – 7; in Switzerland, Poland, Romania, and Mongolia – 6 years (Shulyuk, 2021).

As a rule, each country has its special regulations on the selection of the leadership of supreme control institutes and the implementation of their activities (Bardash, Osadcha, 2020).

Thus, the president and vice-president of the German Federal Chamber of Accounts are elected by the Bundestag on the proposal of the Federal Government and appointed by the Federal President for a term of 12 years (Bardash, Osadcha, 2020).

The state controller of Israel is elected by the parliament (Knesset) and approved by the country's president for a term of 5 years, with a maximum of two terms. Dismissal from the position of the state controller earlier than the established term is possible only with the decision of 2/3 of the votes of the members of the parliament (Bardash, Osadcha, 2020).

The Federal Court of Auditors of Brazil consists of two chambers with four ministers (judges) in each, who are approved for office by the Senate, including 6 ministers – on the proposal of the chairman of the Senate, and 4 ministers – on the proposal of the President of the Republic. The president of the institution is elected from among the ministers for a term of one year (Deineko, 2012).

The Accounting Chamber of France is one of the most organizationally complex structures, where the leadership of the chamber is approved by the Council of Ministers. The leadership of the Chamber includes the Prime Minister (appointed for life), the Prosecutor General (who acts in the interests of the state and acts as an intermediary between the Chamber, the government, and the judiciary), and the General Premier-advocate. The Chamber operates

on a collegial basis. The supreme audit institution's professional staff includes 7 chamber presidents (by branch) and 200 magistrates (legal advisers, financial inspectors, auditors) (Deineko, 2012).

Institutional independence is complemented by an adequate level of financial independence, which is one of the main principles of democracy and the practicality of state control. An important guarantee of this is the fact that expenses for the maintenance of audit agencies are approved as a separate item of the state budget. At the same time, the possibility of the existence of other additional sources of income for the development of the institution and the encouragement of employees is allowed (Shulyuk, 2021).

It should be especially noted that avoiding bias in the work and other subjective factors is achieved by ensuring a high level of auditors' remuneration. About one-third of the budget of the National Audit Office of Great Britain is direct expenditure on personnel salaries. In Turkey, the salary of the professional staff of the Accounting Chamber is twice the salary of the administrative staff (Deineko, 2012).

Another element of SAI activity is that a mandatory condition for effective provision of effective and operational control in most countries is the presence of territorial units, which, depending on the form of the country's state system, are fully or partially subordinated to the supreme accounting office, but generally retain independence in the performance of functions and focused on checks on the spending of local budgets. If necessary, they perform operational tasks of the central control institution. Similar regional offices of the supreme institution of state financial control function in France, Germany, Canada, Mongolia, Bulgaria, Brazil, Poland, China, the Czech Republic, etc. (Stefanyuk, 2018).

The organizational structure of the central apparatus of the supreme audit institution is characterized by the division into institutions either by industry principle (Germany) or by grouped areas (Denmark). Important in the process of improving the structure of foreign accounting offices is the formation and gradual autonomy of institutions, and groups of audit of administrative activity (performance auditing) (Deineko, 2012).

Currently, the experience of the rich Arab country Bahrain is an example of the most optimal approach to the issue of using the

functions of the supreme institution of state financial control. Professional components of the organizational structure of the state audit institutions of this country are sections:

1) financial audit (analysis of the general financial condition of enterprises and institutions; verification of compliance with the provisions of normative and regulatory documents) (Savchenko, 2016);

2) audit of administrative activities (determination of cost-effectiveness and efficiency, assessment of the quality and quantity of services provided; analysis of the achievement of the set goal by the object of control);

3) audit of computer and accounting systems.

To these three directions, only environmental audit can be added, which in some developed countries is separated from the audit of administrative activities into a separate type of state control (Deineko, 2012).

The functioning of the budgetary relations of any country, given the limited financial resources aimed at the implementation of social programs, requires an increase in the effectiveness of state financial control. Market conditions have complicated the financial aspects of the state's activities because commercial structures are actively involved in meeting public needs, infrastructures of banks and other financial and credit institutions are used to service state funds, and the state has acted in the market as a property owner and producer of goods and services. In addition, numerous facts of unmanaged activity, the transformation of state wealth into private wealth, the creation of economic conditions with a predetermined goal - the bankruptcy of a budget enterprise, the existence of schemes for the illegal circulation of state funds to avoid paying taxes to the budget, etc. prove the need to introduce new methods of research on targeted use budget funds.

It is obvious that today the performance audit is a promising type of control both in the field of entrepreneurship and in the system of state financial control, because any property owner, whether it is the state or a private investor, has an objective need for information about how effectively its assets are managed. A fairly young performance audit originated in the 1960s as financial control of the effectiveness

of the use of budget funds and today is actively used in the system of state financial control of foreign countries (Khmelkov, 2017).

With its use, external state control of the management of state finances is carried out, based on the results of which independent conclusions are formed about the degree of effectiveness of the management of state financial resources, the effectiveness of decisions made by executive authorities during the execution of tasks, and the economic use of budget funds spent on this (Shulyuk, 2021). However, as world experience shows, the use of performance audits in state financial control contributes to increasing the responsibility and accountability of executive authorities, as well as the manageability and “transparency” of the state sector of the economy.

The more than the thirty-year history of the development of the performance audit in the world has developed generally accepted theoretical and methodological foundations for its implementation, which are guided in the practical activities of the higher audit institutions (SAI) of most foreign countries. Because the performance audit is a new phenomenon in the domestic theory and practice of state financial control, it seems appropriate to turn to the foreign experience accumulated by countries with developed democracy in the field of application of the performance audit. The study and use of foreign experience are of fundamental importance for the development of the concept of state control in the financial environment in Ukraine, as it makes it possible to creatively apply the practical experience of countries with developed democracy in the formation of the national Ukrainian model of state financial control, contributes to a comprehensive theoretical understanding of the effectiveness audit and awareness of its place in practical activity of the audit institutions that carry it out (Khmelkov, 2017).

The problems of the effectiveness of the use of budget funds and the implementation of external state financial control of the activities of executive authorities and entities of the state sector of the economy are quite relevant for Ukraine.

After all, the effectiveness of the management of state financial resources is a guarantee of the stability of the economy, ensuring the necessary rates of economic growth and the level of public welfare, as well as compliance with the national security interests of the state (Khmelkov, 2017). The development of the domestic system of public

administration in recent years shows that even with the economic and social validity of the structure and volume of public expenditures, the desired results are often not achieved. One of the main reasons for this situation is the lack of objective mechanisms for monitoring the implementation of the budget.

Meanwhile, the development of the theory of the audit of the effectiveness of the use of budget funds and the methodology of its application in state financial control in Ukraine is at an initial stage. The content of the latest domestic research and publications on the issue of the introduction of performance audits is characterized by a fragmented perception of the experience accumulated in this field, which negatively affects the system of state financial control, and does not contribute to the formation and clear definition of the theoretical-methodological and organizational-legal foundations of its creation.

The emergence of performance audit as a new type of budget control was recorded in the Lima Declaration of Guidelines on Auditing Precepts, adopted in October 1977 at the 10th Congress of the International Organization of Supreme Audit Institutions (International Organization of Supreme Audit Institutions – INTOSAI). In particular, Article 4 of the declaration emphasizes that, in addition to the financial audit, the importance of which remains undeniable, “there is also another type of control aimed at evaluating the effectiveness, efficiency, and economy of public administration”. Performance control covers not only individual financial transactions but also all spheres of public sector functioning, including verification of organizational and management systems (Lima Declaration, 1977).

With further development, the idea of researching the effectiveness of the functioning of state-owned enterprises and organizations within the framework of an efficiency audit is beginning to gain legislative support, primarily in those countries whose budget systems were oriented towards achieving a specific result. It should be emphasized that even if the legislation of the country does not enshrine the authority to conduct financial audits and certify the reliability of financial statements of state-owned enterprises and organizations, even for the highest auditing institution, it, as a rule, has the authority to audit the effectiveness of their activities. Since medieval times and almost until the beginning of the 20th century, state financial control in foreign countries was carried out in the form of a financial audit of

budget expenditures. Accounting audit institutions (chambers) were formed at the offices and audit institutions of the countries, which were the first HDC in the world in terms of the powers they exercised. At the same time, at the initial stage of their formation, the HDC of foreign countries, based on the relevant laws, solved too large tasks and had a wide range of duties related to the allocation of budget funds for state audit institutions reconciliation of accounts of government institutions, checks of the correctness of payments after payment of state expenses and reports on the use of funds. Thus, the National Audit Office of Great Britain (NAO) was created in 1120 to audit the spending of public funds on wars and luxury goods (Carassus, Georges, 2003).

The Royal Chamber of Accounts of France, organized in 1318, according to the decree of Philip V. the Long (1319–1320), performed the functions of external control of the management of finances and property of the French crown and prepared reports based on the results of such control for submission to the king. Until that time, procedures for external and internal control of royal property and lands were carried out by specially appointed accountants, who, starting in 1303, were located in the accounting room at the Palace of Justice of France.

By the requirements of the legislation, the state financial control institutions of that time performed both executive and control functions regarding the expenditure of state funds in various combinations. Such institutions performed a large amount of work in the control of all public accounts, as evidenced by the large volumes of reports on the results of audits for parliaments. In particular, the annual reports of the Auditor General of Canada submitted to the House of Commons reached 2,400 pages at the beginning of the 20th century. These reports listed all the financial transactions of the ministries and departments, starting with the purchase of shoelaces and ending with contracts for the building of powerhouses.

Gradually, in foreign countries, there was a separation of responsibilities in the budget process between the government and the state financial control audit institutions, which was caused primarily by granting the latter the status of an independent institution accountable to the parliament. Moreover, the government was responsible for collecting and spending state funds, and the state financial control audit institutions was supposed to check how these

funds are spent and provide reports to the parliament on the results of checks, that is, to conduct a financial audit of the implementation of the state budget. So, for example, with the acquisition of the right to determine the state budget by the English Parliament in 1215, the NAO was granted the status of an independent state financial control institution that audits the spending of public funds and provides parliamentary reports on the results of such audits.

The understanding of the need to use performance audits in state financial control for most foreign countries is connected with the transition in the middle of the 20th century to new models of budget formation and the introduction of “results-oriented budget” expenditure of budget funds with the expected return from their implementation, with their social and economic efficiency). The importance of organizing and conducting audits in the environment of public finances was realized even in the ancient world when after entrusting the process of managing state property to other persons (managers) there was a need to control the correctness of this process. Existing written records make it possible to assert that the first sprouts of state audit were laid even when the ancient civilizations of the Middle East began to create highly organized states and establish economic activities. The finances of ancient states were subjected to a systematic “audit” already in those days (Shulyuk, 2021).

Property management in the countries of the ancient world involved keeping records and controlling economic transactions for the two main economic entities of that time: the state and the estate of the slave owner, the feudal lord. Long before the introduction of the principles of double-entry bookkeeping and trade accounting, initiated by Luka Pacoli, accounting was carried out simultaneously and independently of each other by specially appointed persons. This contributed to the prevention of defamations in the treasuries of rulers and the farms of individual slave owners, and also served to confirm the accuracy of reporting. Investigating the reasons for the emergence of state audit, the Indian professor K. Gupta in his work “Modern Audit” rightly notes: “... trade accounting and the profession of independent auditors arose relatively recently, although accounting and auditing of state transactions was introduced in ancient times” (Gupta, 2005).

Addressing the origins of auditing in Ancient Rome, the author Mamyshev A.V. in the article “Management and External Mandatory Audit: A Comparative Historical Study in the Context of Mandatory Confirmation of Accounts” characterizes the nature of the obligation to provide audit reports in this ancient city as follows: “... the term “audit” was used in a legal sense, an obligation ordered civil servants holding responsible positions – provincial quaestors and proconsuls – to submit a report on their activities before the court. The participation of a third person – an auditor, as we call him today, was not foreseen” (Carassus, Georges, 2003).

The powers of the Royal Chamber of Accounts of France at first, i.e. after the restoration in 1800 under the Napoleonic law under its modern name, were limited to auditing the accounts of managers of budget funds and the work of public accountants. In some sources, there is evidence that at that time the Accounting Chamber of France legally performed the functions of controlling the compliance of accounting of the state treasury. A report with conclusions based on the results of such control was received by the ministers of justice and finance, and then it was given to the emperor of France. Perpetrators of mistakes, fraudsters, and recipients of bribes were put on trial. Subsequently, the need to control the spending of state funds became obvious. This enabled the Accounting Chamber of France to assess the quality of management of budget funds by managers. Control of the work of public accountants took the form of assessment of accounts (Kukhareva, 2017).

Already by the middle of the 20th century, in the developed countries of the world, and primarily in Europe, a system of state financial control was formed, which consisted of two equally important parts: internal control, which was carried out through government institutions empowered to control state finances, and external control, which was implemented by on behalf of the HAD parliament – institutions independent of the process of direct management of public financial resources and their control, which belongs to the competence of the government. As a result of a certain functional “division of labor” between the structures of internal control and the HAD, the latter, as a rule, concentrate their activities mainly on the financial audit of annual reports of ministries and departments and reports of the government on the implementation of

the budget, while internal control institutions carry out checks of accounts and the correctness of financial reporting direct recipients of budget funds.

At the moment, SAI of foreign countries have accumulated a lot of practical experience in conducting financial audits, which included an audit of reporting (checking the correctness of management, completeness, the accuracy of accounting, and reporting of revenues and expenses of the state budget, relevant financial documents; as a result, the parliament is provided with confirmation of the authenticity of accounting documentation and financial information on the implementation of the state budget) and compliance audit (verification of the implementation of revenues and expenses of the state budget, based on the results of which the parliament is provided with a conclusion on the compliance of the indicators of the budget implemented by the government with the approved indicators).

In the 50s and 60s of the 20th century, SAI of some foreign countries began to carry out inspections of public expenditures not only in terms of their compliance with legislation but also from the point of view of their social utility, that is, the results that society received from legally spent budget funds. During this period, the goals and directions of the audit used in the state finance control system are changing. In response to these changes, along with conducting inspections of the legality and regularity of financial management in the public sector (financial audit), the SAI began to pay more attention to the study of the effectiveness and cost-effectiveness of activities, that is, to develop an efficiency audit (Melnychuk, 2002).

Formation and implementation of efficiency audits in the activities of SAI in foreign countries required appropriate changes to their organizational structures. Most of them (Belgium, Great Britain, Denmark, Norway, the Netherlands, and Sweden) have created special institutions for auditing efficiency. So, for example, in Sweden in 1967, during the reform of the state financial management system, the National Audit Office (Riksrevisionsverket – RRV) received the status of an external state financial control institution, which concentrates its activities mainly on auditing the effectiveness of budget expenditures. For this purpose, the reorganization of its organizational structure and work methods were carried out, which ensured the verification of the results of the activities of state agencies and organizations to achieve

the goals set by the government. At the same time, conducting financial audits was mainly the prerogative of special government agencies that performed the functions of internal state financial control. The next reorganization of the organizational structure of RRV was completed in 1989 and three divisions were created: the Institution of Performance Audit, the Institution of Financial Audit, and the Institution of Financial Management. During the several years preceding this period, based on the generalization of the practical experience of conducting performance audits in Sweden, its theoretical foundations were first developed, and then the methodology for conducting audits of the activities of state organizations for the effective use of budget funds.

SAI of the developed countries of the world is increasingly focusing its attention on monitoring the effectiveness of the use of state funds and state property. As a result, performance audits become the predominant type of state financial control. In Canada, for example, more than 60% of control activities carried out by SAI the country are carried out using this type of audit (Ivanova, 2017).

Analyzing the results of the conducted research that led to the emergence and wide and rapid introduction into practice and use as an effective type of state financial control of the efficiency audit, the main principles that led to this should be highlighted, namely:

1) qualitative changes in socio-economic; political and other spheres;

2) implementation of generally accepted principles and legal bases for the preparation of the draft state budget, its implementation, as well as financial reporting;

3) solving problematic issues in relations between the parliament and financial control institutions.

These circumstances directly or indirectly influenced the formation of the system of state financial control, the selection of independent financial control institutions from it, and the increase of their role in state management. At the same time, higher financial control institutions play a leading role in internal control structures, in particular, in the process of conducting financial audits, they assess the reliability of the latter's control and audit activities and, depending on the level of its quality, appropriately use the obtained results when organizing their work on budget execution control. In addition, the

result of this is an increase in the degree of transparency and publicity of the budget process, which, to a certain extent, guarantees the prevention of various types of abuses and violations in the use of budget funds. Because in most developed countries financial control institutions are accountable to parliaments or are part of the legislative branch of government, the parliament plays a significant role in the activities of these institutions, acting, in particular, as the only “consumer” of its products – reports on the results of financial audits (Stefanyuk, 2018).

At the current stage, the performance audit, as a rule, covers issues that are of great importance for society, protects the financial interests of the state, and allows establishing cause-and-effect relationships of their non-compliance. As a form of state financial control, the performance audit enables the timely development of proposals to eliminate the causes that create conditions for deviation from the requirements established by law. Moreover, its demand is especially significant in those budget systems that are oriented to achieving a specific result. For example, in the USA only after the adoption in 1950 of the law on the budget and budgetary responsibility procedures, where requirements were established to indicate in the budget not the structure of expenditures by types of expenditures, but the expected result from the implementation of programs or the performance of state functions, the demand for efficiency audits increased significantly. And in Canada, performance audits became widespread after the country’s government in 1955 switched to management principles focused on achieving final results, when all federal ministries and departments were obliged to determine the main socially significant results from the use of budget funds, as well as from the implementation of social and economic programs and services (Ivanova, 2017).

The legislation of most foreign countries, which regulates the status of SAI and their functional powers to conduct performance audits, is based on the general provisions of the INTOSAI Public Finance Audit Standards. According to the standards established in these standards, the essence of the performance audit is to check the economy, productivity, and effectiveness with which the audited organization uses resources in the performance of its tasks and obligations. At the same time, the economy is understood as the

minimization of costs for carrying out the organization's activities taking into account the corresponding quality of such activities, productivity is characterized by the ratio between the product (goods, services) and the resources used for their production, and effectiveness is the level of fulfillment of the intended goals by the organization in the form of a ratio between planned and actual results of its activities (Auditing Standards, 1992).

Caused by differences in legislative regulation and by national and historical traditions, the practical implementation of performance audits in various foreign countries has its characteristics. These features are determined by the setting of certain tasks, which should be solved by the state financial control with the help of an efficiency audit, as well as by emphasis on certain aspects of evaluating the economy, productivity, and effectiveness of the use of budget funds by state organizations (institutions). In addition, the development of the efficiency audit and its application in the state financial control of foreign countries took place unevenly. Thus, in some periods in some countries, the greatest attention was paid to the assessment of the economic use of resources in the public sector, and in other cases, the focus was on achieving the planned results. In certain periods, the objects of audit research were various ministries or the activities of those ministries, and state organizations that performed specific tasks were audited (Derii, 2011).

The given definition of the essence of the performance audit is recorded in one form or another in the majority of laws regulating the activities of SAI in foreign countries, as well as in the standards and rules for performance audits developed by them. In particular, as stated in the UK Financial Control Act of 1983, the NAO conducts audits to determine "how frugally, economically, efficiently and purposefully ministries, departments or other institutions spent funds in the performance of their tasks" (Khmelkov, 2017).

"The audit of the effectiveness of spending public funds is a systematic, targeted, organized, and objective review of the activities of state authorities and includes an audit of the economy, efficiency, and profitability of state authorities, as well as an assessment of the impact of these activities on the environment" (Melnychuk, 2002) – so the essence of the performance audit in the Office of the Auditor General of Canada is defined.

The most complete essence of a performance audit is revealed in the Audit Standards of Government Organizations (GAGAS), issued by the General Budget Control Office of the United States (US GAO). According to GAGAS standards, an efficiency audit “constitutes an objective and systematic verification of factual data (documents) to provide an independent assessment of the work of a state organization”.

At the same time, the analysis of the world experience of the introduction and use of the efficiency audit makes it possible to state its dual nature: on the one hand, these are control measures that allow assessing the effectiveness, efficiency, and economy of the use of public funds by the audited organization and the management of state property for the implementation of large socio-economic projects with a long time lag; on the other hand, the analysis of the activities of state authorities in terms of their implementation of laws and other normative legal acts, instructions and rules that determine the procedure for spending public funds, identifying violations and deviations in their work during the implementation of the program (Khmelkov, 2017).

If the subject of financial control is the financial documents and reporting of the audited object, which characterize the legality of the use of state funds, then the subject of an efficiency audit is the activity of the audited object to the use of state funds in the performance of its assigned functions, tasks and implementation of programs. That is, the subject of an efficiency audit is specific financial programs, a type of activity, or a function performed by the object of inspection using public funds (Khmelkov, 2017).

Analyzing the experience of foreign countries, it should be noted that the performance audit cannot be considered a form of financial control, since it can be carried out both in the process of implementing temporary forms of financial control (for example, previous and subsequent) and in the implementation of its extended forms (for example, external control) (Khmelkov, 2017).

There are a number of fundamental differences between the content of a financial audit and a performance audit, the essence of which is as follows.

First of all, financial auditing is a fairly formalized procedure compared to performance auditing, which is a more flexible system

based largely on analytical procedures. The task of the financial audit is to confirm the legality of operations with budget funds, compliance with relevant laws, norms, and rules, as well as the correctness of financial reporting. This task is usually solved during the current year, with the current implementation of the budget (Zhovnirenko, 2016).

The performance audit includes not only the analysis of the effectiveness of budget projects. During its application, a comprehensive analysis of the reasons for inefficient use of state funds is carried out, and on this basis, recommendations are developed for improving the budget process and current legislation (Romaniv, Honcharuk, Prymak, Danylyuk, 2015).

The objects of the performance audit are state authorities that are the main managers or managers of budget funds (state extra-budgetary funds), other subjects of economic activity that use state funds and have tax, customs, and other benefits and advantages provided by law (Romaniv, Honcharuk, Prymak, Danylyuk, 2015).

In the activities of external state financial control institutions of foreign countries, financial audits and audits of the effectiveness of state funds are often conducted simultaneously during budget execution checks. Before proceeding to the performance audit, it is necessary to make sure of the reliability of the budget organizations' reporting. Correct and well-founded decisions require real data, which are based on reliable financial reporting on the amounts and directions of the use of funds. At the same time, both types of financial control are based on INTOSAI audit standards, which are a kind of skeleton that defines the main postulates, principles, as well as necessary actions when conducting control measures, as well as preparing reports based on their results (Zhovnirenko, 2016).

INTOSAI auditing standards emphasize that “unlike financial auditing, where the requirements and expected results are quite specific, the auditing of the effectiveness of the use of funds is broader and open for discussion” (Khmelkov, 2017).

A financial audit and an efficiency audit differ in the setting of tasks, inspection subjects, and methods, as well as in the preparation of their results (Romaniv, Honcharuk, Prymak, Danylyuk, 2015).

In the Slovak Republic, the Supreme Audit Office defined, in the audit standards it developed, an efficiency audit as “an activity aimed at checking and evaluating the degree of economy, effectiveness and

productivity of the audited organization's use of funds, property, performance of duties, the exercise of property rights (proper financial management), which is subject to inspection by the Supreme Supervisory Institution of the Slovak Republic within its competence" (Audit Standards, 1994).

It is now possible to assert, and it is obvious, that the given definitions of the efficiency audit differ only in the form of presentation of its essence, which consists in conducting audits of the activities of state organizations and institutions to determine the economy, effectiveness, and productivity of their use of budget funds received for the implementation of their assigned tasks state functions and socio-economic tasks.

The concepts underlying the performance audit methodology have also changed repeatedly. In particular, government auditors of Great Britain have traditionally focused on the reliability of processes and procedures within government (budgetary) institutions. However, since the excess of cost over budget funds spent is determined primarily by the results that have been achieved at the expense of these funds, the audits carried out by NAOs in the public sector have increasingly focused on the evaluation of the final results, rather than the processes carried out to achieve them. That is, during the performance audit, not only the possibilities of improving the management procedures and activities of state institutions are evaluated, but also the final results of its implementation (Mamishhev, 2011).

Performance audit tasks in foreign countries, where the organization of the budget process is based on result-oriented budgeting, mainly include assessing the level of effectiveness of the management activities of government (budgetary) institutions to achieve the planned final result (Savchenko, 2016). A typical example of such a country is the Netherlands, where three models of performance audits are implemented. Within the framework of the first model, the main focus is on the quality of management systems and procedures existing in the audited organization, their focus on ensuring economy, productivity, and effectiveness of the use of budget funds, as well as on determining the degree of attention of the organization's management to these issues. When implementing the second model of efficiency audit, the reports of the organization's

management, which are submitted to the relevant state institutions, are checked, and conclusions are drawn up about the reliability and completeness of the results of activities on the effective use of budget funds. And the third performance audit model is used if the audited organization does not provide a performance report. In this case, depending on the objectives of the performance audit, the economy, productivity, or effectiveness of the organization's activities are evaluated (Shulyuk, 2021).

Conducting an efficiency audit in countries where budget formation and implementation are based on the principles of result-oriented budgeting is characterized by some features. One of them, in particular, is that during the performance audit, not only the effectiveness of the management and use of public funds is determined, but also the presence of certain tools and indicators for evaluating their activity in the audited organization (Dorosh, Fesai, 2018). So, for example, the Office of the Auditor General of Canada during the performance audit checks "the tools and procedures by which the efficiency of the objects under inspection is determined" (Savchenko, 2016). And the Court of Auditors of the Netherlands, along with this, checks whether the responsibility of the management of the state institution (organization) being audited for ensuring effective management activities, as well as the requirements for the implementation of effective management, is established and how is it established in regulatory documents (Stefanyuk, 2018).

In some countries, there are differences in the content of checks on the effectiveness of the implementation of state-targeted programs compared to checks on the effectiveness of the activities of state organizations, the essence of which consists mainly in the emphasis on certain aspects of evaluating the effectiveness of the use of budget funds. So, for example, in the USA, when conducting an audit of the effectiveness of the activities of public organizations, the emphasis shifts towards the assessment of how economically and rationally the organizations acquire, store and use their resources (personnel, property, areas). And during the audit of the implementation of state programs, the auditors of the US GAO use the following types of evaluations of the effectiveness of their implementation: process evaluation – compliance of the quality of the provided services with society's expectations; product evaluation (outcome evaluation) – the

level of achievement of the planned results of the program; impact evaluation – the net effect of the program implementation due to comparing the results of the implementation of the latter with the results of the analysis of what would have happened in the absence of it; cost-benefit and cost-effectiveness evaluation – correspondence between the results of the program and the resources spent to obtain them (Khmelkov, 2017).

During the development of efficiency audits in foreign countries, the approaches and methods of measuring the effectiveness of budget expenditures were simultaneously changing. Initially, efficiency was perceived as a quantity determined based on the analysis of the physical volumes of spent resources (input-oriented estimation), i.e., the main attention when assessing the effectiveness of budget expenditures was paid to the economy of their use. Then, to carry out such an assessment, displays of allocative efficiency began to be used, in the determination of which, not physical measures of the number of resources spent, but costs (cost) were used. The evaluation of the effectiveness of budget funds at this stage was carried out based on determining the efficiency and productivity of their use. In the future, when it became necessary to carry out a comprehensive assessment of the effectiveness of state funds, the main attention began to be paid to the analysis of production (services) (output), and then to the final results of the use of budget funds (outcome). Analyzing the experience of higher financial control institutions of foreign countries, we can conclude that the main idea of a performance audit is to create an effective mechanism of control over executive state institutions regarding their performance of state functions and effective use of state resources. Based on this, an efficiency audit can and should be carried out by an institution whose activity does not depend on the executive state and which has the right to evaluate the economy, effectiveness, and efficiency of the use of budget funds and state property.

That is, the substantive component of the efficiency audit consists in identifying the legality and expediency of the mobilization of financial and material resources in the process of implementing social and economic policy, which allows one to assess how effectively the resources were used to achieve the set goal (for example, economic

growth, rates of economic growth, reduction of inflation, planned profit, etc.), deviations from the objective function.

State financial control institutions of foreign countries are guided by basic principles when conducting performance audits:

- within the framework of an efficiency audit, it is not the process of decision-making by representative and executive authorities that is checked, but the progress of the implementation of these decisions;
- performance audit is not conducted for determination the correctness of the implemented political course or approved state programs, and for performance evaluation executive authorities regarding their implementation (Ivanova, 2017).

An active discussion on the forms, methods, types, and directions of state financial control is a convincing example of the need to form a unified system of state financial control, which is reflected in the Law “On the Basic Principles of State Financial Control in Ukraine”, the introduction of relevant amendments to the Budget Code of Ukraine, other normative – legal acts. This will make it possible to legislate the sequence of state financial control, to determine the competence and authority of institutions that audit the effectiveness of the use of state funds and state property.

References to section 1.4

Ivanova, A.I. (2017). Adaptation of foreign experience in the formation of an effective system of public financial control. *Oblik i finansy*, vol. 3 (77). URL: http://nbuv.gov.ua/UJRN/Oif_apk_2017_3_12. (application date: 24/08/2022).

Bardash, S. & Osadcha, T. (2020). Current status of state financial control of Ukraine and ways of its improvement. *Baltic Journal of Economic Studies*. Vol. 6. №. 2. P. 17-24.

Derii, V.A. (2011). The concept and significance of economic control for minimizing costs and maximizing the income of enterprises. *Accounting and auditing*. №. 2. P. 48-56.

Nečas, P., Vacková, M. & Lošonczi, P. (2019). Въздушната мощност като фактор за сигурност: казус в Сирия. Air power as a security factor: case study Syria. In *Incas Bulletin*. Bucharest, Romania: INCAS – National Institute for Aerospace Research “Elie

Carafoli". ISSN 2066-8201. ISSN (online) 2247-4528. Vol. 11, №1, P. 217-230.

Romaniv, Ye.M., Honcharuk, S.M., Pryimak, S.V. & Danyliuk, L.Ya. (2015). Development of state financial control in Ukraine: monograph. Lviv. Prostrir M. 174 p.

Khmelkov, A.V. (2017). State financial control: textbook. Kharkiv: KhNU named after V.N. Karazin. 228 p.

Melnychuk, V.H. (2002). Independent state financial control in Ukraine and the experience of foreign countries. *Financial control*. №. 2. P. 33.

Dorosh, N.I. & Fesai, M. O. (2018). Methodological aspects of the auditor's assessment of internal control at the enterprise. *Scientific bulletin of the national academy of statistics, accounting and audit*. №. 1-2. P. 68-76.

Bondar, Yu. A. (2012). The place of internal audit in the system of bodies of the Pension Fund of Ukraine. *Economic sciences*. Series. : Accounting and finance . Issue. 9(1). P. 99-106.

Zhovnirenko, O.V. (2016). Methodological provisions for evaluating the effectiveness of internal financial control. URL: <http://sworld.com.ua>. (application date: 14.08.2022).

Drotárová, J., Mesároš, M. & Lošonczi, P. Сътрудничество между спасителните и пожарните бригади и медицинската спасителна служба, представляваща основа за ефективна интегрирана спасителна система в Словашката република. Cooperation Between the Rescue and Fire Brigade Corps and the Medical Rescueservice Representing a Basis for an Effective Integrated Rescue System in the Slovak Republic. In: *Annals of Burns and Fire Disaster*. Palermo, Italy: Euro-Mediterranean Council for Burns and Fire Disaster. Vol. 34, №4. link: http://www.medbc.com/annals/review/vol_34/num_4/text/vol34n4p365.htm ISSN: 1592-9566.

Audit of administrative activities: theory and practice. (2000). Trans. from English V. Shulga. Kyiv: Osnovy. 190 p.

Kaletnik, H. & Zdyrko, N. (2021). Public financial control in Ukraine: state, problems, prospects. *Economic Annals-XXI*. Vol. 187. Issue 1-2. P. 163-176.

Shulyuk, B.S. (2021). Ways of development of state financial control in Ukraine in the context of the experience of economically

developed countries.
URL: <http://dspace.wunu.edu.ua/jspui/bitstream/316497/33365/1>.
(application date: 03/09/2022).

Deineko, E. V. (2012). Actual problems of reforming the system of state financial control in Ukraine. *Technological audit and production reserves*. no. 4/2(6). URL: <http://nbuv.gov.ua>.
(application date: 01/09/2022).

Stefaniuk, I. B. (2018). Foreign experience! There is something to study, there is something to borrow (Organization of governmental financial control in France). URL: http://www.dkrs.gov.ua/kru/uk/publish/article?art_id=34227&cat_id=34204. (application date: 02/09/2022).

Savchenko, R.O. (2016). The evolution of the Western theory of internal control. *Agrosvit*. №. 5. P. 29-32.

Lima Declaration of Guiding Principles (adopted by the IX Congress of the International Organization of Supreme Audit Institutions (INTOSAI) in 1977). URL: http://zakon5.rada.gov.ua/laws/show/604_001. (application date: 05/09/2022).

Carassus, David & Georges Gregorio (2003). Gouvernance et audit externe legale: une approche histoeique comparee a l'obligion de reddition des comptes. URL: <http://www.univ-pau.fr/IAE-CREG/IMG/pdf>. (application date: 30/08/2022).

Gupta, Kamal. (2005). *Contemporary Auditing*. New McGraw Hill Publishing Company Limited. Sixth Edition. P.1.

Kukhareva, G.P. (2017). Development of French public administration: experience for Ukraine. *Public Administration and Local Government*. Issue 4(35). P. 13-20.

Auditing Standards (1992). Issued by Auditing Standards Committee. International Organization of Supreme Audit Institutions. June. p. 69.

Auditing Standards for Government Organizations: Revised 1994 (1994). *US General Accounting Office*, 101 p.

Malyshev, A.V. (2011). The emergence and development of control mechanisms in retrospect. *Financial control*. №. 4. P. 47.

Lošonczi P., Haniš J. Analysis of occupational risks in the profession of a paramedic. Анализ на професионалните рискове в професията фелдшер. In: *Annals of Burns and Fire Disaster*.

Palermo, Italy: Euro-Mediterranean Council for Burns and Fire Disasters Vol. 35, № 5. link: http://www.medbc.com/annals/review/vol_35/num_1/v35n1content.htm, ISSN: 1592-9566.

Vacková M., Kováčová L., Kancířová M., Lošonczi P. (2016). Необходимостта от иновации в образованието по сигурността за укрепване на резултатите от традиционното обучение в университетите. The need for innovation of security education for strengthening the results of traditional teaching at universities. In: *Communications : scientific letters of the University of Žilina*. ISSN 1335-4205. Vol. 18. №3. P. 93-97.

CONCLUSIONS TO PART 1

The activities of the financial manager and the financial controller will be effective only if they combine their efforts with the help of the financial controlling system, because otherwise the financial manager cannot obtain relevant information necessary for making reasoned management decisions. In modern conditions of activity, financial controlling faces the task of providing the enterprise with "cheap" financial resources with maximum return and minimum risk for the enterprise

In modern business conditions, economic analysis plays an important role in the management process of enterprises. The ineffectiveness of the analysis results is associated with the inept organization of the analysis at the enterprise. To carry out an effective and high-quality analysis, first of all, it is necessary to create an analytical service, choose the form of organization of the analysis and the type of organizational structure that will most closely correspond to the enterprise management system, and form the appropriate support.

The organization of analytical work requires compliance with the basic principles of analysis and requires the consistent execution of certain procedures. Based on this, it is advisable to perform the analytical work by dividing it into three stages: preparatory, main, and final. At each stage, appropriate measures will be implemented to ensure the organization, conduct of economic analysis and generalization of analytical results. This procedure for organizing

analysis and carrying out analytical work will ensure the study of all aspects of the company's activity, reduce the duplication of indicators and the execution of similar calculations, will contribute to the observance of a single methodology of analysis from year to year, which determines the efficiency and quality of analytical conclusions.

The importance of analytical and control work at the enterprise is quite significant in making effective management decisions. Carrying out qualitative analysis and control provides answers to questions related to solving problems related to increasing the efficiency of activities and ensuring the competitiveness of the enterprise on the market. Control and analytical work at the enterprise is increasing in connection with globalization and integration processes in the economy, reforming of accounting and reporting in accordance with international financial reporting standards. With their help, the company's development strategy is being developed, the choice of optimal options for management decisions is substantiated, their implementation is monitored, the results of the company's activities are evaluated, and the causes of problems and available reserves are identified.

Use of positive experience of foreign activities states can be an important factor in improving the domestic system state financial control. The generalization of world experience shows that that such type of control as audit is characteristic for most countries. Him it is necessary to develop in our country as well, because the budget system must focus not only on the development of state funds, but also on achievements specific socio-economic result.

To increase the effectiveness of state financial control in domestic practice, it is necessary to improve the activity of control bodies, clearly defining their functions and powers, creating and working out a mechanism for coordinating work; establish a systematic exchange of financial and management information between the mentioned bodies, creating a single information and analytical database; to ensure the suddenness of the implementation and cancellation of restrictions during the previous, current and next state financial control; to adapt the national system of inspections to the standards and norms of international law in the field of such control. This will make it possible to ensure effective, targeted and effective use of budget funds.

2. FINANCIAL CONTROL IN THE ECONOMIC SECURITY MANAGEMENT SYSTEM OF THE ENTERPRISE

2.1. Financial control as a tool of the management system to ensure the economic security of business entities ⁵

In the conditions of globalization, internationalization and transformation of economic relations, the issues of ensuring the economic security of business entities acquire special importance. With this in mind, enterprises should provide such a degree of security that would provide for the internal and external stability necessary for proper economic functioning, investment inflow, increased competitiveness, active participation in the international arena, which, of course, would create a basis for ensuring a sufficient level of economic security.

The issue of ensuring economic security has become especially acute due to Russia's military aggression, in the conditions of a fall in the national currency, a total increase in the prices of services, goods and raw materials, aggravation of relations with neighboring states, which leads to significant costs and negatively affects all areas of the company's security. It should be noted that the large-scale changes taking place in the country entail not only certain contradictions and problems, but also create new threats for enterprises. Threats to economic security make it necessary to create an effective system of financial control.

Currently, a national system of financial control has been built in Ukraine, but it has some contradictions and shortcomings. Financial control, as a factor of ensuring economic security, is currently used to an incomplete extent. Underestimation of the importance of financial control is one of the reasons for the emergence of crisis phenomena in the public sector, the failure to achieve regional development priorities, the presence of abuses in the sphere of public finances, irrational management of state and communal property, inefficient spending of budget funds, etc. Therefore, the problems of financial control of the realization of economic measures to stimulate the development of regions, the development of ways to increase its

⁵ Mulyk Ya. I.

effectiveness in order to ensure economic security are relevant.

Theoretical and methodical aspects of financial control were studied by such scientists as: L.V. Dikan, N.G. Zdyrko, M.F. Bazas, S.S. Klyuchka, M.T. Bilukha, V.F. Pihotskyi, I.K. Drozd, L.M. Odintsova, N.G. Vygovska, L.A. Savchenko, V.F. Maksimova, I.F. Stefanyuk, V. V. Voytenko and others. The following authors devoted their works to the study of economic security issues, in particular, its essence, threats, influencing factors, the order of its management, etc.: O.V. Blank, A.O. Epifanov, M.M. Ermoshenko, O.V. Cherevko, O. M. Cherchyk, V. L. Ortynskyi, O. V. Stepanova, Z. B. Zhyvko, G.V. Kozachenko and others. A significant contribution to the study of the role and importance of financial control in ensuring economic security was made by such scientists as: Bulkot, S.S. Klyuchka, O.M. Yesmanov, O.I. Baranovskyi, T.O. Krivtsova, G.V. Datsenko and others. However, the basic principles of the organization of economic security and financial control are mostly studied separately, without emphasizing their interrelationship, which determines the relevance of this study.

Financial control plays an important role in the management of the national economy. It involves monitoring the management process, evaluating results, comparing them with a defined goal, etc. Its wide scope of application makes it possible to influence various economic processes, supervise the observance of economic security, monitor the achievement of financial self-sufficiency of regions and sectors of economy, balanced budgets, protection of the interests of citizens and society. The rational organization and effective functioning of financial control is an important task of economic policy, which contributes to the observance of the country's national interests (Zdyrko, Mulyk, 2019).

During the development of the mechanism of financial control at the enterprise, it is important to determine its structure, which, according to scientists, should meet the following requirements: observance to a systematic approach during the study of financial control in increasing economic security at the enterprise; the formation of elements and blocks of the financial control mechanism at the enterprise, which should be interconnected and interdependent; compliance with the requirements of the current system of domestic regulatory regulation of financial control with the possibility of their

adaptation to European standards; providing scientific substantiation of measures, the implementation of which is aimed at improving financial control and increasing the economic security of enterprises; ensuring the adaptability of the financial control mechanism to the changing conditions of the external environment (Datsenko, 2019).

Besides, in the work of the mechanism of financial control at the enterprise, there should be feedback, which ensures effective communication regarding the solution of tasks aimed at improving the operation object. In view of the above, the mechanism of financial control at the enterprise is proposed to be defined as a set of goals and objectives, the achievement and implementation of which lead to the use of methods and means of influence, supported by institutional, personnel, organizational, methodical, technical and information support, established by the management for the implementation of legal and effective operation of the enterprise, which should correspond to the main result, namely the increase of its economic security (Datsenko, 2019).

So, we believe that to the main tasks of the mechanism of financial control of the enterprise, which will influence the creation of an appropriate system of economic security it is appropriate to include (Fig. 2.1).

The main component of the implementation of the financial control system is its goal, because it depends on it, what exactly should be controlled, how and by what means. Its purpose is to comply with the current legislation in the field of taxation; ensuring the correctness of accounting at all controlled objects; ensuring the effectiveness of the use of budget allocations and the use of state property (if the object of control is a state enterprise); timely identification the reserves for the growth of the company's financial resources. At the same time, the study of the essence and nature of financial control in terms of systemic understanding of the nature of this concept makes it possible to distinguish its subject-object and subject structure (Datsenko, 2019).

Thus, it is expedient to include to the subjects of financial control an organization, institution, enterprise and other controlling body, which based on the legislative acts of Ukraine and in accordance with the established powers, carry out verification of compliance with norms and standards over the objects of financial control. The

peculiarity of the controlling body as a subject is that it can simultaneously be an object of financial control for others.

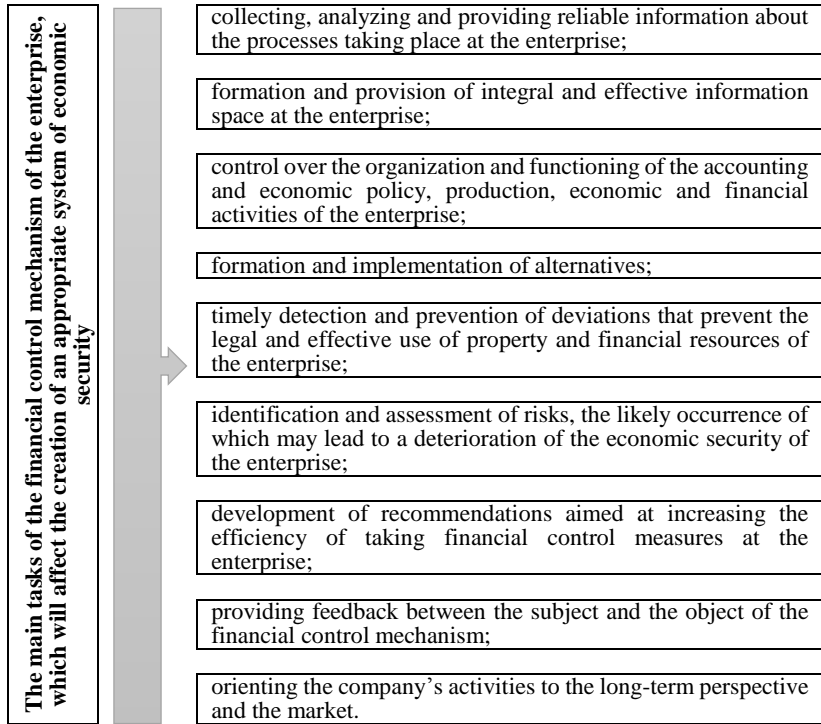


Fig. 2.1. Tasks of financial control at the enterprise

Source: formed by the author based on (Lavrov, 2010; Butynets, 2011; Kozachenko, Ponomaryov, Lyashenko, 2003)

As for the object of financial control, it can be institutions, organizations, enterprises, as well as natural persons being checked (compliance of the processes of formation, distribution and use of financial resources and property management). Besides, there are scientific views according to which the object of control is a management decision, economic and financial transactions.

The subject of financial control is a specific object to which control actions are directed (methodical apparatus of the process responsible for carrying out financial control). Usually, the subject of financial control is the activity of objects of financial control and its separate

aspects. Thus, at the enterprise level, the subject is a set of financial and economic operations and processes related to the reproduction of means of production, distribution, redistribution and sale of products, reproduction and expansion of production funds (Mulyk, Tsurkan, 2018).

The development of a scientifically based classification is a key element of the rational organization of financial control, as it solves the problems of both theoretical and applied aspects of ensuring economic development. At the same time, most scientists classify financial control using different criteria, which leads to differences in the interpretation of the essence of various economic categories. The unanimous is the economists' opinion that the division of financial control by types, forms, methods, as well as the separation of its functions and principles has important theoretical and practical significance (Savchenko, 2001).

The selection of types, forms, methods, functions, principles and component parts of ensuring financial control made it possible to build a scheme of financial control according to classification features, shown in Fig. 2.2. A characteristic feature of financial control is that, regardless of the stage of its implementation, it has a systemic target character, and therefore, is aimed at the realization of a defined goal and established tasks.

Thus, during the division of financial control according to classification signs, we note that the type of financial control is a subordinate economic category, while the definition of types takes place depending on the specific carriers of functions, subjects and objects of financial control. The classification of forms of financial control makes it possible to understand them in terms of the external manifestation of control. Therefore, the form of financial control is an actual expression of its content and economic essence, which is determined by the frequency and time of control actions (Voronova, 1998).

The definition of financial control methods is understood as a set of means or actions of a theoretical and practical direction, aimed at its organization. Thus, the methods of financial control are developed methods (techniques), the application of which is aimed at the implementation of its functions by the relevant entities (Datsenko, 2019).

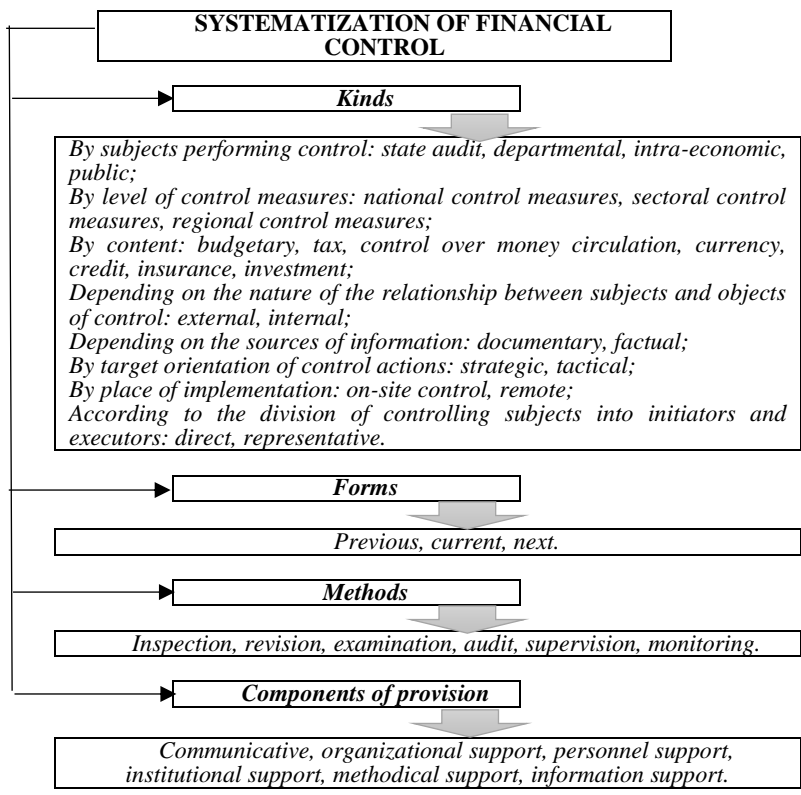


Fig.2.2. Types, forms, methods and components of ensuring financial control

Source: formed by the author based on (Savchenko, 2001; Voronova, 1998; Vygovska, 2008; Stefanyuk, 2009; Datsenko, 2019)

Analysis of scientific approaches to the classification of financial control by types (Savchenko, 2001; Voronova, 1998; Vygovska, 2008; Stefanyuk, 2009; Datsenko, 2019) made it possible to single out the most common of them: by subjects exercising control (state, audit, departmental, internal-economic, public); by content (budgetary, tax, control over money circulation, currency, credit, insurance, investment); by the level of control measures (national, branch, regional. and object control measures); by the nature of the relationship (subjects and objects of control); by sources of

information (documentary and factual); by the target orientation of control actions (strategic and tactical); by place of implementation (on-site and remote control); according to the division of controlling subjects exercising control into initiators and executors (direct and representative). Note that the classification of financial control according to the above types ensures their close relationship, while complementing each other, the specified types ensure the continuous nature of financial control.

Having conducted a study of classification of financial control forms, we note that depending on the time of its implementation, a group of authors (Voronova, Kucheryavenko, 2003; Odintsova, Tytarenko, Shvets, 2009; Bazas, 2004; Datsenko, 2019) distinguish its following types: *preliminary financial control* – is carried out at the stage of consideration and decision-making on financial issues, before the execution of economic transactions to prevent irrational expenses and mismanagement, illegal actions and various losses; *current control* – is carried out in the process of performing economic operations and its main tasks are to identify deviations in the process of performing work in order to take the necessary measures to eliminate negative factors and consolidate positive experience. It happens: guiding – during the action, there is a continuous measurement and assessment of the controlled object's state; filtering – if the course of the process does not meet the established norms, the action is not skipped until it is brought into compliance with the requirements; the next (retrospective) financial control – control over the financial results of activity, which is carried out after the completion of business operations. The main task of such control is the correctness check and legality of business operations at enterprises, to identify violations and abuses, as well as to develop measures aimed at eliminating the identified shortcomings and preventing them in the future (Mulyk, Dombrovska, 2018).

So, we can talk about the close relationship and complementarity of all forms of financial control, which ensures the reflection of the continuous nature of financial control.

The effectiveness of financial control is largely determined by the methods used. Among the methods of conducting financial control, which are the methods and techniques of its implementation, we propose to single out the following:

revision (this is a form of documentary control over the financial and economic activities of an enterprise, institution, organization, compliance with legislation on financial issues, the reliability of accounting and reporting; a method of documentary exposure of deficiencies, embezzlement, appropriation and theft of funds and material assets, prevention of financial abuse. According to the consequences of the revision an act is drawn up. Depending on departmental subordination, revisions are classified into: *departmental* – carried out by employees of the department at subordinate enterprises of one owner; *non-departmental* – carried out by state audit control bodies. Revisions are distinguished by organizational features: *planned* – carried out in accordance with pre-developed and approved plans; *unplanned* – are carried out in terms not stipulated by the approved plan (in case of a natural disaster, unsatisfactory operation of the enterprise or interconnected enterprises);

checkings (applied in certain aspects of financial and economic activity on the basis of reporting, balance sheet and expense documents. On the basis of detection of violations of financial discipline, measures to eliminate their negative consequences are formed. Thematic and chamber checkings are distinguished: *thematic checking* is a form of control of individual parties or thematic issues financial and economic activity of enterprises and organizations. Such checking is carried out by higher and state control bodies in accordance with the specifics of the functions they perform; *chamber checking* – a form of financial control used in executive power bodies when receiving and checking reporting indicators);

examination (despite the sphere of control over individual aspects of business entities, unlike inspections, this method of financial control covers a wider range of indicators, thereby determining the financial position of enterprises, forming their development prospects, the need for reorganization or reorientation of production);

audit (a form of control, which is an independent expertise of the state of accounting and financial statements) (Mulyk, 2019);

supervision (is carried out by supervisory bodies for economic entities that have received a license for one or another type of financial activity, and compliance with the rules and regulations established by them is controlled);

monitoring (a system of measures related to the observation of financial phenomena and processes and aimed at making operational decisions)

Assessment of the financial control essence and its implementation are impossible without defining the functions, which by their economic nature are meaningful and socially necessary. It is worth noting that there is no single approach to defining the types of functions of financial control in the scientific literature either. So M.F. Bazas (Bazas, 2004) singles out the following functions of financial control: observational, cognitive, informational and analytical, preventive, mobilizing, as well as the functions of promoting the activities of business entities and providing recommendations for taking measures and improving the management system. At the same time, L.A. Savchenko (Savchenko, 2001) distinguishes the following functions: informative, analytical, stabilizing, law enforcement, preventive and educational. The analysis of the views of scientists regarding the understanding of the functions of financial control made it possible to implement their systematization, shown in the form of Table 2.1. This approach to the systematization of the functions mentioned below allows expanding the content of the traditional understanding of financial control not only in terms of its regulation, but also from the standpoint of the implementation of monitoring, communication, preventive, warning, and encouraging processes (Datsenko, 2019).

Based on many years of experience, the world community has developed the basic principles of financial control organization, which every modern civilized state strives to implement. These principles are outlined in the Lima Declaration (The Lima Declaration (ISSAI 1). Approved at IXth Congress of INTOSAI, 1977), and among others, they include such universal principles as independence and objectivity, competence and publicity.

We believe that, for the implementation of financial control, it is possible to formulate the following basic principles, which include legality, independence, objectivity, responsibility, publicity and systematicity.

The principle of legality means strict and exact compliance with the norms and rules established by the current legislation, by all bodies carrying out financial control and their officials.

Table 2.1

Systematization of financial control functions

Functions	Characteristic
<i>Search</i>	Allows to search for factors that have a negative impact on the object of financial control with the aim of taking further measures to eliminate or correct the threatening situation.
<i>Mobilizing</i>	It is aimed at identifying not only negative, but also positive phenomena of influence on the object of financial control, as well as the search for prerequisites for their occurrence.
<i>Informational</i>	Ensures obtaining information as a result of control and making management decisions regarding the determination of measures that will positively affect the controlled object in accordance with the established norms of current legislation.
<i>Analytical</i>	Ensures the implementation of thorough analysis, study and processing of information obtained during control activities in order to make the necessary decisions in accordance with the defined goal and set tasks of financial control.
<i>Administrative</i>	It is aimed at effective management of the economy through the use of specific methods for the rational use of material, labor and financial resources.
<i>Warning</i>	Contributes to the prevention of illegal economic and financial operations, which lead to the violation of norms and standards established by normative legal acts, the occurrence of mismanagement, shortages, thefts and abuses; as well as identifying persons involved in financial violations and bringing them to justice in accordance with current legislation
<i>Organizational</i>	It is aimed at organizing the formation and practical application of measures to improve the activity of control bodies, which involves the use of instruments of state coercion.
<i>Stabilizing</i>	Ensures the improvement of the financial and economic activity of economic entities, as well as the application of measures to identify internal reserves of production for the growth of financial resources.
<i>Law enforcement</i>	The expediency of carrying out financial control is not only in the formation, distribution and use of funds, but also in the legality of the implementation of relevant economic and financial transactions.
<i>Communication</i>	It is aimed at establishing, maintaining and developing the system of public communications that arise in the process of financial control.
<i>Ethical</i>	Contributes to the development, implementation and observance of ethical norms and standards of activity of persons working in the field of financial control.

Source: [Datsenko, 2019]

The principle of legality is determined by the Constitution of Ukraine, which stipulates that the state, all its bodies (including control ones) act on the basis of legality, ensure the protection the society's and citizens' interests. Financial control bodies and their officials in the performance of their duties must comply with the

Constitution and laws of Ukraine.

The principle of independence means that financial control bodies are independent from other state authorities, local self-government bodies, as well as from political and other public associations in terms of carrying out control and audit and expert and analytical activities. The independence of control is ensured by the financial independence of the control body, as well as longer terms of authority of the heads of control bodies, compared to the parliamentary ones.

The principle of objectivity means strict compliance by control subjects with current legislation, a high professional level of controllers based on clearly established standards for conducting a control measure. Objectivity is the principle of control, on the basis of which control is carried out impartially, objectively and in the absence of any external influence.

The principle of responsibility means that measures of legal responsibility are applied to violators of financial legislation.

The principle of openness means the openness and availability to society and mass media of information about the results of control-revision and expert-analytical measures carried out within the framework of financial control under the condition of preservation of state, commercial or other legally protected secrets.

From these basic principles, others of an applied nature also follow: effectiveness; clarity and logic of the requirements presented by the subjects of control (professionalism); incorruptibility of control subjects; consistency of actions of various control bodies; the principle of compliance with professional ethics, etc. (Voytenko, 2018).

Scientists also propose to divide financial control also by the components of provision. In accordance with this, it is proposed to carry out financial control of enterprises on the basis of communication (coordination of the actions of controlling bodies with subjects of control, state bodies and the public); organizational (structural organization of financial control subjects, standardization of control measures, comparison of their results); personnel (unity of subjects of financial control regarding issues of personnel policy; level of professional training of personnel); institutional (a clear structure of departmental subordination, the presence of priority between specially created bodies, the presence of a concept regarding the definition of financial control bodies, their sphere of activity,

strategies for reforming and developing financial control); methodical (standardization of methodical recommendations regarding the organization and conduct of financial control, registration of its results, evaluation of the effectiveness of the activities of control bodies); information (creation of the Informatization Program, state information-analytical system, unified information system for detection of violations in the financial sphere of provision) (Datsenko, 2019).

Considering the above, it can be concluded that financial control is an integral structural element of state regulation of the economy, as it is designed to ensure this process, which is expressed as the goal of financial control and to form the necessary measures to block negative phenomena and prevent them in future. The information obtained as a result of financial control can also be used for timely implementation of measures to block negative phenomena and prevent them in the future in practice of state regulation of the economy.

The role of financial control in the system of state regulation of the economy is determined by its participation in solving two problems: increasing the efficiency of state regulation of the economy; compliance with the rules of formation and use of financial resources established by the state. Taking into account the above, effectively conducted financial control at the enterprise level affects both the satisfaction of the needs and interests of business entities, and the improvement of the economic development of the state in general.

The key point in carrying out financial control at enterprises is that the inspection is carried out not only for compliance with the conducting of financial and economic activities with the requirements of current legislation, but also for the efficiency of spending funds (in the case of state-owned enterprises – state funds). The levers applied to the objects of financial control can be both positive (proposals and prescriptions to the objects of financial control regarding the improvement of their activity from the point of view of its efficiency and effectiveness are mostly used during the implementation of internal economic and audit financial control during the search for shortcomings in its work and the development of proposals for improvement), as well as negative (sanctions, diverse in their properties and similar in purpose – punishments: financial, administrative, criminal, disciplinary, etc. In particular, these are fines,

finances, arrests, suspension of operations on accounts, revocations, inflicted on the state. Negative leverage is predominantly used during state and departmental financial control) (Datsenko, 2019).

The peculiarity of control in the system of economic security of the enterprise is that it is carried out in the process of financial and economic activity, it plays an important role in ensuring the preservation of property. This allows timely detection of shortcomings and determination of measures to eliminate them. Ensuring control in the system of economic security is one of the main conditions for the effective functioning of the enterprise. The system of economic security of each enterprise is individual, its completeness and effectiveness depend on the legal framework in force in the state, on the amount of material, technical and financial resources allocated by the heads of enterprises, on the understanding of each of employees the importance of guaranteeing business security, as well as on the experience of the heads of services enterprise security (Bulkot, 2014).

Economic security is a rather important and multifaceted concept. Analyzing the works of various scientists regarding the essence of economic security, we can conclude that “economic security is a complex and complex social phenomenon characterized by various signs and forms of manifestation” (Mulyk, 2014). Economic security is associated with such terms as “sustainability”, “guarantee”, “security”, “needs”, “capacity”, “threats”, etc. As it is noted by S.S. Klyuchka, economic security is a kind of provision, a guarantee in the long term of independence, stability and stable development. At the same time, economic security is not only the protection of national interests, but also the readiness and ability of government institutions to create mechanisms for the implementation and protection of national interests, the development of the domestic economy, and the maintenance of stability in society (Klyuchka, 2018).

A. Cherchuk holds a similar opinion, who interprets that the main features of the economic security of the enterprise are the protection of economic interests from possible threats; sustainability and stability, which is realized in the formation of the competitive potential of the enterprise, and on its basis – competitive advantages and competitiveness, the possibility of development; the flexibility of the elements of the internal environment, which makes it possible to adapt to external changes, to quickly eliminate various threats without

negative consequences; equability, reliability, emergency, which ensures the stability of the enterprise as a system against real and potential negative influences; access to resources and markets, the state of protection against external and internal risks, the level of economic efficiency of operation, the ability of the enterprise to develop (Cherchyk, 2016).

The economic security of the enterprise is the state of the enterprise, characterized by its ability to function normally to achieve its goal under existing external conditions and their changes within certain limits. By normal, we understand the functioning of the enterprise, which in the existing external conditions ensures the achievements of its goals in an optimal way or sufficiently close to it (Fig. 2.3).

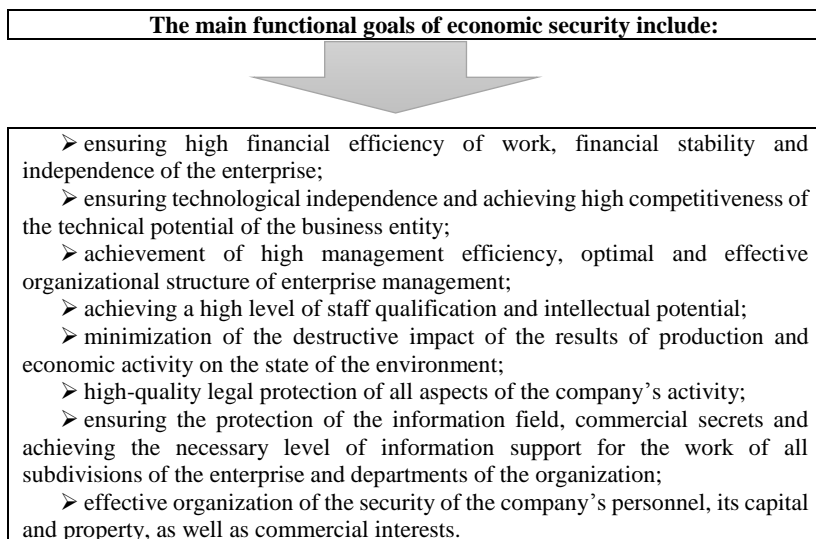


Fig. 2.3. Functional goals of economic security of the enterprise

Source: [Zhyvko etc., 2019]

It is appropriate to consider that the definition of the concept “economic security” is generally interpreted and contains elements (Fig. 2.4): first, due to the characteristics of the system state, namely, sustainability, stability, etc.; secondly, due to the ability to counteract

internal and external threats; thirdly, due to the possibility of full implementation of all functions of the business entity; fourthly, due to the full provision of all necessary resources and their use in production and economic activity.

The main elements of the economic security system of the enterprise:

1) protection of commercial secrets and confidentiality of information; 2) computer security; 3) internal security; 4) security of buildings and structures; 5) physical security; 6) technical security; 7) communication security; 8) security of economic and contractual activity; 9) security of transportation of goods and people; 10) security of advertising, cultural, mass events, business meetings and negotiations; 11) fire security; 12) environmental security; 13) radiation and chemical security; 14) competitive intelligence; 15) information and analytical work; 16) expert review of the security system mechanism

Fig. 2.4. Elements of the economic security system of the enterprise

Source: (Zhyvko etc., 2019)

The most common classification of dangers in science is also by the field of their occurrence. Internal and external dangers are distinguished by this sign. External dangers and threats arise outside the enterprise, not related to its production activities. As a rule, this is such a change in the environment that can cause losses to the enterprise.

Internal factors are related to the economic activity of the enterprise and its personnel. They are caused by processes that occur in production and during the sale of products and can affect business results. The most significant of them are: the quality of planning and decision-making, compliance with technology, organization of work and work with personnel, financial policy of the enterprise, discipline, etc.

There are many internal and external risk factors. This is caused primarily by the variety of connections and relationships that the enterprise necessarily enters into. In the implementation of material, financial, informational, personnel and other connections, there is an exchange, consumption and movement of raw materials, materials, components, machines, equipment, investments, technologies, cash

etc. All these connections and relations arise in specific political, socio-economic, natural-climatic and other conditions that have developed both on the scale of the entire country and at the level of a certain region. It is the specific situation in one or another settlement, region where the enterprise operates that can significantly affect the results of economic activity (Zhyvko etc., 2019).

The organization of the security system of any enterprise should have the following four levels (Fig. 2.5):

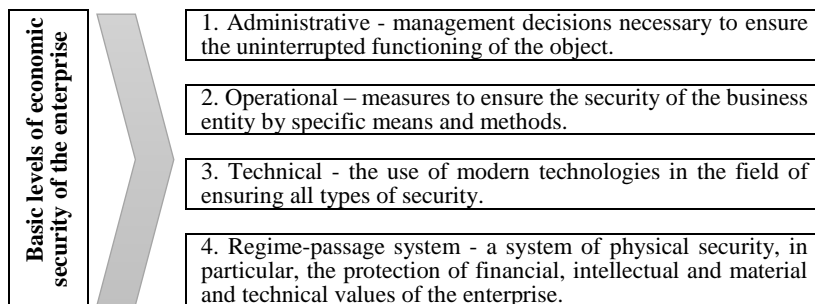


Fig. 2.5. Basic levels of economic security of the enterprise

Source: (Zhyvko etc., 2019)

The system of economic security of each enterprise is individual, its completeness and effectiveness depend on the legal framework in force in the state, on the amount of material, technical and financial resources allocated by the heads of enterprises, on the understanding of each the employees the importance of guaranteeing business security, as well as on the experience of the heads of services security of enterprises.

Reliable protection of the economic security of the enterprise is possible only with a comprehensive and systematic approach to its organization. This system provides an opportunity to assess the company's growth prospects, develop tactics and strategies for its development (Ortynskiy, Kernytskyi, 2009). Economic security consists in ensuring the progressive economic development of society in order to produce the necessary goods and the functioning of enterprises, especially under the conditions of an unstable economy, is largely determined by the reliability of the enterprise's economic security system. That's why, the problems of creating effective

mechanisms for increasing the economic security of the enterprise are gaining particular relevance (Stepanova, 2014).

The peculiarity of control is that it is carried out in the process of financial and economic activity and functions at the time of implementation and registration of economic transactions. This allows timely detection of deficiencies and determination of measures to eliminate them. Control in the system of economic security is carried out at the enterprise level and its object is its economic activity. Therefore, such control should be carried out by managers, specialists of structural units and accounting staff. An important component of the general problem of control development is the choice of its main types and directions, which determine the organizational and technical side of control at the enterprise (Bulkot, 2014).

Let's reveal the content of each of the elements of the control system in the economic security system of the enterprise (Fig. 2.6).

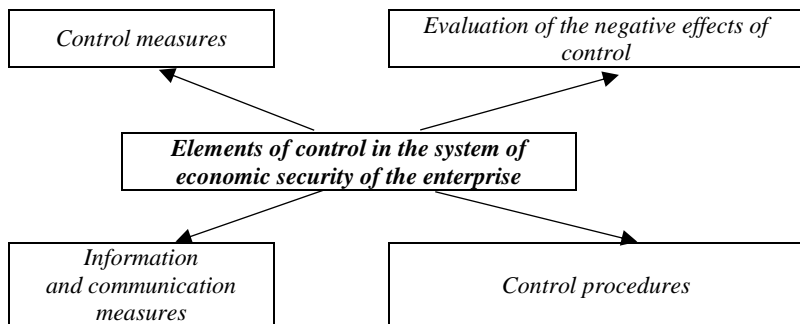


Fig. 2.6. Elements of control in the system of economic security of enterprise

Source: (Bulcott, 2014)

Control measures form the atmosphere in the control system, which sets the tone for the work of the enterprise, influencing the consciousness of employees and their attitude to work and control. So, control measures in the system of economic security of the enterprise are components of the control system established by the management of the enterprise in separate directions and sections of economic activity in order to ensure its effective and reliable management.

Control measures include policy and control procedures. In

particular, procedures designed to prevent or detect and correct errors. The goal is to ensure, as far as possible, organized and efficient business operations, including strict compliance with internal policies, asset protection, fraud and error prevention and detection, accuracy and completeness of accounting records, and timely preparation of reliable financial statements (Bulkot, 2014).

Control measures are the working conditions and rules, actions and procedures provided by management for its personnel, which reflect both the general attitude of top management and the owners of the enterprise to control, and the importance of control to that enterprise. If top management believes that control is important, then other employees will follow the proposed rules and procedures carefully. But if employees understand that the management does not care about control, then there will be no effect from such control.

Assessment of negative impacts (risk assessment). Each system is faced with a variety of negative external and internal influences that must be evaluated. Since the economic and political conditions, as well as external regulatory influences, rules and regulations are constantly changing, the system is faced with the task of identifying and eliminating the negative effects associated with these changes. Control allows to identify negative impacts, respond to changes in conditions and contribute to the elimination of these impacts.

Information and communication measures. Reliable and useful information about the used resources and the results of previous activities allows you to make the right decisions. Control allows to check the degree of reliability and authenticity of information.

Control procedures are certain actions that help ensure the implementation of management decisions. Control helps to ensure that all necessary measures are taken in a timely manner to eliminate risks that may prevent the tasks performance.

Control is carried out both during current activities and during specially organized monitoring. The implementation of control during current activities includes a number of different types of activities: issuing permits (sanctioning), reflection in accounting the facts of economic “life” (registration), granting powers (authorization), performing control measures (conducting inspections), dividing responsibilities, documentation, reconciliation (dispute resolution), preparation of reviews of assigned tasks (consideration of

performance indicators), asset preservation, access restrictions. Monitoring is achieved with the help of constantly performing work on conducting independent inspections and evaluations or with a combination of these activities (Bulkot, 2014).

Observation takes a special place in the normal course of business and includes regular observation activities carried out by employees. Continuous monitoring is carried out during operational work. The scope of work and the frequency of independent evaluations are usually related to the assessment of risks and the effectiveness of the procedures carried out during the monitoring process. Executors should report deficiencies in the system to higher authorities, and information about serious problems should be transferred to senior management or the board of directors.

Management control involves making management decisions.

Control over the functioning process and activity results (effectiveness control). This type of control ensures constant monitoring of the process and results of financial and economic activity. It allows efficient use of available resources. Control points of activity are necessary in order to avoid searching, duplication, unproductive costs and to ensure proper performance of assigned tasks by all employees.

In the process of monitoring the operation, the company's assets are protected from losses. At the same time, two main tasks are solved: ensuring the economic security of assets and carrying out control of transactions with assets.

Ensuring the economic security of assets is aimed at preserving assets from fraud and taking appropriate precautions to protect against both natural disasters and technical violations in the operation of equipment.

Loss of assets is possible in the process of operations. For example, you can suffer losses if you constantly load products to an insolvent buyer or pay an invoice for raw materials without being convinced of the honesty of the seller. If documents are not protected by an appropriate control system, they may be stolen, misused, or accidentally destroyed. This applies to intangible assets or accounts receivable, a number of important documents (confidentiality agreements, government contracts) and accounting registers (General Ledger and Journals). The protection of certain assets and registers has

become of great importance due to the emergence of computer systems. Larger volumes of information stored on computer media can be destroyed if measures are not taken to ensure their preservation (Bulkot, 2014).

Organizationally control of results is carried out with the help of the activities of units at different levels of management. At the highest level of management, it is carried out by the office of the deputy director for economics and finance. Control over the activities of production departments and subsidiaries is carried out by the accounting department, financial service, and planning service, which collect and process information characterizing the financial results of activities for a certain period, deviations from planned indicators and their causes. Since the reporting system of departments and subsidiaries is usually built according to the same form as the planning system, it facilitates control over the implementation of planned indicators.

Control in the economic security system of the enterprise concerns all aspects of economic activity of the economic entity (scientific and technical, production, material and technical supply, sales) and is reflected in a concentrated form of the effects of numerous internal and external factors. Within the framework of a single control system, a constant check of the functioning process and the results of production and economic activity are carried out.

In our opinion, it is advisable to clarify the objects of control in the economic security system of the enterprise (Fig. 2.7). Let's outline the content of control objects in the economic security system of the enterprise.

1. Sources of resources. The flow of financial resources includes funds (cash), which include: funds (cash) received as a result of financial and economic activities; funds (cash) received on the financial markets through the sale of shares, bonds, obtaining loans; funds returned to financial market entities as payments for capital in the form of interest and dividends; funds invested and reinvested in the development of the enterprise's production and economic activity; funds intended for the payment of tax payments. Cash and other liquid resources must be sufficient to make all current payments.

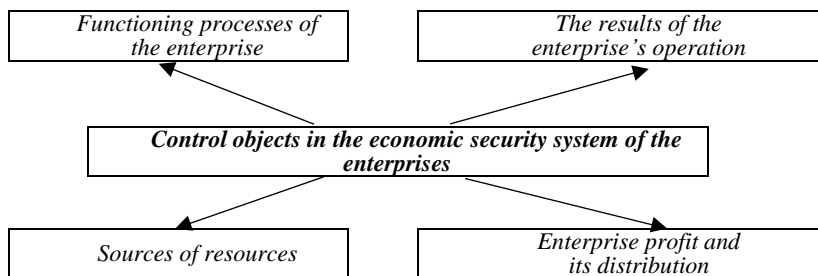


Fig. 2.7. Objects of control in the economic security system of the enterprise

Source: (Bulcott, 2014)

2. Enterprise operation processes. Managing the process of achieving results involves making decisions on financial and economic issues and developing methods for their implementation, planning and control. In order to perform tasks effectively, it is necessary to be constantly informed, especially about those areas in which measures must be taken: implementation, costs, taxation, asset structure etc. This information is also necessary for a detailed analysis both by types of manufactured products and by structural divisions. In the management process, decisions are made about a combination of such goals as increasing profits and increasing the exchange rate of shares. These goals can counteract each other. This occurs when a company that invests capital in the development of production suffers current losses, expecting to receive high profits in future, which will ensure the growth of the value of its shares. On the other hand, the enterprise may refrain from investing in the restoration of fixed capital for the sake of obtaining high current profits, which will later affect the competitiveness of its products and lead to a decrease in the profitability of production, and then to a fall in the exchange rate of its shares and to a deterioration in the situation on the financial market (Bulcott, 2014).

Therefore, the manager's constant attention is focused on three classic financial problems – liquidity, profitability, and the structure of assets and capital.

Liquidity. Money (cash) is the “life force” of business, and imperfect control over it can become almost the only important factor

that leads to financial losses. That is why the control of the flow of financial resources, expressed in money (cash), should be a central (main) issue. The release of fixed and working capital can lead to high liquidity of the enterprise in general, despite the low real profit. Such a position can be regarded as a strengthening of the company's financial position (Mulyk, 2018).

Profitability. The increase in income is carried out by controlling expenses, as well as reducing capital invested in assets.

Structure of assets and capital. Important for any enterprise is the optimal combination of long-term assets (fixed assets) with long-term capital necessary for their financing. There is a simple rule that states that short-term assets (receivables, stocks) should be financed with short-term capital, and long-term assets with long-term capital (equity, long-term loans). Therefore, it is necessary to control such areas as optimizing the assets structure, determining the need for their replacement or liquidation, developing an investment policy, methods and means of its implementation, determining the need for financial resources, investment planning, and managing the securities portfolio (Bulkot, 2014).

3. The results of the operation of the enterprise. The goals of control in this case are as follows: to have accurate information about the financial and economic condition and financial results for making operational and strategic decisions, to have enough funds for timely payment to suppliers, contractors, etc. Control of the results of functioning is carried out in the following areas: control of the volume of sales of products, goods, works, services and non-realization income; assessment of the financial condition of the enterprise and the results obtained for the current period; control over the company's position in the industry.

4. Enterprise profit and its distribution. The main task of such control is the verification of decision-making that ensures the most efficient movement of financial resources between the enterprise and sources of its financing. Control is carried out in the following areas: correct calculation and payment of taxes, distribution of profits and creation of funds, implementation of dividend policy, control over implemented investment projects and involved sources of their financing (Bulkot, 2014).

So, summing up, we note that control is an important element in

the economic security system of the enterprise. With regard to control as an element of the enterprise's economic security system, it is advisable to distinguish two types of such control: control over the management system (control over the implementation of laws, intended programs, plans); control over the functioning process and activity results (effectiveness control). The organization of control is carried out through clearly defined elements and objects of control as part of the economic security system of the enterprise, which are the basis of the practical organization of such control.

References to section 2.1

Zdyrko, N. G., Mulyk, Y. I. (2019) State financial control in the system of ensuring the economic security of the state. *Economics, finance, management: topical issues of science and practice*. № 7. P. 112-122.

Datsenko, G. V. (2019) Formation of the mechanism of financial control in increasing the security of industrial enterprises. *Scientific Bulletin of the Uzhhorod National University*. Issue 27, part 1. P. 44-48.

Datsenko, G. V. (2019) Peculiarities of the organization of financial control in ensuring the effective functioning of economic entities. *Economy and society*. Issue 20. P. 189-198.

Lavrova, Yu.V. (2010) The mechanism for ensuring the financial security of the enterprise. *Bulletin of Economics and Industry*. № 29. P. 127-130.

Butynets, T.A. (2011) Development of the science of economic control: problems of theory, methodology and practice: monograph. Zhytomyr: ZhSTU, 772 p.

Kozachenko, G.V., Ponomaryov, V.P. (2003) Economic security of the enterprise: essence and mechanism of provision: monograph. Kyiv: Libra, 250 p.

Mulyk, Y.I., Tsurkan, A.O. (2018) Internal economic control in the agricultural enterprise management system. *Efficient economy*. № 3. URL: <http://www.economy.nay&ka.com.ua/?op=1&z=6188>

Savchenko, L.A. (2001) Legal problems of financial control in Ukraine: monograph. Irpin: Academy of the STS of Ukraine, 408 p.

Voronova, L.K. (1998) Finance law. Kyiv: Venturi, 384 p.

Vygovska, N.G. (2008) Economic control in Ukraine: theory,

methodology, organization. Zhytomyr: ZhSTU, 432 p.

Stefaniuk, I.B. (2009) State financial control: problems of identification and definition of the system. *Finances of Ukraine*. № 11. P. 12-19.

Voronova, L. K., Kucheryavenko, M. P. (2003) Financial law: textbook for law students. universities and colleges Kharkiv: Legas, 360 p.

Odintsova, L.M., Tytarenko, A.O., Shvets, M.V. (2009) The system of financial control and the development of auditing in Ukraine. *Bulletin of ZhSTU*. № 1. P. 47. 13.

Bazas, M.F. (2004) Methodology and organization of financial control: textbook for students. higher education estab. Kyiv: IAPM. 440 p.

Mulyk, Ya.I., Dombrovska V.V. (2018) Internal economic control of the financial security of the enterprise. *Global and national economic problems*. Issue 22. P. 960-964.

Mulyk, Y.I. (2019) Organization of control for the purpose of ensuring economic security. *Accounting, taxation and control in the conditions of international economic integration: theses add. Ukrainian science and practice conf*. Kyiv, P. 240-242.

Брітченко, І.Г. (2001) Концепція виробничого менеджменту підприємства. *Зб. наукових праць "Торгівля і ринок України"*. Вип. 12. Том II. С. 31-36.

The Lima Declaration (ISSAI 1). Approved at the IXth Congress of INTOSAI, Lima/Peru 1977; INTOSAI Professional Standards Committee. URL: http://www.issai.org/media/12901/issai_1_e.pdf. (application date 09/09/2022)

Voytenko, V. V. (2018) Types and principles of financial control in the state administration system. *State governance: improvement and development*. № 8. URL: <http://www.dy.nayka.com.ua/?op=1&z=1560>. (application date 05/09/2022)

Bulkot, G. V. (2014) The main types of control in the system of economic security of the enterprise. *Scientific Bulletin of Poltava University of Economics and Trade. Series: Economic Sciences*. № 4. P. 68-75.

Mulyk, Ya.I. (2014) Theoretical approaches to determining the essence of financial security of agricultural enterprises. *Current problems of humanities and natural sciences. M., Institute of Strategic Studies*, P. 169-174.

Брітченко, І.Г., Князевич, А.О. (2015) Контролінг: навч. посіб. Рівне: Волинські обереги. 280 с.

Klyuchka, S. S. (2018) State financial control in the system of economic security of the state: diss... candidate. econom. sciences: 08.00.03 / Institute of Legislation of the Verkhovna Rada of Ukraine. Kyiv, 235.

Бритченко, И.Г. (2001) Виртуальные банки и их связь с реальной банковской системой. *Наука, религия, суспільство*. № 2. С. 3-10.

Cherchuk, A. (2016) Scientific approaches to determining the essence of ecological and economic security of the enterprise. *Economic journal of Lesya Ukrainka East European National University*. № 2. P. 79-83.

Брітченко, І.Г., Перепелиця, Р.К. (2005) Оцінка кредитоспроможності емітента корпоративних облігацій. *Вісник НБУ*. № 11 (117). С. 32-37.

Zhivko, Z.B., Cherevko, O.V., Zachosova, N.V., Zhivko, M.O., Vavorovska, O.B. (2019) Organization and management of the economic security system of the enterprise: educational and methodological manual. Cherkasy: Rev. Chabanenko Yu.A. 120 p.

Брітченко, І.Г. (2003) Переваги застосування нових кредитних технологій. *Схід*. №3 (53). С. 55-58.

Polova O., Podolianchuk O, Gudzenko N., Koval N., Ishchenko Y., Pravdiuk M., Mulyk T., Tomchuk O., Mulyk Ya., Kozachenko A., Mashevska A. (2022) Current issues of accounting, taxation, analysis and audit development in modern challenges condition: collective monograph. Košice: Vysoká škola bezpečnostného manažérstva v Košiciach, 282 p.

Ortynskyi, V. L., Kernytskyi, I. S. (2009) Economic security of enterprises, organizations and institutions: training. Manual. K.: Legal Unity, 544 p.

Stepanova, O. V. (2014) Economic security in the conditions of globalization of the world economy: col. monogr.: in 2 vols. Dnipropetrovsk: LTD Drobyazko, Vol. 2, pp. 34-43.

Брітченко, І.Г., Кужелєв, М.А. (2001) Формування системи державного управління інвестиційним процесом як головна передумова економічного зростання в Україні. *Вестник ДонГУЕТ*. № 12. С. 15-22.

2.2. Effective use of modern tools of financial control in the economic security management system of the enterprise ⁶

The economic security management mechanism of any enterprise is a systematic combination of interrelated elements that ensure the economic security of its objects through their subjects with the help of functions, using tools, methods, levers, based on principles to overcome threats and negative external influences and internal environment, stable functioning of the enterprise and achievement of goals in economic activity (Fig. 2.8):

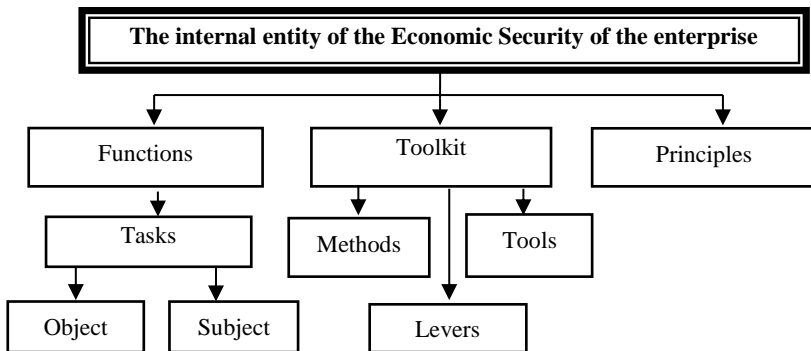


Fig. 2.8. The mechanism of managing the economic security of the enterprise

Source: (Melikhova, 2018)

The mechanism of managing the economic security of the enterprise in the study of Antonova O.V. contains a set of financial interests of the enterprise and threats, functions, principles and methods of management, organizational structure and culture, methods and means of management, criteria for assessing the level of financial security as the main element of economic security (Antonova, 2015).

Vasylichak S.V. to this mechanism adds management personnel, management techniques and technology, financial instruments (Vasylichyk, 2011), but does not mention threats, culture, methods and means of management. So, despite the fact that scientists cite many elements and components of the economic security management

⁶ Kozachenko A.Y.

mechanism of the enterprise, the question of the structure of the economic security management mechanism remains debatable, although the opinion of scientists that the main elements of this mechanism are functions, principles, methods, and tools is correct.

The mechanism of managing the economic security of the enterprise, substantiated in detail by Blank I.O., who divides it into: the system of state regulatory regulation of the financial security of the enterprise, the market mechanism of regulating the financial security of the enterprise, the internal mechanism of managing the financial security of the enterprise, the system of management methods, the system of management tools (Blank, 2009). One can agree with the scientist regarding the concept proposed by him, which is based on the management of the economic security of the enterprise, as well as grouped management tasks in terms of its priority financial interests. However, in our opinion, the presented concept lacks an organizational structure and corporate culture of entity management. Since in the economic encyclopedia edited by S. Mocherny, the term “mechanism” is revealed in two aspects: firstly, it is a system or method that determines the order of a certain type of activity and, secondly, as a system of certain links and elements that brings them into action.

A large explanatory dictionary of the modern Ukrainian language edited by V.T. Busel defines the term “management” as an action with the meaning “to manage”, that is, to direct the activity, work of someone, something, to be at the head of someone, something, to manage; to direct the course, course of some process, to influence the development, state of something (Busel, 2004). When carrying out operational, financial and investment activities, an industrial enterprise interacts with external and internal entities that not only manage the enterprise’s activities, but also contain threats to its economic security.

Therefore, T.O. In her article, Melikhova notes that the external subjects of the enterprise’s economic security include persons, groups of persons, and economic entities with whom the enterprise interacts in the external environment and whose actions may cause threats to its security or create conditions for ensuring the enterprise’s economic security: buyers, suppliers, government officials, employees of banking institutions, law enforcement officers, external auditors,

judges, scientists of innovation institutes, insurers, issuers, investors, debtors, creditors, partners, importers, exporters, tax officials, customs officers, security guards from private agencies, journalists, workers of social services and others (Melikhova, 2018). The internal economic security subjects of the enterprise include persons and groups of persons who work at the enterprise and perform functions and tasks aimed at managing the economic security of the enterprise and its facilities, which include owners, managers, economic security analysts, financiers, economists, accountants, marketers, managers, lawyers, employees of the personnel department, cashiers, storekeepers, internal auditors or auditors, guards, shareholders of the enterprise and others, that is, all personnel of the enterprise who perform tasks related to the economic security of the enterprise.

The internal subjects of the economic security management of the enterprise are persons or a group of persons who work at the enterprise and perform the functions of managing the subjects of ensuring the economic security of the enterprise in relation to its objects in order to level the impact of hazards, increase the efficiency of activities for its stable functioning and achieve business goals. They include the owners, the head of the enterprise and the economic security services of the enterprise, which perform tasks related to the management of the economic security of the enterprise.

Orlyk O.V. notes that subjects of financial and economic management influence security objects with the help of certain management methods, which reveal ways to counteract identified and predicted threats, dangers and risks in specific conditions, as well as reflect the immediate state of enterprise security (Orlyk, 2015). Therefore, it is advisable to consider the objects of economic security of the enterprise.

The object of economic security of the enterprise is not only its financial activity, but according to NP(S)BO 1 “General requirements for financial reporting” in general, the process of carrying out operational, financial and investment activities of the enterprise for each object of accounting in accordance with the Chart of accounts of the accounting accounting, namely: non-current assets, stocks, funds, settlements and other assets, equity and collateral, long-term liabilities, current liabilities, income and results of operations, expenses by elements, expenses of activities. The object of economic

security is a phenomenon, resource, person, activity, changes in which affect the level of economic security of the enterprise. The objects of economic security of the enterprise include: operational, financial and investment activities, personnel, financial resources, information, innovations, investments, financial relations, financial interest, threats, dangers, financial risks.

The object of management of economic security of the enterprise is the process that manages financial, informational, material and personnel resources to ensure the needs of economic security of the enterprise. These include financial relations.

The logical continuation of this study is the determination of the subject of economic security of the enterprise. The difficulty of studying views on the interpretation of the subject of economic security of the enterprise lies in the fact that scientists do not pay enough attention to its definition in their research.

The subject of management of the economic security of the enterprise is an activity aimed at managing financial, informational, material and personnel resources to ensure the needs of the economic security of the enterprise. These include: operational, financial and investment activities.

According to the authors Filippov S.V. and O.S. Dashkovskii, the effective performance of the functions entrusted to it by the system provides a toolkit with the help of such financial methods as: management of profit, expenses, capital, financial accounting, financial analysis, financial planning, financial regulation, etc., as well as thanks to financial levers, namely: profit, income, financial sanctions, dividends, price, financial incentives, wages, etc. (Fillipov, Dashkovskiy, 2012).

Management of economic security should be based on a number of standards principles of general management and specific principles in accordance with object of management.

In the scientific literature, there are different approaches to the representation of functions management of economic security. According to the results of the generalization of the existing ones, the most typical forms of scientific research can be singled out identification of economic security management functions (Danilova, 2020):

1) economic security management functions are formed from taking into account the hierarchical levels of enterprise management (at the level management of the enterprise, at the level of management of the economic security service);

2) functions of the economic security system are divided into functions ensuring economic security and economic management functions security;

3) functions are formed in accordance with the source of danger and are divided on external and internal functions of economic security management;

4) functions are presented as a detailed list of personnel actions for each a functional component of economic security (personnel, financial, force, legal, environmental, etc.);

5) depending on the purpose of performing actions, functions are divided into primary and connection functions;

6) the functions of managing economic security mean the list actions of the management entity, which ensures the achievement of the general goal system of economic security of the enterprise.

The functions of the economic security management process should be considered in several planes (Fig. 2.9).

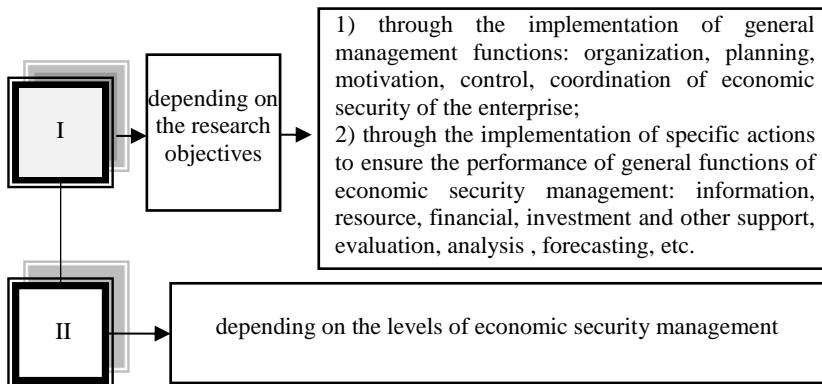


Fig. 2.9. Functions of the management process

Source: (Danilova, 2020)

As V. M. Andrienko rightly points out, it is advisable to manage economic security at three levels: strategic, tactical, and operational (Andrienko, 2016).

The functions of economic security management at the strategic level are:

1. Organization of the system of economic security objects depending on the adopted approach to management (resource-functional, program-target, system, etc.). Thus, with the resource-functional approach, the economic security system is formed on the basis of functional components and the corresponding objects of danger in each of them. In the case of program-target economic security, the object of economic security is a set of conditions that ensure the implementation of programs for the formation of economic security. In the case of the system, all carriers of danger in the system of the enterprise.

2. Development of the concept of economic security management, as generalized directions of practical implementation of the goal of such management.

3. Development of an economic security strategy as a long-term goal and desired management result.

4. Information provision of the economic security system (Zachosova, 2016)

At the tactical level of economic security management, the entire set of actions of the subject of management is aimed at developing a policy for the implementation of strategic goals. The policy of economic security is determined depending on the strategic goals, the magnitude of the dangers, and the organizational capabilities of the enterprise. Taking into account the analysis of existing experience, the policy of managing economic security lies in the area of implementation of the following functions: formation of an annual economic security plan, adjustment of actions in accordance with changes in the environment of the enterprise, organization of current control over the safe use of all types of enterprise resources, execution of strategic plans and identification of causes deviations, monitoring the state of production factors, functions and processes for signs of danger and risks, etc.

At the operational level, the functions of economic security management consist of monitoring the fulfillment of obligations by the personnel of the economic security department, the implementation of tactical plans and the identification of reasons for

deviations from them, the development of operational plans for economic security, etc.

So, the following basic elements form the economic security management system (Danilova, 2020):

1) the goal of management is the formation of safe conditions for the operation and development of the enterprise on different time horizons (strategic, tactical, operational);

2) the goals of the functions that realize the goal of managing economic security are to ensure the conditions for the stable implementation of these functions (ensuring the conditions for the implementation of the functions of management, supply, production, sales, financing, etc.);

3) the management process is the subject's influence on objects of danger in order to identify, neutralize or reduce the negative impact of external and internal dangers and risks;

4) management methods, a set of methods of influencing the subject of management on the object of danger in order to achieve functional and general goals of economic security management;

5) target indicators of management are indicators of stability and sustainability of the enterprise;

6) the target indicators of the functional management of economic security are indicators of the stability of functional performance;

7) indicators of economic security at all levels of management are the economic security index of the enterprise's activity and the economic security index of the implementation of each of the functions.

In the conditions of increasing dangers for the activity of the enterprise, the management of the economic security system is aimed at ensuring such conditions that are able to ensure the structural integrity and stability of the efficiency of its functioning and development. Realization of the specified goal is possible only when forming goals to ensure conditions for safe implementation of functional goals.

According to the Great Explanatory Dictionary of the Modern Ukrainian Language, the term "instrumentary" is interpreted as a set of tools used in any field (Busel, 2004). It is appropriate to note that the toolkit of economic security of the enterprise is a set of tools, methods, levers, with the help of which subjects of economic security

perform their functions to identify, neutralize threats and protect objects of economic security of the enterprise. The toolkit for managing the economic security of the enterprise is a set of tools, methods, levers, with the help of which financial security management subjects perform their functions to manage personnel in the prevention, overcoming, neutralization and protection against threats to the objects of the economic security of the enterprise.

A large explanatory dictionary of the modern Ukrainian language edited by V.T. Busel defines the term “tool” as a tool for work, and “tool” is interpreted as a device, device, mechanism, etc., with the help of which a certain action is performed; that which serves as a means in some action, business (Busel, 2004).

Thus, the tool of economic security of the enterprise is the means of prevention, detection, neutralization and protection against threats of objects of economic security of the enterprise, which are used by its subjects, as well as means for its stable functioning and development. At the same time, the tool for managing the economic security of the enterprise is the means of prevention, detection, neutralization and protection against the threats of objects provided by its subjects to manage the economic security of the enterprise, as well as means for supporting its stable functioning and development.

These tools include: financial analysis, financial control, financial and tax planning and forecasting, budgeting; adjustment of plans, diagnosis of bankruptcy, adoption of anti-crisis decisions, factoring, raising capital, raising funds through contributions of investors and owners to the authorized capital, rational use of production areas and resources, provision of deferred payment (commodity or commercial credit), franchising, operational and financial leasing, futures and forward agreements.

We focus on the effective use of modern tools of financial control in the economic security management system of the enterprise. Therefore, financial control today is defined as a successful component of solving tasks in the aspect of establishing the basic requirements for the legal conduct of economic activity, compliance with law and order, systematicity, optimality and balance of control actions that ensure state, contractual and executive discipline, on the one hand, and the state’s implementation of international legal norms,

which guarantees the effective implementation and development of market relations in Ukraine, on the other hand.

Coordination and cooperation between state bodies of financial control and heads of enterprises provide management personnel with a high level of responsibility, autonomy and efficiency during decision-making, as well as their implementation, improving their professional development, which increases the probability of ensuring the stability of economic security at the enterprise. Therefore, it is possible to achieve maximum efficiency during the organization and conduct of financial control, which will ensure an increase in economic security at the enterprise, only with the help of an appropriate mechanism.

The urgency of forming and ensuring the mechanism of financial control of enterprises lies in the importance at the current stage of creating a perfect financial system that will ensure and increase economic security at the macro, mezo, and micro levels in the conditions of a weak domestic economy that is under martial law. The analysis of the set of scientific studies in the field of financial control (Butynets, 2011; Vygovska, 2011; Kostyrko, 2009) forms an idea about the degree of compliance of the functioning of the financial control system with the set goal and a comparison of the results obtained and the resources spent.

Since the main goal of financial control is to promote economical, efficient, effective, legal and transparent use of the company's financial resources, it can be argued that the optimization of the functioning of financial control is the ability of the corresponding system to contribute to the reduction of the number and volume of offenses, to prevent and counteract violations of financial and budgetary legislation with the least costs.

According to O. I. Baranovskyi, the effectiveness of financial control is important from the point of view of ensuring the financial security of Ukraine, as it contributes to the detection of financial crimes, Bondar Yu. A. notes in his scientific work. (Bondar, 2019). The degree of effectiveness of the financial control system is determined during its evaluation. The analysis of research by individual specialists allows to identify the assessment of the effectiveness of financial control as a process during which the subject of the assessment characterizes the state of functioning of the financial

system in order to establish compliance with certain assessment criteria (Koyuda, 2007). The essence of financial control is that the subject of financial management checks how the managed object (enterprise of any form of ownership) complies with the law. The importance of financial control is manifested in the verification of compliance with the established legal order in the process of financial activity by state and local authorities, enterprises, institutions, organizations, citizens and the economic conditionality and effectiveness of the actions carried out, their compliance with the tasks of the state and local self-government.

Thus, it is an important means of ensuring the legality and expediency of modern financial activities. Financial control is designed to ensure legality and financial discipline, which is understood as a set of requirements established by legislation regarding the functioning of the financial mechanism of the state and the obligation to comply with them by all participants in financial legal relations (Voronova, 2006).

Therefore, financial control is the activity of state, local and other public bodies regulated by legal norms in the financial activities of all economic entities to check the timeliness and accuracy of planning, the validity and completeness of the receipt of funds in the relevant funds, the correctness and efficiency of their use (Voronova, 2006).

Thus, financial control can be considered in two aspects (Voronova, 2006):

1) as a strictly regulated activity of special control bodies in compliance with financial legislation and financial discipline of all business entities;

2) as an integral element of managing finances and cash flows to ensure the expediency and efficiency of the enterprise's financial operations.

In general, the financial control procedure is reduced to comparing the actual and planned indicators of the enterprise's activity, identifying significant deviations and the reasons for these deviations, and developing recommendations for taking appropriate measures.

The country's economy is a multidimensional system that includes a large number of different interconnected and interdependent elements with signs of complex characteristics and actions that function and develop in accordance with the system of laws.

The content of financial control is reduced to the following (Fig. 2.10):

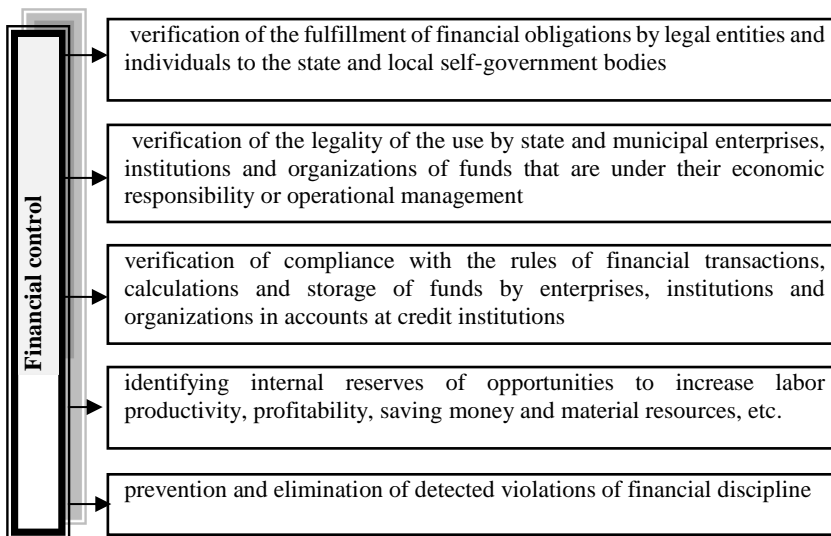


Fig. 2.10. Content of financial control

Source: (Parkhomenko, 2008)

At the enterprise level, the concept of “control system” is defined on the basis of the scientific and methodological concept of the study of objects that are systems, that is, the theory of systems, as well as the theory of control. The enterprise is a complex open system, each element of which is a relative boundary of dividing the system in each individual case of distribution and analysis. At the same time, a complex system is understood as a set of relatively separate interconnected subsystems, for each of which a functioning goal can be determined, which is subordinate to the overall goal of the system. Each subsystem manifests itself not only in its functionality, but also as expressing a plurality of some aspects or at least one aspect. At the same time, each such one- or multi-aspect subsystem can be structurally divided into lower-level subsystems. Yes, the financial control system is a subsystem of the enterprise-level system, but it, in turn, can consist of subsystems of planning, accounting, analysis, control, etc., depending on the complexity of the organizational structure of the enterprise and the specifics of its activity.

The financial control system is a set of elements that ensure the implementation of the financial control process at the enterprise. When studying the functioning of the financial control system and the enterprise in general, it is fundamentally important to choose a systemic approach, as it helps to take into account all the relationships within the system and identify the economic effect and conduct an analysis of this effect. For Ukrainian enterprises, the choice of such an approach is the most optimal, since they are characterized by partiality in the functioning of the management system and the financial control system and their non-systematic, episodic improvement.

The functioning of the enterprise as an economic system is carried out with the help of a variety of technological, managerial, logistical, social, financial and other processes. According to the statement of V. Koyuda, “the life cycle of the enterprise depends on the effective management of this system regarding the continuation of its life cycle or revival on a fundamentally new basis due to the introduction of scientific and technological developments in the field of production, organization and management”. The implementation of the financial control system at the enterprise and its optimization must comply with the classic management cycle (Plan – Do – Check – Act), which ensures continuous improvement of processes. Provided that the mentioned cycle is the basis, the process of improving the operation of the financial control system at the enterprise can be presented as follows (Fig. 2.11):

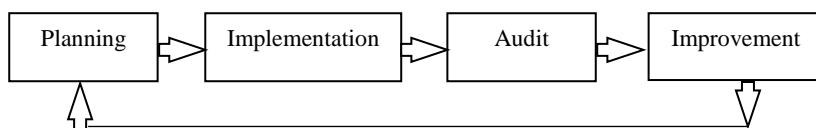


Fig. 2.11. The process of optimizing the operation of the financial control system at the enterprise

Source: (Koyuda, 2007).

Elements of the financial control system are represented by the following list:

- the control environment, which is the basis for all other elements of internal control;

- information systems and communications that ensure the movement of information flows between elements in the control environment;
- procedures and means of control are those actions that help to ensure that the management implements its decisions in achieving the company’s goals and eliminates risks that may prevent it;
- risk assessment, which consists in the identification and analysis of risks associated with the achievement of the goals set for the enterprise;
- monitoring of the financial control system, i.e. constant assessment of the quality of this system’s work over a certain period of time.

Regarding the levels of financial control, the following ranking is appropriate (Fig. 2.12):

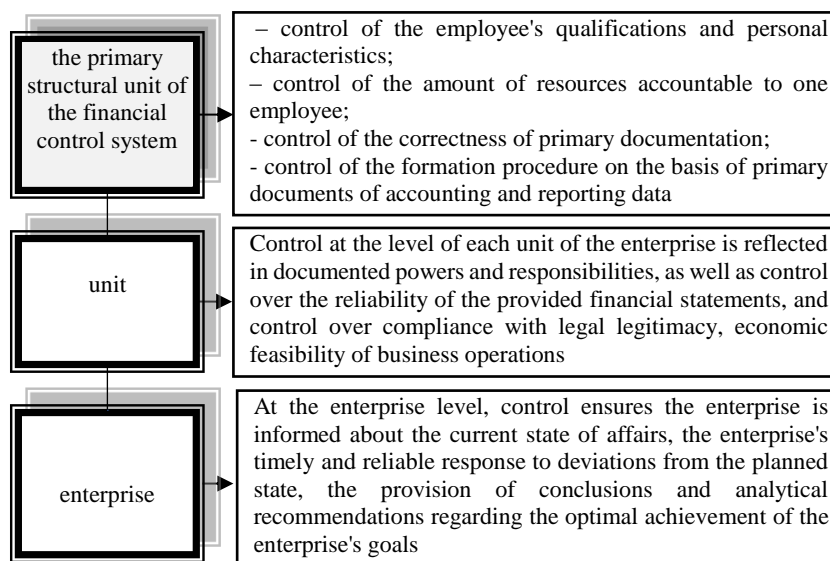


Fig. 2.12. Ranking of levels of financial control at the enterprise

Source: (Bondar, 2019).

The effective interaction of the elements of the financial control system at each of the specified levels of control ensures the achievement of the main goals of financial control.

It should be noted that the enterprise is a complex system containing a set of relatively separate interconnected subsystems with their own internal structure and patterns of functioning. Each subsystem is an integral part of the overall system, that is, the enterprise, with its own internal structure and patterns of functioning. The successful functioning of the enterprise as a system depends on the effective implementation of scientific and technological developments in the field of production, organization and management.

The financial control system ensures the implementation of the financial control process at the enterprise and helps to avoid systematic errors in making managerial decisions and managing the enterprise's resources.

The specificity of each type of control as an element of control is its secondary nature. You can control what already exists. By itself, financial control cannot be a means of organizing financial activities. It is designed to prevent or eliminate errors in this activity, to improve it. For more effective implementation of financial control, criteria, certain benchmarks are needed, with which the activity being checked is compared in the control process. Financial control, depending on the approaches taken as a basis, is divided into several types. The most common approach to classifying financial control into types is the time factor of control, and on its basis, previous, current, and subsequent financial control are distinguished. All control bodies have these types of controls. This was considered in more detail in point 2.1 of this monograph.

Preliminary financial control belongs to the process of determining the amount of state financial resources for the planned period and their main part, which is accumulated in the state budget, as well as their distribution between individual public needs and recipients of state financial resources (Stohrynets, 2018).

Preliminary financial control is carried out at the stage of development and adoption of laws and other regulatory acts on financial issues. For this purpose, a qualified expert evaluation of the financial results of the implementation of this or that decision, which may be adopted, is carried out. Preliminary financial control based on analysis and calculations of financial results ensures the objectivity of assessing the expediency of adopting or rejecting the appropriate

decision, is of great importance for the prevention of violations of financial discipline and other financial offenses (Stohrynets, 2018).

Current financial control is control over operational financial activity, that is, over the financial process itself. It consists in compliance with the requirements of financial norms and regulations, i.e. systematic verification of compliance with financial discipline, first of all compliance with established indicators of mandatory payments to the budget and state extra-budgetary funds. This type of financial control has the greatest impact on the process of formation and use of financial resources in all structures of social production. It is directly carried out by financial activity management bodies. Although all subjects of financial legal relations are involved in this type of control. The next financial control is carried out after carrying out financial operations (fulfilment of financial obligations to the state, receiving and using funds from the state to pay salaries to employees of the budget sector, etc.) and, as a rule, after the completion of certain stages of activity for clarification its effectiveness.

The following financial control is the basis for the analysis and assessment of the effectiveness of the use of financial resources and the effectiveness of the organization of financial work, the application of control financial norms and standards in general. Equally active participation in this type of control is taken by all subjects of financial and legal relations, but each of them carries out the following financial control at its level and within the limits of the competences granted to it (Stohrynets, 2018).

It should be noted that all types of financial control are carried out precisely by employees of structures engaged in financial and economic activities and owners of financial resources. At the same time, the role and meaning of all types of financial control do not change, but the scope of its application is limited to an enterprise, institution, organization, firm, etc. Here the emphasis is on the turnover of financial resources, that is, the efficiency of their use and its reflection in accounting and reporting, and not for a check of financial discipline, although it is not out of sight at all. On the basis of many other factors, mandatory and proactive financial control are distinguished. Mandatory is carried out:

- 1) due to the requirements of regulatory acts (for example, the control of the Accounting Chamber of the Verkhovna Rada of Ukraine

over the implementation of the budget based on the results of the year that ended);

2) by the decision of the competent authorities of the state (for example, the tax administration to find out whether taxpayers have fully fulfilled their financial obligations to the state), the prosecutor's office (to find out whether the law is observed in the country), the court (to establish the truth during the consideration of a specific court case) etc. (Stohrynets, 2018).

Initiative financial control is carried out on the basis of own decisions of business entities. Other criteria for the classification of types of financial control are also applied, for example, according to the subject composition of bodies performing financial control. In this case, financial control is divided into the following types:

- 1) financial control of bodies of legislative power and local self-government;
- 2) financial control of executive bodies of general competence;
- 3) financial control of executive authorities of special competence;
- 4) financial control of financial and credit authorities;
- 5) departmental financial control;
- 6) intra-household financial control;
- 7) public financial control;
- 8) audit financial control (Stohrynets, 2018).

Financial control is carried out by various methods. They are very diverse and are not chosen arbitrarily, but depending on a combination of factors, primarily from:

- 1) subject of control. Here, the legal status and specifics of the activity of the body performing control play an important role;
- 2) from the object of control;
- 3) from the goal and tasks facing the subject of control;
- 4) from the reasons for the emergence of control legal relations and a number of other circumstances (Petryshyn, 2006).

Such methods of financial control are most often used, such as audits, checks (documentation, state of accounting and reporting, completeness of financial obligations, etc.), listening to reports, information of officials about financial activities at sessions of local self-government bodies, meetings of state bodies executive power, inventory, etc. As a rule, their implementation is planned. However,

they can be carried out outside the plan, in connection with the necessity that has objectively arisen.

All methods of financial control are specified in the methods, that is, in the technologies (rules) of conducting financial control by various subjects of certain objects. The methodology indicates specific methods and means of action, guides how and in what sequence to start, carry out and finish the inspection. For the most frequently used control methods, there are methods tested in practice. They are developed taking into account the organizational structure, forms of ownership, and other important differences of controlled objects.

Under the current conditions, the main attention and financial control is paid to the completeness and participation of funds in financial resources, the legality of receipts and expenses in all links of the financial system, compliance with accounting and reporting rules. Financial control covers not only the process of forming and executing the state budget, but also local budgets, as the state must exercise control during: distribution of grants (subsidies) and loans from the state budget to regional and local budgets to finance their current and capital expenditures; approval of the issuance of local loans guaranteed by the government; implementation of government programs.

References to section 2.2

Melikhova, T. O. (2018). Scientific approaches to defining the essence of the concept of “economic security of the enterprise”. *Scientific Bulletin of the Uzhhorod National University*. Series: International economic relations and world economy. Issue 17(1). P. 167-170.

Antonova, O.V. (2015). Methodical principles of the mechanism of financial security management of the enterprise. *Naukovyy visnyk Khersonskoho derzhavnoho universytetu*. №. 15. P. 43-46.

Vasylchuk, S. V., Protsykevych, N.V. (2011). Management of financial security of the enterprise. *Naukovyy visnyk NLTU Ukrayiny* № 21. P. 151-153.

Blank, I.A. (2009). Upravleniye finansovoy bezopasnost'yu predpriyatiya. *Management of financial security of the enterprise*. 2 nd ed., Elga, Kyiv, Ukraine.

Busel, V.T. (2004). Velykyy tлумachnyy slovnyk suchasnoyi ukraïnskoyi movy. Great explanatory dictionary of contemporary Ukrainian language. Irpin, Kyiv, Ukraine.

Князевич, А.О., Брітченко, І.Г. (2015). Кластерний підхід до створення інноваційної інфраструктури країни. *Науковий вісник Мукачівського державного університету*. Серія “Економіка”. Вип. 2(4). Ч. 2. С. 24-28.

Britchenko, I., Shapran, V. (2021). The establishment of the inflation target and the corridor of fluctuations of the target: analysis of world trends and practice in Ukraine. *VUZF Review. VUZF, Sofia (Bulgaria)*. № 6(3). P. 13-20. URL: DOI:10.38188/2534-9228.21.3.02 ISSN 2534-9228

<http://papersvuzf.net/index.php/VUZF>.

Krupskiyi O., Dzhusov O., Meshko N., Britchenko I., Prytykin A. Key sources when formulating competitive advantages for hotel chains. *Tourism: An International Interdisciplinary Journal*, 2019. Vol. 67. №1. P. 34-46. ISSN 1332-7461 (Print), ISSN 1849-1545.

Orlyk, O.V. (2015). Mechanism of management of financial and economic security of the enterprise and its main components. *Finansovokredytna diyalnist: problemy teorii ta praktyky*. № 2 (19). P. 222-232.

Filyppov, S.V., Dashkovskyy, O.S. (2012). System of formation and maintenance of economic safety of the enterprise. *EKONOMIKA: realiyi chasu*. № 2 (3). P. 17-23.

Danilova, E. I. (2020). The concept of a system approach to the management of the economic security of the enterprise: a monograph. Vinnytsia: European Scientific Platform. 342st.

Andrienko, V. M. (2014). Modern approaches to the formation of the system of economic security of domestic construction enterprises. *Scientific notes of "KROK" University*. Series: Economy. Issue 37. P. 119-126.

Zachosova, N. V. (2016). Theoretical and methodological principles of building a system of economic security of financial institutions. *Herald of Cherkasy University. "Economic Sciences" series*. № 1. P. 44-55.

Butynecj, T.A. (2011). Efektyvnistj ghospodarsjkogho kontrolju: problemy vyznachennja. *Effectiveness of economic control: problems of definition*. ZhSTU Bulletin. № 2 (56). P. 10-18.

Vyghovsjka, N.Gh. (2011). Development of methodological bases of efficiency of internal financial control. *Bulletin of Sumy National Agrarian University*. Avg.: Finance and Credit. № 1. P. 23-31.

Брітченко, І.Г., Стьопочкін, А.І. (2016). Передумови сталого розвитку національних соціально-економічних систем, що формують Європейський Союз. *Економіка і організація управління. Збірник наукових праць ДонНУ*. Вінниця. Випуск №3 (23). С. 40-49.

Britchenko, I., Shapran, V. (2021). Financial mechanisms of ensuring the development of business under high interest rates. *VUZF review. VUZF, Sofia (Bulgaria)*. № 6(2). P. 16-24. URL: DOI: 10.38188/2534-9228.21.2.03 ISSN 2534-9228 <http://papersvuzf.net/index.php/VUZF/issue/archive>

Kostyrko, R.O. (2009). Evaluation of the effectiveness of internal control in the management of enterprise costs. *Bulletin of Donetsk National University of Economics and Trade named after M. Tugan-Baranovskyi*. Ser. Economic sciences. № 4. P. 210-218.

Bondar Yu. A. (2019). Optimizing the functioning of financial control systems for enterprises. *Scientific Bulletin of the Aviation Academy*. Series: Economics, management and law. Issue 1. P. 98-104.

Zdyrko, N. G., Mulyk, Y. I. (2019). State financial control in the system of ensuring the economic security of the state. *Economics, finance, management: topical issues of science and practice*. № 7. P. 112-122.

Kojuda, V.O. (2007). *Konceptualjni zasady upravlinnja pidpryjemstvom jak ekonomichnoju systemoju: monohrafija*. Kharkiv. KhNEU.

Voronova, L.K. (2006). *Finansove pravo Ukrajinjy: pidruchnyk* Financial Law of Ukraine: Textbook. Kyiv. Precedent: My Book.

Parkhomenko, N.M. (2008). *Sources of law: problems of theory and methodology*. K.: Law. Dumka.

Shtogrinets, N. V. (2018). Objective prerequisites and main characteristics of financial control. *Scientific Bulletin of the Uzhhorod National University*. Series: International economic relations and world economy. Issue 17(2). P. 140-143.

2.3. Improvement of the economic security management system of the enterprise ⁷

Management system of economic security of the enterprise is a controlled system in real time, which provides feedback to all elements of subsystems, makes it possible to change parameters, if necessary, according to the developed assessment, forecasting and planning models, to adjust plans and measures in a timely manner.

Thus, the implementation of institutional measures becomes an urgent necessity for the engineering of the organizational structure of management, the expansion of the list of tasks and functions of individual structural units and centers of responsibility, and this, as a rule, requires the introduction of significant changes in the founding documents, the development and implementation of provisions, instructions and rules, which generally regulate the activities of the enterprise in the field of economic security.

The main goal of the organizational measures is the implementation of the practice of both planning and ensuring the economic security of enterprises in the bakery industry, for which it is necessary to make changes to the organizational structure of management, to reorganize individual structural divisions, to implement an effective system of training, retraining, personnel rotation, as well as to rebuild the document flow and office management to the level of industry leaders. The implementation of economic measures is aimed at achieving a justified level of efficiency of the financial and economic activity of the production enterprise, and the informational measures are aimed at the proper information provision of the life of the business entity and the protection of its commercial secrets.

Motivational measures selected strategies should be used to encourage personnel to participate more in the implementation of the tasks of strengthening the economic security of the enterprise in the short and long term.

It is also necessary to pay special attention when implementing the selected strategy to the intellectual component, which is characterized by the ability of the scientific and technical personnel of the enterprise

⁷ Polova O.L.

independently (without the involvement of specialists from the outside) to qualitatively develop, implement and monitor the implementation of the entire economic security management system of enterprises in the bakery industry. This can be achieved by a set of motivational measures, as well as competent work of the company's top management. Thus, the built system for managing the economic security of enterprises in the bakery industry is a controlled, self-adjusting and managed system in real time, which has the following functional capabilities: management of all processes in the subsystem; the possibility of changing the parameters, according to the implemented mathematical models, in order to avoid excessive risk of economic security; availability of feedback with all components of the subsystem; the presence of automatic adjustment of parameters to ensure the performance of basic tasks, a high level of accuracy, reliability.

The category monitoring the level of economic security of the enterprise will be considered as a continuous systematic process of observation, collection, analysis, forecasting and integral assessment of quantitative and qualitative information using modern information systems in order to develop a strategy for effective management of economic security. The creation of monitoring systems is based on the following provisions (Voinarenko, 2008):

1. Monitoring systems are not only fixers of certain parameters of enterprises specified in advance by the user, but they can also replenish their parameter base depending on the specifics of the activity of a particular enterprise.

2. Monitoring systems are the basis for creating complex management systems for current and strategic activities of industrial enterprises.

3. Industrial enterprise monitoring systems are actually intelligent tools that help managers at different levels to make decisions affecting the economic state of the enterprise. Fig. 2.13 presents the monitoring information subsystem, which is the most important element of the economic security management mechanism of the enterprise in the bakery industry.

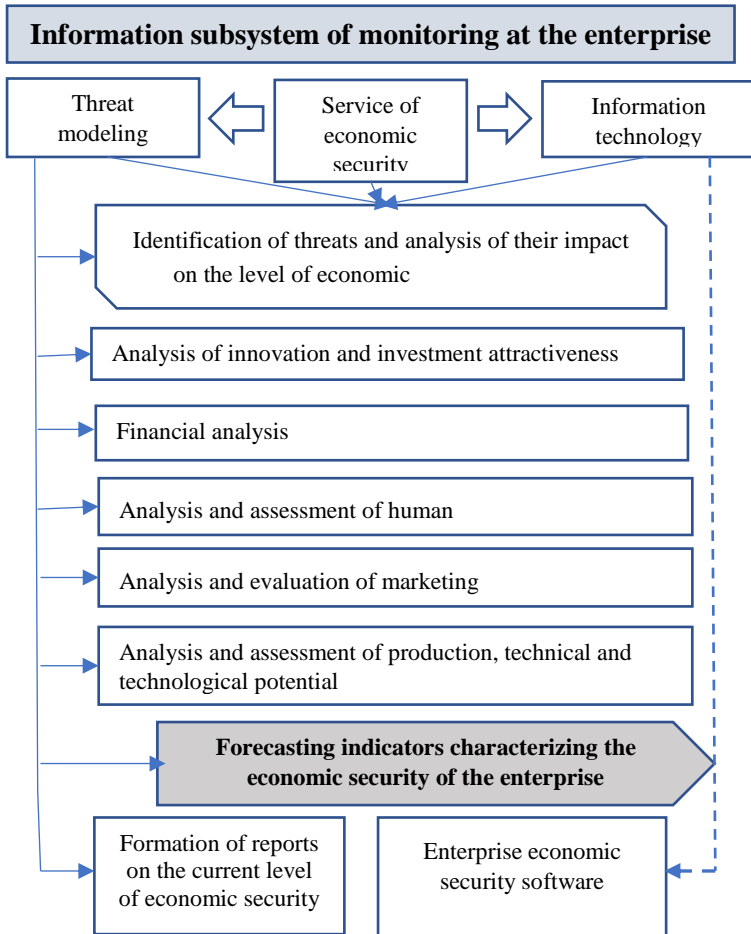


Fig. 2.13. Information subsystem of economic security monitoring of enterprises

Source: grouped by the author based on literary sources

Malyuta L. Ya. believes that the functional purpose of the monitoring system for ensuring the economic security of the enterprise is that it provides the management entity with information not only for choosing one or another alternative from the already available set, but also allows for the development of new management alternatives, i.e. form a set, and then, when a certain situation arises, choose one of the

developed management alternatives to ensure the safe development of the enterprise. The advantage of such a monitoring subsystem is the ability to monitor the level of economic security of the enterprise in real time. As a rule, the analysis and evaluation of the main parameters is carried out based on the results of the quarter and the year. Such a point estimate does not reflect the financial and economic activity of the enterprise during the entire period. Thanks to the implementation of the monitoring information subsystem, the management and relevant departments responsible for financial and economic security can monitor the process based on the results of a shorter period of time (a month or even a week). The effectiveness of managing the development of the enterprise depends on the ability to quickly search, analyze and fully process any amount of information. This is especially relevant for enterprises in the bakery industry, which are under the strong influence of the external competitive environment. The information processing system must correspond to the monitoring system, since even having at their disposal a necessary and sufficient set of complete, reliable and up-to-date data, most enterprises cannot use them rationally in the decision-making process. This is explained by the lack of a well-established process of transforming the flow of information collected into aggregated reports suitable for making strategic decisions.

The purpose of monitoring the economic security of the enterprise is to obtain information from the management of the enterprise about the level of efficiency and effectiveness of the enterprise's activities based on qualitative and quantitative analysis and evaluation of relevant indicators and assessment of the occurrence or existence of possible threats and risks. The subject area of monitoring the level of economic security is the determination of the integral indicator of economic security of the enterprise by selected functional components. One of the conditions that the monitoring algorithm must meet is the possibility of quantitative assessment of all studied indicators to determine the level of economic security of an industrial enterprise.

Monitoring the level of economic security at the enterprise involves the implementation of successive stages of regulatory influence. At the first stage, the economic security system is formed at the enterprise. The system of regulation of economic security at the

enterprise has the following elements: goal, task, object, subject, methods and tools. The purpose of regulating economic security at the enterprise is to determine the possible state of the economic security system, which can be achieved under the condition of preventing the occurrence of threats to economic security and ensuring the development of people and society as a priority.

Relying on the general methodology of statistical monitoring and taking into account the peculiarities of the process of maintaining the appropriate level of economic security of the enterprise when forming a methodical approach to the implementation of internal monitoring at the enterprise, the following urgent tasks are defined:

- formation of the goal and main tasks of monitoring the level of economic security, based on the mission, economic tasks and interests facing the enterprise;

- formation of a system of single indicators-indicators that can quantitatively characterize the state of individual functional components of the enterprise's economic security;

- establishment of sources of information for carrying out the necessary calculations of the level of individual functional components of the economic security of the enterprise and the integral indicator;

- collection and transmission of necessary information for further processing;

- assessment of reliability and completeness and depth of information provision;

- compilation of processed information into computer databases;

- analytical processing of information and obtaining results regarding the current level of economic security of the enterprise;

- identifying the causes and consequences of the low efficiency of the system of regulating the economic security of the enterprise;

- development of proposals to improve regional regulation to ensure security;

- forecasting the level of economic security of the enterprise (Loyko, 2015).

The main objectives of monitoring can be attributed to:

- 1) assessment of the state and dynamics of the enterprise's development;

- 2) determination of causes, sources, nature, intensity of economic

security threats;

3) forecasting the consequences of threats to economic security;

4) systematic and analytical study of the situation and emerging trends, as well as development targeted measures to identify and reduce threats to the enterprise. It is established that the monitoring system of financial and economic security will be effective under the conditions of determining the company's strategy and tactics. Financial strategy economic security involves determining its purpose and tasks, directions for their solution, as well as forms and methods of using appropriate forces and means, the possibility of their regrouping, creation of necessary reserves for neutralization and localization of possible threats.

Financial and economic security tactics are the most flexible part of the system monitoring of financial and economic security, which changes depending on the action of internal and external threats, changes in priority of economic interests, etc. Complexity and the variability of the economic and social situation requires the use of various tactics measures to ensure the financial and economic security of the enterprise. In general, monitoring allows the enterprise to adapt to constant change external environment and act successfully in crisis conditions. Adaptation requires ability to the development, transformation of elements of economic activity and the management system in in such a direction that ensures the survival of the enterprise (Babelyuk, 2017).

Assessment of financial security based on determination of potential the enterprise's internal monitoring system involves the following works: determination of directions and objects of research; choosing a specific period and direction of analysis; determining the purpose of the research; choice of research methods; determination of the main factors of the enterprise's activity and the causes of deviations; calculation of the main causes of fixed losses, overspending of time and money. There may be different methods of financial analysis of enterprises, the specific content of which is determined primarily by the specifics of the production and commercial activity of the enterprise under study. However, it is possible to form a principled approach to determining the potential of an enterprise independent of the spheres of their business activity. Its essence consists in the successive detailing of the conducted financial

analysis based on the monitoring data of the state of the enterprise, reflected in the financial statements.

The internal monitoring system involves a combination of express methods of determining financial potential with the principles of formation of knowledge management systems based on the formation of financial competencies of personnel.

Information and analytical provision of financial security of business entities requires the use of modern economic and mathematical models of analysis and evaluation objects of financial management. In the monitoring system, it is suggested to use multiplicative models of analysis of activity results and factors that shape them.

Factors of the enterprise are divided into groups depending on the characteristics of the enterprise and the level of management: factors of production activity; factors related to investment activities; indicators characterizing the effects and risks of financial activity; indicators of strategic forecasting, enterprises; current financial condition factors; a list of comparison criteria and regulation rules. A specific scheme of analysis of financial and economic results the activity of enterprises is determined by: the completeness of the available information, the features of the accounting and reporting system operating in one or another country, the industry specification, the tasks of research and the principles of building information and analytical support for the financial security of economic entities (Moiseyenko, 2012).

As a result of numerous studies, it has been substantiated that effective it is the use of not absolute, but relative efficiency indicators as the resulting variable, which removes the influence of differences in the amounts of balance assets. The level of profitability of various types of assets, which characterize intellectual capital and allow assessing its potential, was chosen as such an indicator. Differences in the profitability of economic systems are explained by differences of an informational and intellectual nature.

Monitoring of financial activity of the enterprise involves constant monitoring of cash flows, use of own and borrowed funds, etc. Monitoring of the financial condition of the enterprise is a quantitative measure by his financial condition. Monitoring of economic security involves evaluation quantitative and qualitative indicators of the

company's activity in general, to assess possible or existing threats (Mizik, Beketov, Konoplina, Panov and Yaroshenko, 2017). Therefore, monitoring is limited to research only internal state or factors of internal character teru activity of the enterprise.

If in the process of developing an effective system monitoring of the enterprise environment is ensured compliance with the above conditions, it is possible to quickly monitor changes in the studied factors, to timely determine and respond to changes in the external environment of water supply and drainage enterprises, to assess the intentions and behavior of the main counterparties and timely take measures to ensure the appropriate level of financial and economic security in the long term perspective

So, within the limits of the monitoring system being created financial and economic security of the enterprise, it is possible to solve such issues as:

- observation, collection and accumulation of information about changes in environmental factors in dynamics;
- determination of trends in factor changes environment;
- assessment of the influence of factors external and internal environment environment to the level of financial and economic security of the enterprise;
- analysis of trends and tendencies of influence of factors in dynamics;
- forecasting the trend of changes in the financial and economic security of the enterprise, taking into account the influence of environmental factors;
- formation of a system of information support for making management decisions to ensure financial and economic strong security of enterprises in the long term.

Monitoring of the influence of external and of the internal environment to the level of financial and economic security of enterprises implies a certain sequence of stages (Fig. 2.14).

The structure of the monitoring system consists of formed set of information channels, analysis lytic means and information data bank. The basis of analytical tools is a set of indicators, the systematic calculation of which makes it possible to identify "bottlenecks" and choose the direction of main efforts in further activities. At the same time, it should be emphasized that the complex and unpredictable

conditions of the functioning of domestic enterprises require that in the process of monitoring the economic security system of the enterprise, one should not limit oneself to a certain list of indicators, but apply a complex multi-level approach.

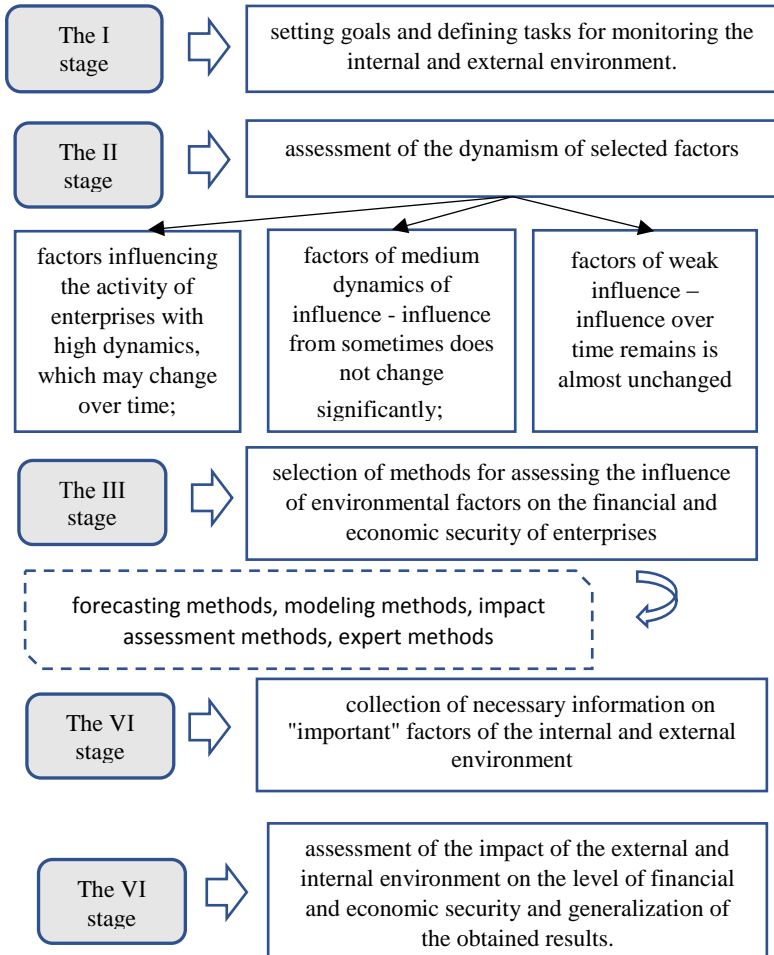


Fig. 2.14. Stages of monitoring the environment of financial and economic security enterprises

Source: grouped by the author based on literary sources

In our opinion, a multi-level comprehensive approach to monitoring the economic security system should include systematic forecasting, ongoing monitoring of the level of economic security of the enterprise and control over the implementation of decisions in the economic security system. We believe that only in this case, it is possible to ensure the high efficiency of the economic security system of the enterprise, which would be aimed at early recognition of the fact of the emergence and development of the threat, had enough time and reserves for making adequate management decisions and provided current control over their implementation.

We have proposed a forecasting procedure to be carried out by using an expert method with further step-by-step application of the methods graphs and matrix analysis, which is motivated by the presence of the following problems that significantly affect on the level of security of domestic enterprises:

- 1) high uncertainty of the operating environment;
- 2) the complexity of formalizing the principles of object development external environment;
- 3) existence of necessity for the needs of managing the economic security system enterprises to carry out mid- and long-term forecasting;
- 4) lack of a sufficient theoretical basis for managing the development of the management object (Zhyvko, 2014).

The effectiveness of managing the development of the enterprise depends on the ability to quickly search, analyze and fully process any amount of information. This is especially relevant for enterprises in the bakery industry, which are under the strong influence of the external competitive environment. The information processing system must correspond to the monitoring system, since even having at their disposal a necessary and sufficient set of complete, reliable and up-to-date data, most enterprises cannot use them rationally in the decision-making process.

This is explained by the lack of a well-established process of transforming the flow of information collected into aggregated reports suitable for making strategic decisions. The main sources of the formation of an information database (hereinafter the database), which should provide the organizational structures of the enterprise with the necessary information, are:

- regulatory and legal support for the activity of the bakery industry;
- information on the state and forecast of the development of the domestic bread market; information about competitors, analytical reports;
- information about new technologies; marketing innovations, etc.;
- accounting information about retrospective and current financial and economic activity of the enterprise;
- information about the personnel potential of the enterprise;
- information on external threats and challenges that may affect the decrease in the level of economic security of the enterprise;
- other useful information obtained from external sources.

To create a full-fledged database, it is necessary that the monitoring subsystem should include regulations on the terms and forms of internal reporting of the structural divisions of the enterprise. An important feature of such a database is the availability of information about markets related to the production of bakery products, as well as information about potential external threats to the economic security of the enterprise due to the country's economic crisis. Without this information, the monitoring subsystem is unable to diagnose the crisis state of the enterprise and the threat of bankruptcy. One of the functions of the monitoring information subsystem is the prevention of threats and challenges from the external environment that negatively affect the security of the enterprise. It is necessary to monitor potential threats in a timely manner before the situation can go beyond controllability and have critical consequences.

Thus, the external environment monitoring module should be configured to organize continuous observation, analysis, assessment and forecasting of trends in the main factors affecting the level of economic security of enterprises. Among the objects of environmental monitoring, such stakeholders as producers of agricultural products, suppliers, enterprises of the industry, competitors, consumers of products, state authorities, etc. should be singled out.

Monitoring the level of economic security of the enterprise is recommended to begin with a preliminary analysis of the security and rational use of the enterprise's resources for each functional

component of its economic security: financial, personnel, technical-technological, material-technical, scientific-technical, informational. According to O. Melnyk “ensuring the economic security of the enterprise is the process of creating favorable conditions and an environment under which the business entity achieves the most efficient use of resources”. Therefore, the limitation of labor, financial, material and technical, informational resources can cause a weakening of the level of economic security of the enterprise.

The pragmatics of the system of financial and economic business security requires a correctly chosen method of ensuring business security, in particular, which should include the collection and processing of analytical information about the experience and security measures of foreign enterprises, analysis, constant monitoring and forecasting of conditions, threats, dangers and indicators of financial security, development and implementation of necessary measures to support financial and economic security at an appropriate level.

Immediately note that the method of building a system of economic security business covers the following stages: – study of the specifics of doing business, the segment it occupies on the market, staff list, as well as getting to know the staff; analysis of external and internal threats to the economic security of business and study information about crisis situations, their causes and ways of resolution; audit of available security measures and analysis of their compliance with identified threats; simulation of a new system of economic security of business: development of a plan elimination of deficiencies identified during the audit; preparation of proposals for improvement of the economic security system (including the creation of a security service on the enterprise, if it did not exist, or the security system based on it, definition mechanisms of its provision), calculation of all types of necessary resources; planning monthly expenses for ensuring the functioning of the economic security system; management approval of the model of the new system and the budget for its maintenance; formation of a new system of economic security; evaluation of the effectiveness of the formed system, as well as its improvement (Korobchynskyi, 2019).

Financial and economic security is achieved by implementing a single, agreed, balanced, coordinated system of measures adequate to internal and external threats. Without creating a single system of

financial and economic security of business it is impossible to achieve an exit from the crisis, to stabilize the economic situation, to create an effective mechanism for the functioning of production and economic systems. The system of financial and economic security of the business will be effective under the conditions of defining the strategy and tactics

The strategy of financial and economic security involves defining the goals and tasks of the financial and economic security system, directions for their solution, as well as the forms and methods of applying the appropriate forces and means, the possibility of their regrouping, and the creation of the necessary reserves to neutralize and localize possible threats. Financial and economic security tactics are the most flexible part of the financial and economic security system, which changes depending on internal and external actions threats, changes in priority of economic interests, etc. The complexity and variability of the economic and social situation requires the use of various tactics measures to ensure financial and economic security of business. It is important to clearly distinguish between strategic goals and tactical measures (Fomichenko, Barakova, 2013).

We, in turn, will defend the opinion that the implementation of an effective strategy occupies an important place in the system of financial and economic security of business financial and economic security of business. The financial and economic security strategy should include: characterization and classification of internal and external threats economic security; identification and monitoring of factors that undermine the stability of the company's financial position; definition of criteria and parameters which characterize the financial and economic interests and meet the set requirements; formation of financial and economic policy and the necessary mechanism that eliminates or facilitates the effect of factors that undermine the stability of the financial and economic system. Financial, accounting and analytical aspects security; main areas of financial and economic security; management of the financial and economic security system, coordination of activities and management to ensure financial and economic security at all levels.

In total, there are five possible strategies that can be used to optimizing the level of financial risks when building a business financial strategy:

1) rejection of activities that contain a defined source of financial risk;

2) acceptance of responsibility for the risk of a financial strategy with a full guarantee compensation for losses from own sources; 3) sale and transfer liability for financial risk on other persons (in particular, insurance organizations);

4) reduction or prevention of possible negative consequences from financial risk through preventive measures;

5) orientation of activity on financial risk, that is, the use of all types of resources in one field of activity for the purpose of obtaining profit at a high level of risk (Fomichenko, Barakova, 2013).

In the basis of provision financial security of the enterprise lies in the concept of a systematic combination of functions of control, planning, feedback and information support. It should be noted that the development of a financial and economic strategy is necessary business security should contain:

- description of external and internal threats to the economic security of business;

- determination and monitoring of factors that strengthen or destroy the stability of its socio-economic position in the short-term and medium-term perspective;

- development of an economic policy covering accounting mechanisms that affect the state of economic security of factors; areas of business activity regarding the implementation of the strategy.

All management decisions in the industry ensuring the protection of the company's financial and economic interests from external and internal threats are interrelated and have a direct or indirect impact on results his activities. Protection is due to the ability of the management bodies of the enterprise to at the appropriate levels: to ensure sustainable economic development of the enterprise; to neutralize the negative impact of economic crisis phenomena; to form an adequate accounting system of financial flows and strengthen the operational efficiency of the system control; to ensure the implementation of works to protect the confidentiality of information that constitutes a commercial secret, etc.

In general, modern industrial and economic systems must manage financial risks arising from various destabilizing factors. To ensure financial and economic security and the possibility of predicting risks

at the enterprise must have an effective system management of financial and economic security of business as a whole (Vivchar, Martyniuk, 2012).

To the main measures that management enterprises can use for management of economic security, belong to:

– *legal* – measures aimed at application normative legal documents that apply to all areas of the company's activity, in order to ensure the interests of specific individuals business entities;

– *financial and economic* – targeted measures to ensure financial independence and financial stability, competitiveness of products enterprises, material increase values, their protection from competitors' encroachments;

– *force* – measures aimed at attracting third parties or use own units to protect property, material values, information, of all kinds resources of the enterprise from the actions of competitors;

– *informational* – measures related to collection and analysis of relevant information which used to make effective management decisions, strategy development enterprise activity, warning crisis situations;

– *technical and technological* – measures aimed at timely updating of production assets, rational use of production capacities, etc.;

– *innovative* – use of innovative technologies in various aspects of activity enterprises for the purpose of provision competitiveness.

The formation of the system covers the following main ones stages: studying the specifics of the company's business, the segment it covers on the market; definition of the mission and goals of the activity. Formation of the economic management system security and the creation of its objects depend on the size of the enterprise and its capabilities. As a rule, small business enterprises use external services specialized private enterprises. Medium-sized businesses can use a combined system economic security, relying on capabilities and resources of own units security and as necessary involving the potential of external organizations.

Great it is expedient for enterprises to create a full-fledged system of economic security with own service and powerful resources:

external and internal monitoring the environment in which the enterprise operates, studying information about crisis situations, their causes and ways of settlement, detection existing and potential

economic threats enterprise security, thorough analysis received information;

assessment of the level of economic security enterprises by each component (financial, intellectual and personnel, power, production-technological, political-legal, information, environmental security), audit available means of ensuring security and analysis of their compliance with identified threats;

modeling of a new economic system enterprise security: development of measures with minimization and neutralization of negative influences factors that were discovered during previous stage; selection of tools and means of protection against detected threats; determination of centers of responsibility and powers of management; preparation proposals for improving the system economic security (including creation of a service security at the enterprise, if there is none whether there was a security system at its base, determination of the mechanisms of its provision and development of the organizational structure system management);

calculation of all kinds necessary resources; monthly planning costs for ensuring functioning systems of economic security (budget);

implementation of the formed system on enterprise and assessment of its efficiency.

As a result of the study, it is proposed economic security management system enterprises. Its main advantage is clarity and a sequence of actions that will help managers quickly navigate in conditions of uncertainty and threats So, the management system is economical safety of the industrial enterprise is a complex of measures of various directions, which are intended to protect his interests from negative influence from outside. Based on objects, subjects of the system, goals, tasks, principles and instruments of economic security. Directly the service deals with issues of its provision enterprise security.

Increasing the economic security of the subjects of the gentlemen plowing is carried out in accordance with each state gift stage and life cycle, its specifics activity, effectiveness of material application bases, features of the technological process. However, it is necessary to solve these problems but take into account the following principles: effective management laziness, effectiveness of the measures taken, careful planning reliability, economic validity, timely analysis lysis

and control, etc. (Bojkevych, 2011),

Under modern economic conditions, the assessment is economic business security needs monitoring for such display nicks: differentiation of safety indicators for enterprises capacities of various branches and consistent assessment of certain stages. Each of the target security sections of the enterprise has its target unit, determined by necessity and on direct work of the company. Resource-functional approach is lasting. Using this approach to define the degree of security of the enterprise in its own calculations, you need to define an aggregate indicator that is based based on the conclusions of professional experts regarding functions nal indicators of economic security of this concrete of the enterprise.

It has a special role in ensuring the economic security of the enterprise accounting and analytical support aimed at the formation of managers and management of economic entities knowledge about the situation on market, the main trends in the development of specific sectors of the economy and entrepreneurship in general, the specifics of dangers and threats to one's own economy activity

The main tasks of the accounting and analytical subsystem for ensuring the economic security of the enterprise is:

- accounting of economic transactions by target directions, through the use of monetary (on the basis of accounting) and non-monetary indicators (on the basis of strategic management accounting);

- control over the use of the resource potential of the enterprise, display of all business transactions at the stages of planning and accounting, reliability of analytical data;

- analysis of the company's activity by target directions (in terms of features time and space);

- formation of analytical budgets as sources of planned accumulation, accounting and analytical information.

On the effectiveness of the management decisions taken to ensure economic security is affected by the quality of the information resource in the form of creation and use of own and external information field enterprises. The own information field is formed from internal sources. What refers to the external information field, then the task of its formation and use is associated with overcoming unreliability, asymmetry, heterogeneity, insufficiency or excess of information coming from various sources and obtained in different

ways (Yershova, 2015).

An important source of information for implementation strategies for ensuring economic security – there is information that is formed in system of strategic management accounting.

Accounting and control and analytical tools of strategic management accounting must correspond to the information determinant of the implemented economic security strategy enterprise to reflect the initial, the intermediate and final state of the company's resources and their sources during implementation strategy, evaluate its effectiveness using relevant balance sheets generalizations and system of indicators. To such tools of strategic management accounting include a balanced scorecard model economic added value, cost accounting by types of activities, etc. Strategic management accounting information is the basis for formation strategic management reporting, which by its economic nature is a type of management reporting and is formed in accordance with the established regulations It includes both derivative balance sheets, which contain forecast financial information, and forecast reporting, which carries strategic nature, formed both on the basis of data transformation accounting and financial reporting, as well as within the framework of the budgeting system.

Sustainable economic development and economic security of enterprises is not possible without the introduction of technical and economic, organizational, managerial and social measures. At the same time, it is primary and basic emphasis on improvement in the organizational, managerial and social spheres, because precisely the overall result depends on effective management of all areas of the enterprise his activities. And personnel management is the factor that will have in the future periods of positive results affecting the economic results in the geometric progression, as the quality of personnel formation increases at all stages of the manager influence contributes to the optimality of the enterprise's activity.

As we mentioned in the previous ones research, a qualitatively and optimally formed and managed team, which consists from professionals capable of clearly performing work functions, potentially ready to development and growth is the basis of innovatively active and effective formation working organizational and economic mechanism of enterprise development. Depending from

the market situation and the economic condition of the industrial enterprise in his management there is a certain range of methods of influence on personnel management with the goal achieving stable economic security.

Entities in the management system of recruiting, development and motivation processes personnel represent a management subsystem, which is based on the body management with a certain set of management workers with defined rights and duties in relation to ensuring the purpose of creating such a system. The control subsystem in to the system of managing the processes of recruiting, development and motivation of personnel is specified and practically implemented in the activity of the enterprise through the appropriate organizational and economic mechanism (Mantsurov, 2020).

Realization of reserves for improving the quality of management of recruiting, development and motivation of the company's personnel is carried out in the process of developing various plans development of enterprises and their structural subdivisions, as well as their further implementation in in the context of the main purpose of their functioning. Part of the implementation of these reserves will be carried innovative character and will be reflected in a separate section of the general development plan, which is aimed at improving the quality of management of recruiting and development processes and motivation of personnel of both a separate structural unit and the enterprise as a whole.

Understanding the economic security of the enterprise can be considered as a process of preventing various losses from negative influences on various aspects of its economic and financial activity. Confirmation of the relevance of the problem creation of a system of economic security in the homeland these enterprises may also be the fact that today many large enterprises, including most corporations, create special ones in their structure units that should ensure their economic security. However, these newly created services mostly do not have a developed scientific evaluation system and ensuring the economic security of enterprises, theoretical base of his work, which significantly reduces efficiency of their functioning.

References to section 2.3

Voinarenko M.P. (2008) Economic security of an enterprise in a competitive environment: a monograph. Voynarenko M.P., Duda T.T., Lukyanova V.V., Yaremenko O.F. for science. ed. M.P. Voynarenko. Khmelnytskyi. : KhNU, 382 p.

Malyuta L. Ya. (2018) Institutional determinants of organizational support of economic security of enterprises in the context of their innovative and technological development: thesis. ... doctor of economics. Sciences: 08.00.04 / Malyuta Lyudmila Yaroslavivna. Ternopil National Technical University named after Ivan Pulyuy. Ternopil, 586 p.

Melnyk O.O. (2011) Study of modern trends and determination of methodological bases for ensuring the economic security of the enterprise. *Development economics*. №. 3. P. 115-119.

Loyko V.V. (2015) Monitoring of economic security industrial enterprises *Ефективна економіка* № 8 URL: <http://www.economy.nayka.com.ua/?op=1&z=4446>

Babelyuk I.V. (2017) Financial and economic security management system at Ukrainian enterprises. *Student Scientific herald*. MNAU. 310 p.

Moiseyenko I.P. (2012) Methods of monitoring financial security of the enterprise. *Scientific bulletin of the Lviv State University of Internal Affairs*. №. 2. P. 205-211.

Mizik I.I., Beketov O.M., Konoplina O. O., Panov V. V. Yaroshenko N. A. (2017) Advanced tools and methods in strategic monitoring of financial& economic security: on the example of water services enterprises in Ukraine. *Scientific Bulletin of the Uzhhorod National University*. Issue 16, Part 2 . P. 25-28.

Zhyvko Z.B. (2014) Monitoring software economic security. *Scientific bulletin of Kherson State University*. Issue 7. Part 2. P. 194-197.

Korobchynskyi O.L. (2019) The method of formation of the system of economic security of the enterprise. *Current problems of the economy*. № 4. P. 41 – 45.

Fomichenko I.P., Barakova S.O. (2013). Formation of the economic security management system at enterprises of Ukraine. *Economics and management of machine-building enterprises fields: problems of theory and practice*. № 3 (23). P. 57 - 66.

Vivchar O.I. Martyniuk V.P. (2012) Peculiarities of identifying the methods of assessing the market value of a business during diagnosis his economic security. *Young Science*. Issue 18. P. 118 – 122.

Vasyliiev O. V., Meyta V. I. (2013) Formation of economic security management system of industrial enterprises. *Economic analysis*. year. Volume 14. №. 2. P.138-145

Bojkevych, O.R. (2011), Strategic priorities and means of strengthening the economic security of commercial enterprise, Ph.D. Thesis, Economy, L'viv, Ukraine.

Yershova N. Yu. (2015) Methodical approach to the formation of information in the strategic system management accounting for the purpose of increasing the economic security of economic. *Scientific Bulletin of the International Humanitarian University. Series: Economics and management*. Odesa Issue 10. Series: Economics and Management. №. 10. P. 276-281.

Mantsurov I. (2020) Construction of the hierarchical structure of the components of economic security companies/ URL: <http://www.economy.nayka.com.ua/index.php?operation=1&iid=680>

Kachenko S., Britchenko I, Bezpartochnyi M. (2019) Leading methods for promoting finished product quality. *Advances in Social Science, Education and Humanities Research*. Atlantis Press: Proceedings of the 3rd International Conference on Social, Economic and Academic Leadership (ICSEAL 2019). Volume 318. May. P. 99-106.

Lonczi P., Havaj P. (2019) The notification of person and population warning in the floods as a security problem. In: *SGEM 2019 conference proceedings* .Vol. 19. p. 745-752.

Levchenko Ia., Lošonczy P., Britchenko I., Vazov R., Zaiats O., Volodavchuk V., Humeniuk I., Shumilo O. Разработване на метод за целево финансиране 2021на секторите на икономиката чрез капиталови инвестиции. Development of a Method for Targeted Financing of Economy Sectors Through Capital Investment in: *The Innovative Development Eastern-European Journal of Enterprise Technologies*, 5 (13-113), p. 6-13. DOI: 10.15587/1729-4061.2021.243235. ISSN: 1729-3774

CONCLUSIONS TO PART 2

Control is an important element in the economic security system of the enterprise. With regard to control as an element of the enterprise's economic security system, it is advisable to distinguish two types of such control: control over the management system (control over the implementation of laws, intended programs, plans); control over the functioning process and activity results (effectiveness control). The organization of control is carried out through clearly defined elements and objects of control as part of the economic security system of the enterprise, which are the basis of the practical organization of such control.

The transformation of control functions of control subjects is always accompanied by a transition from one formation to another: the tasks and content of control, its methods and organizational forms change as a result of reasons of a political and economic nature. This allows the authors to claim that different types of financial control and its integral system, which includes these types, are not static, definitively determined. The characteristics and essence of state finances, their internal deep contradictions, the conditions of transition from one type of economy to another type of economy are most significantly manifested in financial control.

As the analysis of scientific literature showed, the vast majority of enterprises considers monitoring the level of financial and economic security as an anti-crisis tool management, which allows to ensure economic independence and stability functioning. Monitoring system of financial and economic security of the enterprise includes obtaining by the management of the enterprise information about the efficiency and the effectiveness of its activities, taking into account qualitative and quantitative analysis in the process assessment of relevant indicators, as well as research into the factors of occurrence or existence of possible threats and risks.

An improved system of financial and economic security of business is proposed, which in practical terms will ensure a higher level of the enterprise's work on the market, will positively affect the level of efficiency of functioning in uncertain conditions and will contribute to the achievement of the set goals of entrepreneurial activity with the maximum productivity, as it depicts the widest range

of possible situations and enables consistently, without losing certain details, quickly navigate the conditions uncertainties and threats. Meanwhile, it should be noted that the development and implementation of an effective strategy will allow the enterprise to prevent losses from negative effects on its security from various financial and economic aspects business activities, and will also ensure control and balancing of income and expenses.

Formation of the economic management system Enterprise security is a complex and multidimensional process on which it depends sustainable development and protection from threats and dangers The obtained results deepen and develop conceptual foundations of economic enterprise security and can be the basis for further research in this direction, in particular development of methodology and tools for assessment of the level of economic security.

3. ANALYSIS OF THE EFFECTIVENESS OF USING THE RESOURCE POTENTIAL OF AGRICULTURAL ENTERPRISES

3.1. Methodical approaches to ensure effective use of resource potential of enterprises⁸

The established conditions for the functioning of agricultural enterprises, which are based on market principles, that is, the laws of supply and demand, and competition, determine the need for their rapid adaptation to changes in the changing market environment and the minimization of possible risks. At the same time, commodity producers in modern business conditions must ensure efficient and competitive use of all available resources. In the process of production and commercial activity, agricultural enterprises are constantly faced with new challenges and threats in their activities, therefore they need to respond in a timely and efficient manner both to negative manifestations, and to identify and use promising ones in a timely manner. The main factor that determines the degree of economic ability to respond to the specified processes is the enterprise's resource potential. At the same time, it should be noted that the resource potential management mechanism of agricultural enterprises does not fully and does not always meet the tasks of increasing their competitiveness and development prospects. Maintaining a high level of potential and its growth rates for an individual agricultural enterprise strengthens its competitive advantages, and its success will depend on how successfully the existing resource potential is matched to functioning in the formed external environment.

A business entity can be sure that it has achieved the highest level of efficiency in the use of resource potential, under the conditions of maintaining stability in functioning and positive financial results. However, making a profit does not always indicate a high efficiency in the use of resource potential. As a rule, a business entity has the opportunity to improve its financial results only by optimizing the use of its resources. Therefore, the issue of methodical approaches to ensuring the effective use of resource potential is of particular

⁸ Tomchuk O.F.

importance.

A significant number of scientific works by domestic and foreign scientists have been devoted to the problems of the functioning of business entities in agriculture – I.F. Balaniuk, O.A. Buhutskyi, V.S. Diiesperov, V.Ia. Mesel Veseliak, H.M. Pidlisetskyi, V.V. Rossokha, P.T. Sabluk, A.M. Tretiak, I.V. Tomashuk, O.F. Tomchuk, M.M. Fedorov, V.Y. Shyian, V.V. Yurchyshyn, and others.

In the etymological sense, the term “potential” means, reserves, sources that are available and can be mobilized, set in motion, used to achieve certain goals, implement a plan, solve a problem, the capabilities of an individual, society, state in a certain region (Tomashuk, 2019).

Agricultural production in Ukraine today has a number of problems in the field of formation and use of resource potential, caused by the peculiarities of its past and modern development. The consequence of the low efficiency of agricultural production is the state and nature of slow changes in production relations, which restrain the development of productive forces, including resource potential. The discrepancy between the resource potential and its return has led to a significant increase in fixed assets, the process of reducing the efficiency of using the potential of agricultural land also continues, due to the fact that a number of technical means do not meet modern technological requirements due to insufficient reliability and low productivity. At the same time, there is a lack of many types of agricultural machines and tools for complex, multi-operational maintenance of crops, livestock, and other branches of agro-industrial production in the machine-tractor fleet of farms due to their high cost. Effective use of the resource potential of agricultural formations is an objective necessity and an important prerequisite for the development of the agrarian sector of the economy (Kobets, Vashchenko, 2021).

Having analyzed various approaches to determining the resource potential, we believe that the resource potential is not a simple aggregate, but rather a system of interacting different types of resources. The driving force of this interaction is the management capabilities of the company’s personnel. In view of this, we believe that resource potential is a system of resources available to the enterprise and those that it can mobilize as needed and use to conduct effective activities.

So, the resource potential is not just a random collection of resources at the disposal of the enterprise, but a purposefully formed set of resources, the presence of which is conditioned by obtaining the expected effect. Therefore, the inseparable unity of the enterprise's goals and its resources should be noted.

On the basis of the above, it is necessary to highlight the main features of the enterprise's resource potential:

- resource potential is a system of interdependent elements;
- resource potential is a dynamic form that cannot be formed only by the mechanical addition of elements;
- the law of synergy applies to the resource potential;
- the optimality of the resource potential structure is a condition for the simultaneous functioning of its elements;
- the adequacy of the components of the resource potential to the goals of the enterprise.

These signs of resource potential are manifested during its formation, that is, in the process of determining the characteristics of resources accumulated by the enterprise, in the process of their structuring and building organizational forms of effective use.

The formation of resource potential begins from the moment of creation of the economic entity itself and can be permanent in connection with the dynamics of the priorities of the enterprise.

Conventionally, this process can be divided into several successive stages:

1) identification stage. Based on the established goals and priorities of the enterprise, a set of necessary economic resources and their structure is determined, and their potential, sources, and carriers are evaluated;

2) the stabilization stage involves establishing stable relations between resources and obtaining a beneficial effect from the realization of resource potential;

3) the optimization stage means the search for the most effective ratio of the structure of the resource potential from the point of view of maximizing the expected beneficial effect from the realization of the resource potential of the enterprise.

Given the realization of the enterprise's resource potential through its economic activity, there is a need to distinguish the essence of the concepts "assets", "capital", and "property" and identify their

relationship to the term “resources”.

I. *Resources and assets*. In the current legislation of Ukraine, assets are resources controlled by an enterprise as a result of past events, the use of which is expected to lead to the receipt of economic benefits in the future (Ministry of Finance of Ukraine, 2013). Control in this definition indicates the presence of certain formed legal relations between the enterprise and sources of resources. Therefore, Y.M. Petrovych derives the conditions under which a resource will become an asset:

- 1) it must be owned by the enterprise (controlled by the enterprise);
- 2) it must have a reliably determined value in monetary terms (Petrovych, 2004).

Understanding the resource potential through the set of assets is quite convenient, since the vast majority of resources, especially those that have a tangible basis, are reflected in the Balance Sheet of the enterprise, and this fits perfectly into the understanding of the concept of resource potential. However, the company’s balance sheet does not reflect resources, the objective assessment of which is difficult or impossible, for example, the quantitative and qualitative composition of personnel, the quality of the organizational structure, and to some extent reputation. Therefore, an asset is only part of the resource potential, assessed in cost form.

II. *Resources and property*. The study of the connections of this pair of concepts is caused by the fact that the term “property potential” is found in scientific circles.

The Economic Code of Ukraine defines it as follows: Property is a collection of things and other valuables (including intangible assets) that have a value definition, are produced or used in the activities of economic entities and are reflected in their balance sheets or taken into account in other forms of property accounting provided by the law of these entities (Economic Code of Ukraine, 2003). As can be seen from the definition, the property is the object reflected in the balance sheet of the enterprise (as well as assets) and have a valuation (as well as assets). The approach to definition is excellent: the asset is considered as a source of possible benefits, property – from the standpoint of property relations. As a result, assets and property characterize the degree of providing the enterprise with resources, but from different angles – economic and legal. Hence, in our opinion, the use of the term

“property potential” is inappropriate and introduces confusion into the terminological apparatus.

III. *Resources and capital*. A detailed and in-depth analysis of the concept of “capital” was conducted by I.A. Blank (Blank, 2002). Abstracting from most hypostases of capital proposed by I.A. In the author’s opinion, blanks should highlight those in which capital most closely interacts with resources, namely: as a production resource, as accumulated value, and as a source of income. In the first sense, capital acts as one of the types of production factors, that is, it is an economic resource used in the process of creating goods. The second version of the definition of capital characterizes it as a stock of economic benefits accumulated as a result of the past activities of a business entity. This definition shows the similarity of capital to assets and resources (from the standpoint of the resource approach). In the third case, capital is considered from the point of view of its ability to provide its owner with income. This definition of capital is close to the interpretation of economic potential according to the effective approach. As you can see, in different definitions, capital can be equated to a resource, asset, or economic potential.

Summarizing the comparative analysis of the concepts of “resources”, “asset”, “property” and “capital”, it turned out that there is no definition of the term “resources” in the legislation of Ukraine, which the legislator uses to define the concept of “assets”. In our opinion, the very concept of “asset” is the most adequate for use in the context of resource potential.

Now we can proceed to consider the elemental composition of the resource potential. Taking into account the field, the resource potential of agriculture is considered as a set of interconnected resources used in agricultural production (Fig. 3.1).

The natural (spatial) potential represents the development possibilities of the enterprise, which is determined by the nature and size of its territory, land or water areas that are at the disposal of this enterprise, production and non-production real estate objects, communications, the level of development of the infrastructure of the surrounding space.

Thanks to the personnel potential, the collective capabilities of agricultural formation workers to achieve the goals set by their managers are ensured. Personnel potential brings into action all other

components of the resource potential of the enterprise.

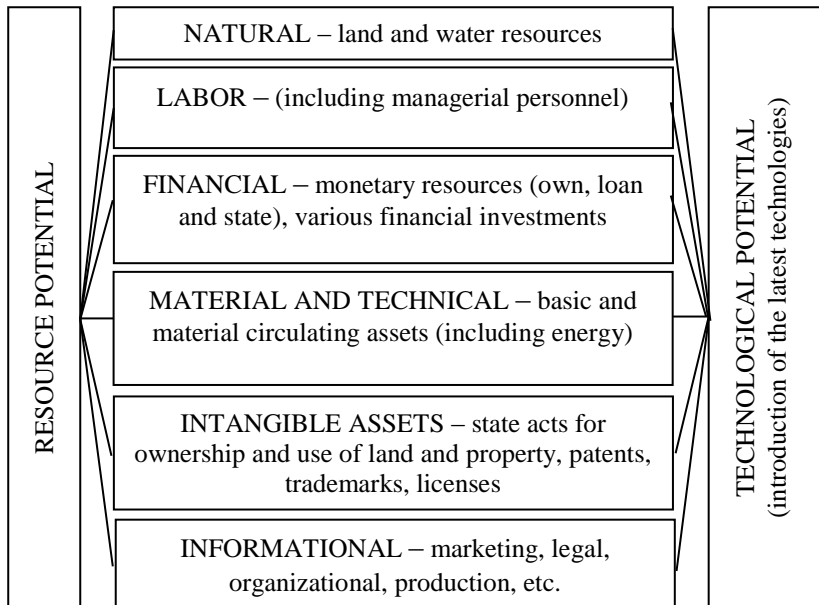


Fig. 3.1. Structural model of the resource potential of agricultural enterprises

Source: (Svirgun, Sokolovska, 2010)

Labor potential is described from different positions depending on quantitative and qualitative indicators, which, in turn, provides an opportunity to assess personnel potential in value categories, which is necessary for the head of an agricultural enterprise. This assessment is useful for obtaining a real idea of whether the abilities of employees correspond to the costs of their training and development (Tomchuk, Beldiy, 2019).

The possibilities of agro-formation that arise during the combination of financial resources and competencies during their involvement and implementation in order to fulfill a certain task represent the financial potential of the enterprise. It is very important as an initial type of resource during the creation of an enterprise and its activities, it ensures production processes, it is an integral condition for continuous production processes of an agricultural enterprise. Considering the current conditions, a large number of enterprises

having the necessary availability of fixed assets and personnel, while not having a sufficient amount of financial resources, which, in turn, leads to the impossibility of carrying out the planned processes at the enterprise.

Sources of replenishment of financial income include two types of resources:

1) internal, which includes the registered capital and the revenue received by the enterprise (which depends on the amount of cost and profit);

2) external, consisting of loans, budget allocations, various types of compensation, and contributions (Tomchuk, 2015).

The material potential is considered to be the company's ability to provide operational processes with the help of advanced machines and equipment, devices, inventory, production, and commodity stocks. These are resources presented in a natural-material form that can be used by agro-forming in economic activity. Part of the working capital consists of material resources: fuel, electricity, low-value and perishable items.

A special resource of the modern developed market is information, its role has grown rapidly in recent years. This resource performs the function of combination in relation to all other components of the resource potential.

The information potential reflects the capabilities and capabilities of the enterprise's information resources system to create conditions for the optimal adoption of a timely business decision. Effective use of information, as shown by the practice of developed countries of the world, leads to significant savings of resources. Information potential is the totality of its information stocks.

Thanks to the reputational potential, the conditions necessary for maintaining and increasing the loyalty of the company's partners and other interested representatives of the market are provided.

In the current conditions, when innovative development of the country's economy is taking place, the Innovative potential, characterized by the following aspects, deserves special attention:

- personnel support of the enterprise;
- the educational level of the company's human resources;
- investment of finances in the enterprise's scientific, scientific-technical and innovative activities;

- the number of patenting of inventions;
- size and structure of scientific and scientific-technical works;
- the dynamic movement of production of innovative products;
- the share of the innovative product in the total amount of production.

Spatial, labor, material and technical, financial, intangible, and informational potential are closely interconnected with technological potential, which characterizes the possibilities associated with the availability and application of modern technologies in the operational process (Tomashuk, 2019).

Each enterprise has its opportunities to achieve certain results, which differ significantly depending on many factors, and above all – the quantity and quality of available production resources. The structure of a system, for example, such as the potential of an enterprise, is a branched stable connection between elements.

In the agricultural sector, the resource potential can be defined as the material basis of the production potential, which realizes the producer's ability to produce a certain volume of products.

The essence of the category of production potential is revealed not by the actual results of the production of agricultural products by the enterprise, but by its potential opportunities in achieving the specified results. Therefore, it is characterized by the possible level of production of agricultural products when achieving the rational use of aggregated resources.

Emphasizing the resource concept, it is possible to interpret the resource potential of an agricultural enterprise from a systemic perspective and define it as a system of resources that interact with each other and thereby condition the achievement of economic results. It can be concluded that the resource approach does not fully reveal the properties of the structure of the resource potential of an agricultural enterprise.

Using the functional approach to analyze the potential structure, it is possible to distinguish its following components: scientific and technical, production, marketing, financial, logistic, social, and organizational. This approach, in our opinion, also does not fully reveal the potential as an economic category. In the works of researchers, when analyzing the structure of the potential, its market share, strategic, economic, competitive, etc. are considered.

Those scientific studies of multi-aspect analysis of the potential structure are of special scientific interest, where, along with the resource and functional aspects, other aspects of the structure are also considered, which gives a more complete idea of its elemental composition. Krasnokutska N.S. reasonably notes that the “structure of the economic potential” of enterprises of various spheres of social economy and the scale of economic activity is not typical, however “it is possible to form a basic set of elements that is mandatory for the functioning of enterprises of various spheres” (Zymina, 2011). A number of authors in their studies emphasize that “the main elements of the enterprise’s potential” can be divided into “material, financial, labor and natural resources” (Kharchenko, 2019).

The potential of the enterprise includes technology, personnel, property, internal and external connections and relations, including economic, scientific, legal, and other, as well as methods and ways of managing the economy. The peculiarity of the supporters of this approach is that they consider it necessary to also take into account the form of ownership (state, private or joint-stock, etc.) or the form of possession (rental) (Kharchenko, 2019).

It is possible to highlight objective and subjective components in the potential structure. The first includes the material and personal forms of the company’s potential. In the process of functioning, they are consumed and reproduced in various forms depending on the branch of the national economy. These are the following elements: production potential, financial potential, innovation potential, and reproduction potential. The second component is characterized by their social form of detection, which includes: management potential, the potential of the organizational structure of management, scientific and technical potential, marketing potential. These potential elements are not consumed, they are a prerequisite, a general economic social factor for the rational consumption of the first component.

Therefore, the structure of any object can be defined as a collection and set of properties that are “...distributed depending on the level of implementation” (existing potential and development potential), the level of involvement or use (realized and unrealized potential) and the expediency of the existence of that share potential that is not used (serves as a reserve). The specified structure is unique and “characteristic of any type of object” when determining different

types of potential (Dligach, 2012).

The realized potential of the agricultural producer is directly used to achieve the defined goal at the time of evaluation. To realize this potential, it is necessary that its properties meet the requirements and conditions of the market, as well as important current costs for its realization.

Let's consider each of these components according to this distribution:

1. Available potential. It is a property that is reflected in the ability to achieve a defined goal of the enterprise without a change in the amount of involvement and the structure of resources.

2. The development potential is the ability of the potential to transform (improve), which will ensure the strengthening of existing properties or the emergence of new properties that can be additionally used. It can be quantitative (operational development) and qualitative (strategic development).

The first is related to the expansion and more effective use of the enterprise's resource potential; the second is related to the strengthening of the use of elements of strategic potential, the achievement of the goal of a qualitatively new state of the enterprise.

The resource potential is a system of interdependent elements, it has all the properties of the system, which can be presented in the form of principles. These include the principles of adequacy, systematicity, structure, target orientation, economic independence, and coherence.

The first principle is consistency, i.e. the directions of marketing research, technology, and movement of financial resources must be agreed upon between the structural divisions of the agricultural enterprise. In the external environment, it is expedient for the enterprise to agree on joint actions regarding tariffs, taxation, customs quotas, etc.

The second principle – systematicity, determines the balanced use of the available resources of enterprises, without significant deviations in the technological chain, taking into account the influence of factors in the external and internal environment.

The third principle of the structural characteristic of the resource potential is related to integrity, which combines all elements into a common target function that determines the system. The interaction and interrelationship of the components of the resource potential is a

key condition for ensuring system integrity.

The fourth principle provides for the interaction of all structural departments, which must be coordinated, subject to the formed strategy and tactics.

The fifth principle provides for the agricultural enterprise to ensure the competitiveness of its products in the joint formation of an action plan for the near future, as well as for the future of all divisions.

The sixth principle provides that all elements must adequately respond to the influence of macro- and micro-environmental factors and form optimal courses of action.

The seventh principle attaches primary importance to the use of labor potential. These actions can be coordinated between the administration and the labor team (regulation of the level of remuneration, work and rest regime, social guarantees, and other motivational factors).

In agriculture, an important and specific component of the resource potential is the natural and climatic potential. It acts as a set of existing factors and conditions that are formed outside the productive activity of a person. The natural and climatic potential is an integrated system of physiological, biological, and economic factors and conditions. Most of them, entering the production process in whole or in part, are sometimes incompatible and in a certain contradiction (Tomashuk, 2019).

Differences in natural and climatic factors and conditions determined the objective need for territorial division and regional specialization by natural and economic zones. This contributed to more productive use of production potential, obtaining the maximum volume of products from a unit of the area while minimizing costs (Pavlova, 2015).

The productive forces of agriculture include land resources, their potential as a means of production is determined by numerous factors, which can be combined into four groups:

1. Production and technological;
2. Factors that are determined by the socio-economic conditions of production development;
3. Factors of genetic origin;
4. Factors caused by various natural climatic and other natural conditions.

Rational use of nature determines the environmentalization of the production process and the constant reproduction of natural resources.

The process of resource potential development requires monitoring and diagnosis of information regarding the influence of factors that can be divided into two main groups: factors of resource potential formation and factors of its effective use (Fig. 3.2).

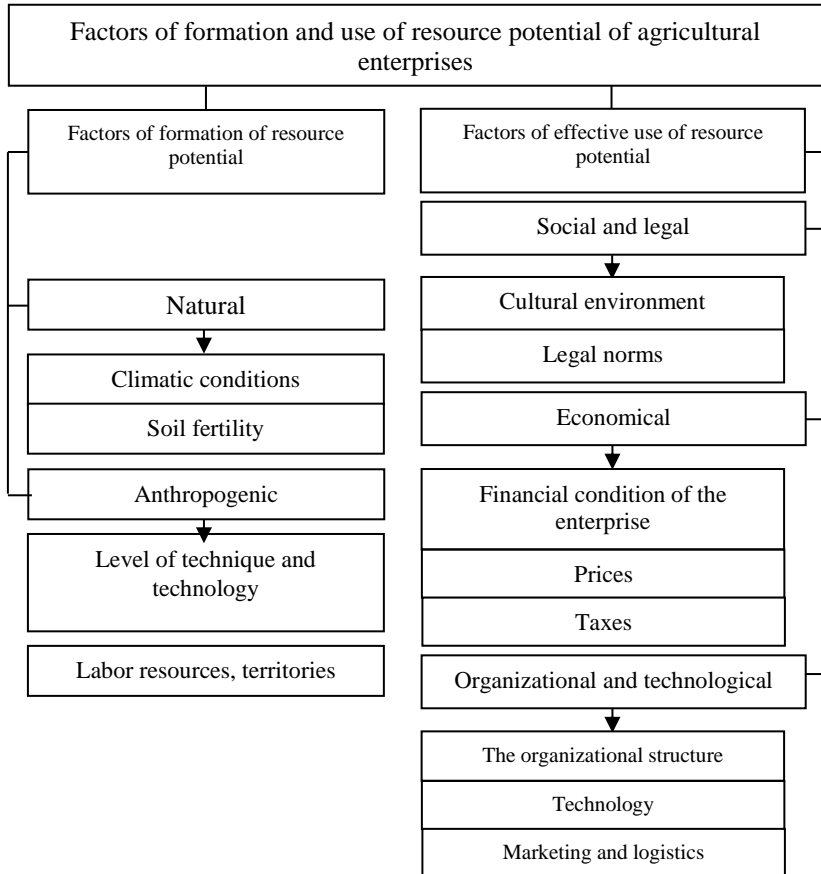


Fig. 3.2. Factors of formation and use of resource potential of agricultural enterprises

Source: (summarized by the author)

The presented factors can be divided into managed and unmanaged in relation to a separate business entity. Controlled factors should be

considered as influencing factors, the occurrence and strength of which can be regulated by the enterprise itself. This category includes the quality of material and labor resources, the company's marketing policy, the level of organization and management at the company, etc. Uncontrollable factors are factors of external influence, the appearance and intensity of which the enterprise can predict, but it is unable to influence them.

If we determine the possibilities of intensification of production, a number of groups can be distinguished by the factors that shape it.

The first group reveals the production and technological factors, which include: the implementation of a targeted influence on the process of creating new varieties of plants and animal breeds, the introduction of modern innovative agricultural technologies into the economic practice of the producer, the use of chemical means in combination with biological and agrotechnical methods, components of biotechnology, genetic engineering, etc.

The second group combines socio-economic and organizational-economic factors that are realized in the process of combining industrial relations (enterprise personnel) and resource potential and creating an effective algorithm for the activation of labor resources. Among them, the following directions can be distinguished: improvement of personnel motivation to work, organization of production and work, optimization of the payment process for natural (land, water) resources; improvement of planning methods; optimization of the management system.

In the regional section, there are significant variations in the provision of assets of enterprises, which affects their performance. Available assets involved in production affect the efficiency of the resource potential of agricultural enterprises. So, the necessary conditions for the intensification of the agricultural production process can be considered to be measures for the accumulation and selection of resources, which will contribute to the achievement of high indicators due to more efficient functioning (Dligach, 2012), in particular:

- highly qualified management and planning of animal productivity or crop yield according to the corresponding phases (periods) of growth and development based on taking into account their physiological and biological properties;

- deepening diversification of production;
- attracting qualitatively homogeneous resources that are used at different stages of the technological process;
- automation of the production cycle, introduction of the latest technologies in plant and animal husbandry;
- operation and development of transport capacities, logistics, processing, storage, and sale of products.

Modern business practice is multi-vector, which makes it impossible to unambiguously establish long-term key factors for the success of an agricultural enterprise. Increasing the efficiency of using the resource potential of the enterprise can be ensured:

- increasing the efficiency of the use of labor resources (labor productivity), which will affect the saving of material costs and contribute to the improvement of the culture and safety of the production process;
- by replacing outdated equipment with the help of technical improvement of the means of labor used in production;
- introduction of agricultural innovations, increasing the level of mechanization and automation in order to ensure the process of growth of production volumes;
- modernization of existing equipment, mechanization of auxiliary and service services, and production;
- improvement of production management on the basis of more optimal use of the information potential and resources enterprise;
- optimal organization of the sales system of agribusiness, the use of more progressive forms of calculations;
- organization and maintenance of staff workplaces, implementation of advanced techniques, work methods;
- implementation of measures to increase the professional qualification level of employees;
- implementation of measures for the rational use of production stocks, liquidation of existing over-standard stocks, improvement of rationing and supply processes;
- introduction of progressive, waste-free, or low-waste technologies and processes.

When forming and realizing the resource potential of an agricultural enterprise, it is considered important to take into account location factors that will affect the effectiveness of agricultural

production (Tomchuk, 2016).

The key factor that allows evaluating the formation, use, and development of the resource potential of agricultural enterprises is the application of various methodological approaches of analysis to ensure the effective use of the resource potential of enterprises. They can be represented as a set of methods and various evaluation operations of practical or theoretical mastering of reality, subordinated to the solution of a specific practical task. The evaluation method acts as a starting stage and a condition for future research, being formed as a theoretical result of previous research. The method is “a way or method of achieving the defined goal and objectives of the research” (Antonschenkova, 2020).

The classification of assessment methods is carried out accordingly with different features depending on the types of resources, processes, and results obtained. As a classification, gradation is usually used, which characterizes the relationships of a person with the key characteristics of processes and work. Scientists propose to divide the methods used to assess the resource potential and the efficiency of its use into a resource, cost, complex and effective (Fig. 3.3).

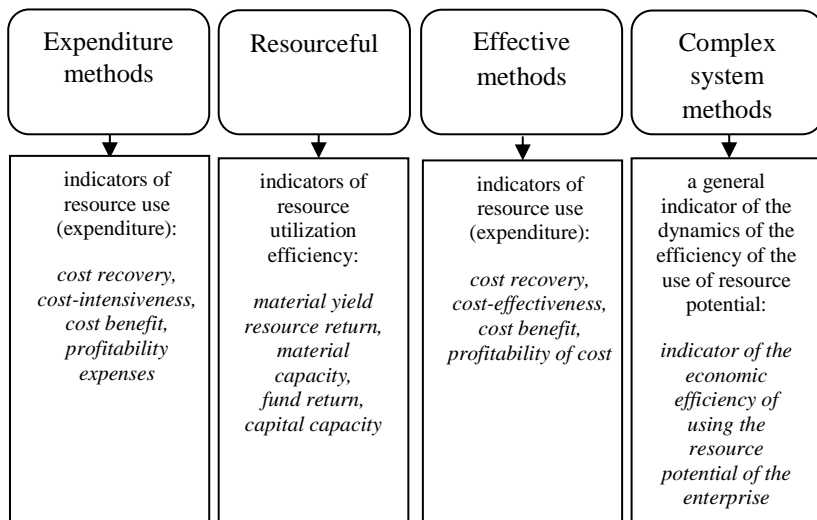


Fig. 3.3. Groups of methods for assessing the resource potential of agricultural enterprises

Source: generalized and formed by the authors

The effective approach is based on the dependence of the value of the object of assessment on the ability to use it effectively. This statement is based on the fact that the prospective owner will not pay more than he seeks to get from the economic use of it. So, the method of evaluating the resource potential based on the concept of the effective approach starts from the point of view of the usefulness of the individual capabilities of the object. This approach has the following methods of resource potential assessment:

- the method of direct capitalization of income – when the value of the enterprise is equal to the present value of future cash flows from its use, which can be capitalized by the management;

- the method of economic profit – when the value of the company is determined by the product of the amount of investment capital and the rate of economic profitability, which is equal to the difference between the profitability of investment capital and the weighted average costs of its attraction and use;

- method of discounting cash flows – if the value of the enterprise consists of the present value of the cash flows generated by each of its components, taking into account the differences between the levels of discounts;

- method of additional income – when the value of the company is calculated by adjusting the company's balance sheet and evaluating the possibilities of obtaining income from its use.

Among the advantages of the above-mentioned method, there are the following: the perspective of the development of the company's activities is taken into account; there is a possibility of taking into account the peculiarities of market conditions for a specific object. Among the shortcomings, the following are distinguished: in analytical calculations, forecasted economic information is used instead of actual; analytical points are subjective in nature; it is difficult to obtain absolutely accurate indicators due to the long evaluation period and the instability of real capital inflow and outflow processes.

The cost approach is based on the statement that the potential owner will not want to spend more on the formation and implementation of personal internal or external opportunities than the value of the expected financial and property result. So, the methods belonging to this group provide for the resource assessment of all parts

of the enterprise complex, taking into account all the costs necessary for its reproduction on the selected date in working condition. Based on estimates, the number of costs to create an object of assessment is determined, then the amount of accumulated wear and tear of various types, each of which is eliminated or not, is estimated.

The cost approach has 6 valuation methods:

- the simple balance sheet method consists of the fact that the value of the enterprise is determined as the difference between its assets and liabilities;

- the method of balancing the balance – when the value of the enterprise is equal to the final real values of all components of the single property complex of the enterprise, minus its debts;

- liquidation value method – the idea is that the value of the enterprise is the number of funds that will be received in the event of its sale (liquidation) or the sum of the liquidation values of all types of enterprise property;

- net assets method – when the value of the enterprise is equal to the deduction from the normalized price of the enterprise's assets, the adjusted value of its liabilities;

- replacement cost method – the value of the enterprise is calculated as the cost of creating a similar integral property complex at current prices, which has the same utility for managers, but is formed in accordance with modern standards and requirements;

- method of accumulation of assets – when the value of the enterprise is equal to the difference between the market value of all the assets of the enterprise and the market value of all its liabilities (Tomchuk, Rabokon, 2019).

At today's stage, with undeveloped national markets and unavailable information about them, the weak level of theoretical training of experts, and the instability of the economic system of the state in general, this approach is the most common in Ukrainian practice, because it has such advantages: options for more efficient use of the company's assets are analyzed; there is a scientific and technical analysis of the company's capabilities and various kinds of improvement of business processes; objects are evaluated; there is an assessment of the potential in the conditions of underdeveloped capital markets. Along with the advantages, the disadvantages of this approach were also revealed, among which: there is the use of information about the company's activities of the past years, which

needs to be adjusted to the modern period; opportunities for the development of the market and the enterprise as a whole are not taken into account.

The resource (comparative) approach is based on information about recent market transactions with similar objects, and its use as a basis for identifying the value of the object under study. All methods of this group are based on the assumption that subjects of market relations enter into agreements by comparing past experience and known traditions. However, there are no absolute analogs of individual elements of the resource potential, as a result, various mechanisms are used to adjust the price of the analog. On the basis of comparison, the following financial and economic indicators are usually used: the total capital of the enterprise, the number of its net assets, cash receipts from the operation of the object, net income, the average amount of dividends paid, etc. In general, a necessary condition for using the methods of this group is the existence of an effective market for the object of assessment and the presence of similar objects in this market.

The above-mentioned approach has 3 methods of assessing potential:

- the method of industry ratios – consists of the fact that the value of the enterprise is estimated on the basis of price characteristics and other qualitative or financial ratios that are characteristic of this field of business activity;

- method of analog sales or capital market – when the price of the enterprise is set at the same level as the price of analog integrated property complexes;

- multiplication method – in which the enterprise value is estimated on the basis of determined indicators, coefficients that create significant characteristics of similar objects that are on the market.

Among the advantages of this approach to resource potential assessment are the following: avoidance of discrepancies between the calculated unit of value and its market equivalents; increasing accuracy of analytical calculations; taking into account both internal and external factors influencing the operation of the enterprise.

Among the shortcomings are: the need for the existence of a transparent, developed market of assessment objects; there are not always analogs for comparison, and therefore it is unrealistic to conduct such an assessment; the future of the enterprise is difficult to

calculate; to apply this assessment method, it is necessary to collect and process a significant amount of information both about the object of this assessment and about its analogs; difficulty in calculating all necessary procedures (Azhaman, Zhidkov, 2019).

The key task of the enterprise is to ensure high profitability indicators, and increase the competitiveness of the provided goods and services. In order to achieve the set goals, the enterprise must have a high level of resource potential, which must be assessed comprehensively, since resource potential is a combination of many factors (reserves, resources, performance, entrepreneurial skills). Such an assessment should contain generalized conclusions regarding the use of resources by the enterprise, which are based on the system principle. The evaluation process must be carried out in a certain sequence and must be clearly organized. Therefore, the assessment is the result of the analysis and determination of qualitative and quantitative indicators of the company. That is, this assessment provides an opportunity to establish at what level the resource potential is functioning, whether the set goals are being achieved, how the change and improvement of management affect the completeness of the company's resource engagement and the effectiveness of its management (Tomchuk, 2015).

Among the existing methods of evaluating the effectiveness of resource potential management, the diagnostic approach is most often used, which is carried out in a complex, step-by-step, and element-by-element study. With the help of a complex form of assessment of the enterprise's resource potential, a study of all the enterprise's resources, which are integrated into a single influencing factor, is carried out. The main methods of integrating indicators: expert and rating. When applying a step-by-step study, there is usually an emphasis on the main criteria that characterize the firm's ability to solve its key tasks. In this case, the main criteria that provide a comprehensive assessment are detailed.

Quantitative indicators are intended to assess the volume and speed of reproduction of certain resources and resource potential in general, instead, qualitative indicators are the basis for determining the efficiency of resource use. The use of quantitative and qualitative characteristics of the resource potential of the company makes it possible to make a forecast of the initial level of development of the

resource potential; highlight the key directions of the company's development; calculate, based on the achieved level and directions of development of the enterprise, the permissible production, social and economic loads.

We completely share the opinion with S. P. Kobets and O. M. Vashchenko regarding the methodical approach to the comprehensive assessment of the economic potential of the enterprise, which consists of 6 stages (Fig. 3.4).

We will reveal in more detail the content of the stages of the process of a comprehensive assessment of the economic potential of the enterprise.

1st stage. Selection of structural components of the enterprise's economic potential.

As can be seen from Fig. 3.4, the authors proposed the following groups of structural components of economic potential:

1. Property potential;;
2. Investment potential;
3. Financial potential;
4. Production potential.

2nd stage. The choice of a system of indicators characterizing the structural components of the economic potential of the enterprise.

The following indicators are offered to assess the specified structural components of the economic potential:

Property potential:

- 1.1. Percentage of inventories in current assets, %
- 1.2. Percentage of accounts receivable in current assets, %;
- 1.3. Percentage of cash in current assets, %;
- 1.4. The percentage of capital and reserves in the sources of property formation, %;
- 1.5. The percentage of long-term liabilities in the sources of property formation, %;
- 1.6. The percentage of short-term liabilities in the sources of property formation, %.

2. Investment potential:

- 2.1. Return on equity (ROE), % (shows what is the return (rate of profit) on invested equity);
- 2.2. Percentage of equity, %;
3. The coefficient of coverage of non-current assets with own

capital (characterizes the level of financing of non-current assets at the expense of the beneficiary's own capital);

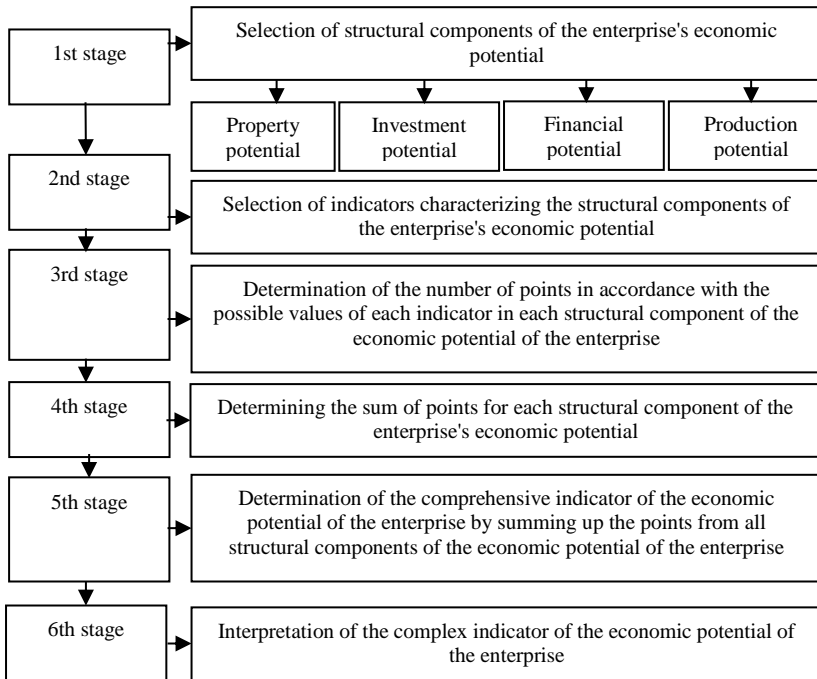


Fig. 3.4. Stages of the process of comprehensive assessment of the economic potential of the enterprise

Source: (Kobets, Vashchenko, 2021)

2.4. Duration of accounts payable turnover, days (this is the average number of days required for settlements with suppliers and contractors, and other creditor entities);

2.5. Duration of turnover of net working capital, days (characterizes the time during which the turnover of the company's working capital is carried out).

3. Financial potential:

3.1. Absolute liquidity ratio (shows what part of the short-term debt the company can repay in the near future);

3.2. Current liquidity ratio (characterizes the degree of coverage of short-term liabilities by current assets. It is used to assess the ability of the enterprise to fulfill its short-term obligations);

3.3. Coefficient of autonomy (shows what part of the total investments in the enterprise is made up of own capital. It characterizes the financial independence of the enterprise from external sources of financing);

3.4. The debt capital concentration ratio (demonstrates how much of the company's assets are financed by liabilities);

3.5. Return on assets, % (characterizes the efficiency of the use of all company assets);

3.6. A turnover ratio of funds in accounts, turnover (determines the number of turnovers of funds in accounts during the reporting period).

4. Production potential:

4.1. The potential of fixed assets:

4.1.1. Depreciation of fixed assets;

4.1.2. The ratio of recovery of fixed assets and disposal of fixed assets;

4.1.3. Fund return.

4.2. The potential of material resources:

4.2.1. The share of direct variable costs in the cost of production;

4.2.2. Ratio of changes in prices for raw materials and products;

4.2.3. Material yield.

4.3. The potential of labor resources:

4.3.1. The ratio of the turnover rate on admission and the turnover rate on dismissal;

4.3.2. Compliance of personnel with professional requirements.

3rd and 4th stage. Determination of the number of points in accordance with the possible values of each indicator in each group.

It should be noted that some indicators have normative values (financial indicators), and some indicators have optimal values that are characteristic of a certain industry (property potential indicators), it is advisable to choose the limits of the values of some indicators taking into account the specifics of the industry and based on the analysis of the data of operating enterprises in this field (Tomchuk, 2021).

To determine the trend of changes in the economic potential of the enterprise, it is advisable to evaluate its level over several periods.

1. Property potential.

For the point assessment of the property potential, it is suggested to divide the values of the indicators into 3 groups, and the number of points is given for each group. After determining the number of points

for each indicator of property potential, the sum of points is calculated and a conclusion is made about the level of property potential of the enterprise.

Levels of the property potential of the enterprise:

The first level is the sum of points from 18 to 21: a high level of the property potential of the enterprise.

The second level – from 14 to 17 points: a satisfactory level of the property potential of the enterprise. The third level – from 10 to 13 points: low level of property potential of the enterprise.

The fourth level – from 7 to 9 points: an unsatisfactory level of the property potential of the enterprise.

Table 3.1 shows the correspondence of the number of points to the values of the indicators characterizing the level of the property potential of the enterprise (we studied enterprises that provide services in the field of production of advertising and souvenir products).

2. Investment potential.

In order to assess the investment potential above, we have created a group of indicators that collectively provide a comprehensive description of the state and prospects of the enterprise.

Table 3.1

Correspondence of the number of points to the values of the indicators characterizing the level of the property potential of the enterprise

Indicators	The value of indicators		
	Scores	3	2
Percentage of inventories in current assets, %	55-70	30-54, 71-89	1-30, 90-100
Percentage of accounts receivable in current assets, %	25-31	1-24, 36-50	51-100
Percentage of cash in current assets, %	5-10	11-25	0-4, 26-100
The percentage of capital and reserves in the sources of property formation, %	66-100	35-65	0-34
The percentage of long-term liabilities in the sources of property formation, %	15-25	0-14, 26-35	36-100
The percentage of short-term liabilities in the sources of property formation, %	35-45	0-34	46-100

Source: (Kobets, Vashchenko, 2021)

Table 3.2 shows the correspondence of the number of points to the values of indicators characterizing the investment potential of the enterprise.

Table 3.2

Correspondence of the number of points to the values of indicators characterizing the investment potential of the enterprise

Indicators	The value of indicators			
	1	2	3	4
Scores	5	3	1	0
Return on equity (<i>ROE</i>), %	>16	8-16	0-8	≤0
Percentage of equity, %	≥70	60–70	50–60	<50
The coefficient of coverage of non-current assets with equity capital	>1,1	1,0–1,1	0,8–1	<0,8
Duration of turnover of short-term debt, days	1-60	61–90	91–180	>180
Duration of turnover of net working capital, days	1-20	>20, (-10)–0	(-30) – (-11)	<-30

Source: (Kobets, Vashchenko, 2021)

Levels of investment potential of the enterprise:

The first level is the sum of points from 21 to 25: a high level of the enterprise's investment potential.

The second level – from 11 to 20 points: satisfactory level of investment potential of the enterprise.

The third level – from 4 to 10 points: low level of investment potential of the enterprise.

The fourth level – from 0 to 3 points: Unsatisfactory level of investment potential of the enterprise.

3. Financial potential.

Each of the indicators is assigned a rating in points. To calculate the total number of points, the sum of the products of the number of points and the ratings of indicators is calculated.

Levels of financial potential of the enterprise:

The first level – more than 250 points: a high level of the financial potential of the enterprise.

The second level – from 201 to 250 points: a satisfactory level of the enterprise's financial potential.

The third level – from 151 to 200 points: low level of the financial

potential of the enterprise. Increased risk, and tension, but there is a possibility of increasing its level.

The fourth level – the sum of points from 100 to 150: unsatisfactory level of the enterprise’s financial potential.

Table 3.3

Correspondence of the number of points to the values of indicators characterizing the financial potential of the enterprise

Indicators	Indicator rating in points	Scores		
		3	2	1
Absolute liquidity ratio	35	>1	1 – 0,6	<0,6
Current liquidity ratio	30	>0,4	0,4 – 0,3	<0,3
Coefficient of autonomy	25	1,0 – 1,1	0,8 – 1	<0,8
Concentration ratio of attracted capital	5	<0,5	0,5 – 1	1
Return on assets, %	3	>25	25 – 15	<15
Turnover ratio of assets in calculations, turnover	2	>7	7 – 3	<3

Source: (Kobets, Vashchenko, 2021)

4. Production potential of the enterprise:

For the point assessment of the enterprise’s production potential, it is proposed to divide the values of the indicators into 3 groups, and the number of points is given for each group. After determining the number of points for each indicator of production potential, the sum of points is calculated and a conclusion is made about the level of the property potential of the enterprise.

Levels of production potential of the enterprise:

The first level is the sum of points from 21 to 24: a high level of the enterprise’s production potential.

The second level – from 17 to 20 points: a satisfactory level of the production potential of the enterprise.

The third level – from 12 to 16 points: low level of the production potential of the enterprise.

The fourth level – from 8 to 11 points: unsatisfactory level of the enterprise’s production potential.

5th stage. Determination of the comprehensive indicator of the economic potential of the enterprise by summing up the points for all groups of structural components of the economic potential of the enterprise.

Table 3.4

Correspondence of the number of points to the values of indicators characterizing the production potential of the enterprise

Indicators	The value of indicators		
	3	2	1
Fixed assets			
Depreciation of fixed assets, thousand UAH	<50 %	51-69%	>70%
The ratio of recovery of fixed assets and disposal of fixed assets	>	0,5-1	<0,5
Fund return, UAH	>	=1	<
The share of direct variable costs in the cost of production, %	>80%	50-79 %	<50%
The ratio of changes in prices for raw materials, materials and changes in prices for products	<1	=1	>
Material yield, UAH	>2	1-2	<1
The ratio of the turnover ratio from reception to the turnover ratio from disposal	>1	0,5-1	<0,5
Compliance of personnel with professional requirements	Meets	Partially meets	Does not meet

Source: (Kobets, Vashchenko, 2021)

Having received the total point estimates for each group of structural components of the economic potential, there is a need to roll up the specified estimates into a general comprehensive indicator of the economic potential of the enterprise.

We offer a formula:

$$C_{EP} = \sqrt[4]{C_{PP} \times C_{IP} \times C_{FP} \times C_{PrP}} \quad (3.1)$$

where: C_{EP} – a comprehensive indicator of the economic potential of the enterprise;

C_{PP} – a comprehensive indicator of the property potential of the enterprise;

C_{IP} – a comprehensive indicator of the enterprise's investment potential;

C_{FP} – a comprehensive indicator of the enterprise's financial potential;

C_{PrP} – a comprehensive indicator of the enterprise's production potential.

Note that each group of structural components of economic potential has four levels. Depending on the number of points, the company receives a certain level of a certain potential. To summarize the structural components of the economic potential, there is a need to provide quantitative indicators for each level of each of their groups.

Table 3.5

Quantitative indicators for each potential level

Potential level	1 level	2nd level	3rd level	4th level
Scores	20	15	10	0

Source: (summarized by the author)

The 6th stage involves the interpretation of a complex indicator of the economic potential of the enterprise. The dependence of the level of the economic potential of the enterprise on the value of CEP is shown in Table 3.6.

Various methods are actively used in foreign practices to assess the competitiveness of an enterprise's potential.

Table 3.6

Dependence of the level of economic sustainability of the enterprise on the value of CEP

The level of economic potential of the enterprise	Absolutely unsatisfactory level of the economic potential of the enterprise (AU)	Low level of economic potential of the enterprise (L)	Satisfactory level of economic potential of the enterprise (S)	High level of economic potential of the enterprise (H)
The value of CEP	0-5	6-10	11-15	16-20

Source: (Kobets, Vashchenko, 2021)

According to the direction of formation of the information base, there is:

- the expert method is easy to use, and does not require the collection of complete information about competitors because it is based on the ideas of experienced experts. But its advantage is at the same time its disadvantage because sometimes the subjectivity of specialists can harm the assessment results;

– criterion method – the absolute values of the main indicators act as an information base.

By the method of displaying the final results of the company:

– mathematical method – is based on factor models of assessment, based on the calculation of a single indicator or several digital values of indicators, as a result of which the final assessment results. This method is the most accurate, although it requires complex additional mathematical calculations;

– the logistic method is an algorithmic method of assessment based on logical assumptions;

– graphic method – provides a higher level of perception of the final assessment results, which is expressed in graphic objects.

According to the possibility of developing management solutions, there is:

– one-moment method – only the actual state of affairs is assessed, without ensuring the possible development of measures for the future;

– strategic method – the state of the company's potential is assessed not only for a specific date but also for the development of a strategic plan for the future.

According to the evaluation method, there are:

– the matrix method is based on the idea of considering the processes of competition in dynamic and interdependent aspects. With its help, managers have the opportunity to assess the level of competitiveness of the potential not only of their own company but also of the closest competitors, which helps to develop a strategy for handling the market. The matrix method is often used by Western consulting companies, therefore, having the necessary information support, it can also be used by domestic enterprises;

– indicator method – it is based on the use of a system of indicators, it is used to assess the competitiveness of the company's economic potential (Tiutiunnyk, Dorohan-Pysarenko, Tiutiunnyk, 2020).

A comprehensive system of indicators is necessary for a comprehensive assessment of the company's potential. The development of such a system should consist of a structural model that includes both actual dynamics and theoretical prerequisites. Therefore, the structural model of the indicator system should include the following requirements:

– ensuring comparison, uniform direction of indicators of groups, of the entire system;

– general theoretical interpretations, interrelationships, and unified targeting of both individual indicators and the entire system as a whole;

– the ability to adjust the value of indicators, depending on the level of use of the resources that are spent, and the effectiveness of the results;

– the ability to obtain a forecast about the direction of the dynamics of indicators.

In order to evaluate the effectiveness of the use of resource potential, a generalizing complex indicator is used in Ukraine and abroad, which characterizes the level of use of resource potential (Antonschenkova V., 2020):

$$R_R = \frac{GP}{RP} \quad (3.2)$$

where: R_R – resource return, UAH;

GP – cost of gross production, UAH;

RP – resource potential of the enterprise, UAH.

Insights into the size of the enterprise's resource potential and its individual elements make it possible to manage the characteristics of the potential and, as a result, there is an opportunity to purposefully act on the return of resources.

The ability to use this indicator when stimulating the work of managers and specialists of various divisions of the enterprise, for building conditional assessments of its activity and industry is promising.

Ensuring a high level of the company's profit, and increasing the competitiveness of its goods and services are its main tasks. To achieve the set goals, the enterprise must have a high level of resource potential, the assessment of which must be comprehensive, because this potential is formed through a combination of several factors (resources, reserves, performance results, entrepreneurial abilities).

So, the volume of resource potential, its structure can be widely used in planning, making a forecast and stimulating production.

Thus, methodical approaches to resource potential assessment have both advantages and disadvantages. Taken separately, one method of assessing the increase in the use of resource potential cannot fully provide and satisfy all the tasks originally assigned to the method. The

methodical approach to the comprehensive assessment of the economic potential of the enterprise is based on available public reporting data, is universal, and allows obtaining quantitative assessments.

The disadvantages of the proposed approach include the relatively large volume of necessary calculations and the relative subjectivity in establishing the level gradation of indicators.

All this indicates that, as of today, the issue of developing the latest methodological support to ensure the assessment of the resource potential of all levels of the enterprise remains open.

References to section 3.1

Tomashuk, I.V. (2019). Assessment of the influence of organizational and economic factors on increasing the efficiency of the use of the resource potential of the Vinnytsia region. Scientific Notes of Taurida V.I. Vernadsky University. Series : Economics and management. Tome 30(69). №. 2. P. 192-200.

Kobets, S.P. & Vashchenko, O.M. (2021). A methodical approach to assessing the economic potential of an enterprise. URL: http://www.economy.nayka.com.ua/pdf/6_2021/80.pdf. (application date: 04/08/2022). DOI: 10.32702/2307-2105-2021.6.78.

General requirements to financial statements (№ 73 of February, 2013). URL: <http://zakon5.rada.gov.ua/laws/show/z0336-13> (application date: 18/08/2022).

Diachuk, I., Britchenko, I. & Bezpartochnyi, M. (2019). Content marketing model for leading web content management. *Advances in Social Science, Education and Humanities Research. Atlantis Press: Proceedings of the 3rd International Conference on Social, Economic and Academic Leadership (ICSEAL 2019)*. Volume 318, May. P. 119-126. (<https://www.atlantis-press.com/proceedings/icseal-19/125909025>) ISBN 978-94-6252-729-4, ISSN 2352-5398

Petrovych, Y.M., Kit, A.F., & Semeniv, O.M. (2004). Business Economics: textbook. Lviv: “Noviy Svit-2000”. 680 p.

Economic Code of Ukraine (№ 436-IV from January 16, 2003). URL: <https://zakon.rada.gov.ua/laws/show/436-15> (application date: 04/08/2022).

Arzevitin, S., Britchenko, I. & Kosov, A. (2019). Banking liquidity as a leading approach to risk management. *Advances in Social Science,*

Education and Humanities Research. – Atlantis Press: Proceedings of the 3rd International Conference on Social, Economic and Academic Leadership (ICSEAL 2019). Volume 318. May. P. 149-157. (<https://www.atlantis-press.com/proceedings/icseal-19/125909030>) ISBN 978-94-6252-729-4, ISSN 2352-5398.

Blank, I.A. (2002). Capital formation management: textbook Kyiv: Nika Centre, Elga. 512 p.

Svirhun, O.M. & Sokolovska, V.V. (2010). Resource potential of the enterprise: theoretical aspects. URL: http://www.ukrnauka.com/17_AND_2010/Economics/69284.doc.htm ml. (application date: 10/08/2022).

Biloshapka, V., Britchenko, I. & Okhrymenko, I. (2019). Central banks as leaders in ensuring financial stability. *Advances in Social Science, Education and Humanities Research. Atlantis Press: Proceedings of the 3rd International Conference on Social, Economic and Academic Leadership (ICSEAL 2019).* Volume 318, May. P. 173-181. (<https://www.atlantis-press.com/proceedings/icseal-19/125909033>) ISBN 978-94-6252-729-4, ISSN 2352-5398.

Tomchuk, O.F. & Beldii, A.M. (2019). Improvement of the analysis of calculations on the payment of labor of agricultural enterprises. Efficient economy. №. 10. URL: www.economy.nayka.com.ua. (application date: 12/08/2022). DOI: 10.32702/2307-2105-2019.10.57.

Zimina, L. (2011). Strategic enterprise management: structural and functional model. Problems of the theory and practice of management. №. 9. P. 77-83.

Britchenko, I. & Cherniavska, T. (2019). Blockchain Technology in the Fiscal Process of Ukraine. *Списание “Икономически изследвания (Economic Studies)”*. Институт за икономически изследвания при БАН, София (България). Volume 28, Issue 5. P. 134-148. ISSN 02053292.

Kharchenko, S.V. (2019). Management aspects of ensuring the effectiveness of the use of the company's potential. Actual problems of the economy. №. 8. P. 141-149.

Dlihach, A.O. (2012). Strategic marketing management: monograph. Kyiv: Alerta. 272 p.

Pavlova, V.A. (2015). Enterprise competitiveness: management, assessment, strategy: monograph. Dnipropetrovsk: Alfred Nobel

University (DUAN). 352 p.

Tomchuk, O.F. (2016). Analytical support for managing business activity of the enterprise. Global and national economic problems. Edition 10. P. 991-995.

Polova O., Podolianchuk O, Gudzenko N., Koval N., Ishchenko Y., Pravdiuk M., Mulyk T., Tomchuk O., Mulyk Ya., Kozachenko A., Mashevska A. (2022). Current issues of accounting, taxation, analysis and audit development in modern challenges condition: collective monograph. Košice: Vysoká škola bezpečnostného manažérstva v Košiciach, 282 p.

Antonshchenkova, V. (2020). The main elements of the resource potential of an agricultural enterprise as the basis of economic and food security. Economic analysis. Tome 30. №. 3. P. 291-298. DOI: <https://doi.org/10.35774/econa2020.03.291>.

Britchenko, I., Bezpatochnyi, M. & Maslii, N. (2019). Financial decentralization in Ukraine: prerequisites, problems, prospects. *VUZF review. VUZF, Sofia (Bulgaria)*. № 4(4). P. 25-44. ISSN 2534-9228 <https://papersvuzf.net/index.php/VUZF/issue/view/13>.

Tomchuk, O.F. & Rabokon, Yu.S. (2019). Analysis of the efficiency of the use of stocks at the enterprise. Finance, accounting, banks. 2019. №. 1 (24). P. 76-86. DOI:<http://dx.doi.org/10.31558/2307-2296.2019.1.8>.

Ajaman, I. A. & Zhidkov, O. I. (2019). Methodical approaches to assessing the level of development of the economic potential of a service enterprise. Efficient economy. №. 5. URL: <http://www.economy.nayka.com.ua/?op=1&z=7028> (application date: 02/09/2022). DOI: 10.32702/2307-2105-2019.5.5.

Tomchuk, V.V. (2015). Analysis of the effectiveness of the use of enterprise financing sources. Global and national economic problems. Edition 8. P. 1177-1181.

Tomchuk, O. (2021). Methodology for analysis of the financial condition of agricultural enterprises and ways of its enhancement. Three Seas Economic Journal. Vol. 2, №. 3. P. 104-117.

Tiutiunyk, Yu. M., Dorohan-Pysarenko, L. O. & Tiutiunyk, S.V. (2020). Financial analysis: education manual. Poltava: Publishing house PE "Astraya". 434 p.

Britchenko. I., Romanchenko. T. & Hladkyi. O. (2019). Potential of Sustainable Regional Development in View of Smart

Specialisation. *Списание «Икономически изследвания (Economic Studies)»*. Институт за икономически изследвания при БАН, София (България). № 6. Volume 28, Issue 6. P. 88 - 110. ISSN 02053292. <https://www.iki.bas.bg/spisanie-ikonomicheski-izsledvaniia>.

3.2 Current state and effectiveness of the resource potential usage of enterprises ⁹

In recent decades, enterprise competitiveness as a concept has firmly taken a leading position in the economic science of growth and policy on the formation of the main factors that ensure its stability. An important area of analysis of the enterprise's operational activity is the determination and assessment of the effectiveness of the resource potential usage as an integral component of the internal strategic environment. Unfortunately, recently in our country there has been a tendency to decrease the effectiveness of resource usage, which at the micro level negatively affects the financial results of individual economic entities, and at the macro level – reduces the resource potential of the country and its competitiveness in general. The urgency of studying the problem of analyzing the resource potential of the enterprise is associated with the aggravation of the economic crisis in the country, the instability of the economic situation, a significant increase in competition between business entities for resource and finished products markets.

The economic mechanism of production resources management should be based on the analysis of resource supply and resource use, which allows to predict the final results of operating activities. Economic analysis of the usage level of various resources at enterprises should meet the needs of managing the effectiveness of activity for both the enterprise as a whole and its individual business units. The rationality of resource use is formed at the micro level and depends on the perfection of analytical support for resource management and control.

The condition for successful long-term functioning of the enterprise is its resource potential. There is a need for constant

⁹ Fedoryshyna L.I.

formation and effective use to ensure competitiveness. It requires a thorough study and the development of new theoretical approaches to solving the problem of formation and development of the resource potential of the enterprise as a component of competitiveness is relevant.

In the etymological sense, the term “potential” is of Latin origin from *potentia*, which means strength or power. The Dictionary of Foreign Words edited by V. Butromeev gives two interpretations of potential. Firstly, it is a set of available means, opportunities, sources. Secondly, it is a point characteristic of a force vector physical field.

The second interpretation of the term “potential” has an applied character for physics, chemistry, mathematics. But the first interpretation is general in nature, which allows it to be applied to various branches of science and human activity, depending on what reserves, means and sources are in question. It is from this position that the resource concept of the term “potential” originates.

The issues of methodology for analyzing the use of certain types of resources were considered in many scientific articles, relevant sections of textbooks and manuals of national and foreign scientists and specialists, in particular: L. Basovsky, M. Vakhrushina, A. Kaygorodov, G. Kindratska, K. Kovalchuk, T. Kosova, E. Mnykh, N. Plaskova, G. Savytska, V. Seredynska, M. Chumachenko and others.

It should be noted that recently there has been a significant increase in the number of publications on analytical studies of the internal potential of enterprises, in particular, such issues were covered in the writings of N. Krasnokutska, I. Otenko, L. Skorobogataya, O. Fedonina. But in the writings of the above-mentioned authors the main emphasis is placed on the disclosure of the economic essence of this category, and the issues of studying the internal or competitive potential are considered mainly from the standpoint of strategic management. Some aspects of the comprehensive analysis of the effectiveness of enterprise resources usage were highlighted in the writings of L. Kryvovyazyuk, M. Vakhrushina, N. Lyubushina, N. Plaskova, I. Chuyeva. At the same time, the methodological and methodical aspects of the comprehensive analytical assessment of the effectiveness of resource potential usage of the enterprise remain outside the attention of scientists. Insufficiently studied is the issue of economic consequences, that is, the lost profits of the enterprise as a

result of incomplete use of the resource potential of enterprise, taking into account intensive and extensive factors.

In later works on potential problems, one can find attempts to interpret potential not as a simple set of resources and sources of their formation, but as a complex system with existing connections. In the general sense, the meaning of the term is revealed as a degree of power in some respect, a set of means necessary for something (Gavva V., 2011).

The analysis of such publications revealed significant differences in the definition of economic potential, its elements, the relationship with such categories as national wealth, the level of economic development, and competitiveness. The analysis of the evolution of scientific opinion regarding the definition of the term “potential” made it possible to identify the following approaches.

The first approach defines economic potential as the aggregate capacity of sectors of the national economy. Representatives of this approach are B. Mochalov, V. Mosin, D. Kruk. In the definitions given by these authors, there is a close connection between economic potential and production function. We agree that this is its important characteristic, but not the only one.

The second approach: economic potential is a set of available resources. This approach is traced in the publications of Y. Lychkin, B. Plishevsky, A. Todosiychuk. In our opinion, the disadvantages of this approach are that the term “potential” is often substituted by the concepts of resources, investments, investment resources, number of employees. Focusing only on the resource aspect, without identifying the specific characteristics of the potential, essential differences from economic categories such as national wealth, resources, material and technical base, specificity are lost.

The third approach is supported by E. Lapin and R. Marushkov. For a long time in the national literature, the potential was identified with the scale of the production enterprise, and for its characterization such indicators as production capacity, output per unit of production area, etc. were most often used. B. Mochalov, on the contrary, believes that it is necessary to distinguish indicators of economic power from economic potential. The economic potential of the country, industry, enterprise, he believes, is characterized by the volume of accumulated resources and the maximum possible amount of material goods and

services, the production of which can be achieved in the future with the optimal use of available resources. Economic power characterizes the actually achieved level of development of productive forces at a certain date. A similar point of view is held by A. Ivanov, emphasizing the difference between the terms “national economy” and “economic potential” (Ivanov, Levina, Mykhalskaya, 2003).

The fourth approach interprets economic potential as a result of economic and production relations between its entities. L. Samoukin believes that economic potential should be considered in conjunction with the inherent in each socio-economic formation production relations that arise between individual workers, labor collectives, as well as the management of the enterprise, organization, branches of the national economy as a whole regarding the full use of their capabilities to create material goods and services. In our opinion, this definition emphasizes a very important feature of the interaction of all elements of economic potential. However, economic potential also depends on the level of development of productive forces. N. Krasnokutska gives the following definition of potential: the potential of the enterprise – the ability of the system of resources and competencies of the enterprise to create results for stakeholders through the implementation of business processes. (Krasnokutska, 2008).

We believe that this definition is interesting from the viewpoint of the interaction of resource and output concepts, but it does not reflect the level of potential and its structure. Attempts to solve the problem of potential assessment at the level of region, industry and enterprises have led to the emergence of various definitions. Thus, the potential is characterized as the means, reserves, sources that are available and capable of being mobilized, put into action, used to achieve certain goals, implement a plan, solve a problem, the capabilities of an individual, society, state in a certain area.

The fundamental basis of the methodology development for the comprehensive analysis of the enterprise’s resource potential is the determination of the economic essence of such key concepts as “resources” and “resource potential”.

In a broad sense, the term “resource” (fr. ressource – means, method) means reserves of something that can be used in case of need.

In the economic literature, resources are considered as a set of

natural, production-technical, organizational and social factors, that is, the main elements of the production potential that the enterprise has at its disposal and which are used to achieve specific business goals and its economic development.

Usually, economic (production) resources are classified as follows:

- by composition (elements): technical, material, personnel, financial, natural, spatial, technological, informational;
- by origin: primary and secondary;
- by structure: means of work, objects of work, products of work;
- by field of use: in the field of production, in the field of circulation.

The key category of internal strategic analysis is “resource potential”. Analytical assessment of the enterprise’s resource (production) potential is primarily based on the general understanding of the concept of “potential”.

Potential (from the Latin *potentia* – possibility, power) is a useful property that appears when an object (state, industry, enterprise, person, etc.) carries out certain activities aimed at achieving set goals. Potential is the available means, stocks, sources that can be used to achieve a certain goal, solve a certain task, as well as the capabilities of an individual, society, and state in a certain field. On the other hand, the potential can be considered not simply as a set of available resources, but also as “hidden abilities, forces for any activity that may appear under certain conditions”.

A dualistic approach to this term is revealed in the approaches of different authors to its understanding. The potential of the organization as an economic category in economic research has various application options: “economic potential”, “competitive potential”, “strategic potential”, “production potential”, “marketing potential”, “labor potential”, “financial potential”, “information potential”, “innovative potential”, “resource potential”, etc. Such diverse “coloring” of this term is related to the professional interests of the researcher studying its essence. The key point should be a general understanding of the potential of the organization (enterprise) as the primary conditions for its functioning and rational use of what it has, that is, resources.

Despite different approaches to the interpretation of this category, the majority of economists have not significantly deviated from the generally recognized understanding of potential, and for the most part,

despite the numerous variants of its interpretation, the resource approach dominates.

When determining the essence of competitive potential, one should distinguish the concepts of “production potential” and “competitive potential”, if production potential characterizes the availability of appropriate resources for the implementation of the main activity, then competitive potential is a characteristic of potential opportunities for effective competition, taking into account the available resource potential. In fact, competitive potential includes production potential as a separate production subsystem and adaptation-development potential.

So, if the production potential can be considered as means, stocks, sources and functional capabilities that are available in the production system and can be used to satisfy the needs and requests of consumers through the production and sale of manufactured products, works and services, then the potential of adaptation-development are stocks, sources and functional capabilities that are available in the production system and can be used for development and adaptation to the conditions of the external and internal environment, which are constantly changing.

The concept of “adaptation-development potential” is closely intertwined with the concepts of “competitive potential” and “strategic potential” (provided that the strategic goals are to increase the competitiveness of the organization). “The strategic potential of the enterprise is its ability to achieve strategic goals due to the effective distribution and use of its own and engaged resources, as well as the opportunity to form certain competitive advantages through resource provision of the appropriate level of the enterprise’s competitive status” (Blyzniuk. 2004).

Ensuring competitiveness depends on the availability, efficiency of use and reproduction of the resource potential of enterprises. One of the features of the functioning of modern enterprises is the quantitative, qualitative and structural imperfection of their resource potentials, caused by large losses of resources in the process of implementing reforms.

Ensuring the competitiveness of enterprises of various types is closely related to the solution of organizational and economic tasks to increase the return from each spent unit of resource potential, its

expanded reproduction, improvement of the structure, and improvement of the effectiveness of the enterprises.

Solving the problem of increasing the effectiveness of the resources usage of enterprises requires the development of a systematic socio-economic approach to the comprehensive study of each individual spectrum of issues on the balanced formation of resource potential and its return. As previous studies show, a comprehensive study of the problematic aspects of strengthening the resource potential of enterprises can be one of the most important preconditions for improving the effectiveness of their development, ensuring their competitiveness.

The conducted analysis of the approaches to determining the resource potential of the enterprise gives reason to propose the following: the potential of the enterprise is an integral reflection (assessment) of the current and future opportunities of the economic system, the transformation of input resources with the help of the entrepreneurial abilities inherent in its personnel into economic benefits, thus maximally satisfying corporate and public interests in order to ensure its competitiveness. In general, the elements of the company's potential include everything related to the operation and development of the company. The selection of the most important of these elements is a very difficult problem, which is confirmed by the many different opinions of scientists on this matter. The potential of the enterprise is considered as object and subject components that have an impact on ensuring competitiveness.

The evaluation of the elements that make up the production potential should be reduced to the evaluation of specific, defined characteristics of objects that reflect their content. Each of the specified elements can be characterized by many indicators, both general and partial. Evaluation of the enterprise's production potential is conducted on the basis of the analysing the level of effective use of structural workplaces, as well as on the basis of the elementary approach.

Approaches to ensuring competitiveness are directly related to the approaches for defining the production potential of the enterprise, namely: there are three main approaches for defining the production potential: resource (or accounting and reporting), structural (functional) and target (problem-oriented).

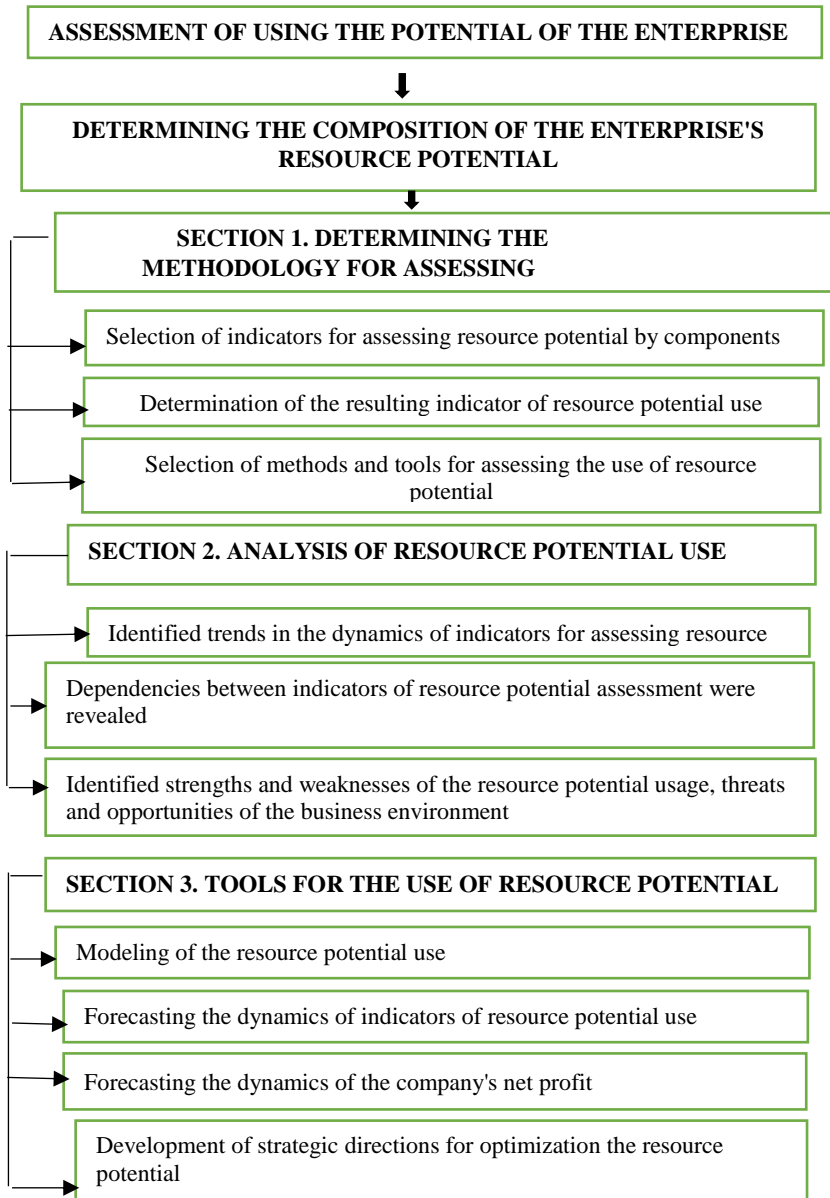


Fig. 3.5. Algorithm for evaluating and optimizing the use of the enterprise's resource potential

Methodology for evaluating and optimizing the use of the enterprise's resource potential, which is based on the use of net profit as the resulting indicator of enterprise activity and includes three interrelated sections (Fig. 3.5).

In general, the indicators of usage effectiveness of the production potential can be differentiated into five groups related to the use of information resources, improvement of management organization, improvement of labor organization, improvement of production organization and increase of creative activity of workers. The total potential of the enterprise determines its technical level, its competitiveness in foreign markets. The most common indicator of the usage level of the production potential, namely basic funds, is the return on funds. The main indicator of the usage effectiveness of industrial and production personnel is labour productivity.

In today's economic literature, there is no unanimous opinion on the methodology for calculating the aggregate, comprehensive assessment of the usage effectiveness of the production and resource potential. Its modern methodology provides for the calculation of labor productivity, capital productivity and capital intensity of products, these indicators, according to I. Romaniuk, are the criteria for assessing each type of resource, as well as indicators of agricultural production efficiency.

Therefore, depending on the indicator that is accepted as effective, the whole set of trends in changing the efficiency of various production factors affects the variation in the ratio of the production result to one of the types of resources. Thus, production efficiency is assessed in terms of the use of each type of resource. Therefore, it is necessary to calculate, according to economists, the integral indicator of efficiency as a ratio of the volume of production to the total consumption of each type of resource.

Production volume of agricultural products and provision of services is considered the main generalizing indicator, due to which the usage effectiveness of the production and resource potential is evaluated. It is the basis for calculating other indicators of enterprise productivity. In particular, it is resource productivity, which indicates the volume of production per 1 UAH of invested resources, and capital productivity (capital intensity), which shows the value of production per 1 UAH of invested fixed and working capital.

In the context of constant economic changes, continuing reforms, enterprises should pay considerable attention to the expansion and deepening of research in the field of production and resource potential management. Effective management of production and resource potential should be a flexible system that will change and adapt to new market conditions, while producing quality products and ensuring the overall sustainable development of agricultural enterprises.

The primary stage in building an effective management of production and resource potential is to establish the mission of business entities. The global goal of the enterprise's activity is set, which reflects its purpose, role in society and ensuring its own production, economic, environmental and social interests. After establishing the mission, it is necessary to set specific goals of activity. At the same time, the effective management of production and resource potential should be aimed at fulfilling not only the main mission of the enterprise, but also its partial goals that derive from the mission.

After analyzing the factors of the external and internal business environment as factors of resource use and production, a strategy for the development of an agrarian enterprise and resource use in its composition should be formed (Marmul, Petrenko, 2017). Strategy development is characterized as a complex process in which leaders of all levels of management must participate. The formation of such a strategy involves focusing on the development of existing opportunities and competitive advantages of an agricultural enterprise.

The basis for the formation of the strategy should be a concept that would take into account the peculiarities of the agro-industrial enterprise, the stage of its life cycle, market position, and the state of the external environment. Taking into account the formed strategy of activity development, the next stage is the formation of the structure and composition of production and resource potential. This is aimed at the rational provision of the enterprise with resources, their structuring and construction of certain organizational forms of management, which will ensure stable development and effective use and reproduction.

An integral component of effective management of production and resource potential is, as already mentioned, monitoring of the resource utilization process, which, in turn, will provide an opportunity to

control management and make the necessary changes, additions, and improvements. Estimating the efficiency of resource use is the next stage of forming a system of effective management of production and resource potential. Such an assessment should contain a certain set of indicators and criteria for determining the priority measures of enterprise resource management.

This will give an opportunity to find out how the enterprise works, whether the set goals are achieved, how changes and improvements in the management process affect the production and resource potential. At the same time, the economic effect is achieved due to the production of quality products and earning profits, the ecological effect is safe products and an ecological environment, the social effect is productive employment, labor productivity, affordable food consumption.

Managing the effectiveness of production and resource potential as a potential for sustainable development should be considered as a system that must contain such structural components as the quality of management, management tools, and results management. The quality of management involves, first of all, the culture of management, business behavior, image and reputation, within which the agricultural enterprise seeks to achieve its goals. This area should include effective motivation and control with a clear definition of goals and priorities for the development of the enterprise and an unambiguous division of powers and responsibilities.

High-quality management of any economic entity, regardless of the form of ownership, in modern conditions is impossible without a rational construction of the accounting and taxation system (Honcharuk, Plakhtiy, Starosud, 2017).

Management of activity results should contain a set of systematic procedures and approaches used for their evaluation and feedback for improvement. At the same time, decision-making must meet the general requirements and principles put forward for any management decisions. They should be justified, targeted, quantitatively and qualitatively defined, legitimate, optimal, timely, complex and flexible. Only under the conditions of compliance with these principles, the adopted decisions will perform managerial (contribute to the achievement of set goals), coordinating (coordinating individual actions, decisions, activities of individual specialists and units) and

mobilizing (activation of executors and resources) functions.

Labour productivity is a complex indicator that reflects the total impact of all other elements of production potential on the level and usage effectiveness of labour resources in the process of the latter's functioning. When assessing the level of technological element usage of the potential, the indicator "technological equipment of production" can be applied. It is the inverse of the production technology effectiveness and shows the costs of technology development required to provide a unit of the final result of the potential functioning. When assessing the level of technological element usage of the potential, the indicator "technological equipment of production" can be applied. It is a value that is the inverse of the production technology effectiveness and shows the costs of technology development required to provide a unit of the final result of the potential functioning.

The crisis state of the national economy and individual enterprises, which is accompanied by the non-utilization of production capacities, the accumulation of excessive stocks of materials and finished products, the reduction of number of employees, a decrease in their qualification level and labor productivity, and other negative phenomena, naturally leads to a loss of potential, hence a decrease in competitiveness.

Formation of the enterprise's potential to ensure competitiveness is the process of identifying and creating a range of entrepreneurial opportunities, its structuring and building certain organizational forms for sustainable development and effective reproduction. The general model of enterprise potential formation is presented in Fig. 3.6. Each of the elements shown in the diagram is subordinated to the achievement of the general goals of the enterprise potential, that is, if there are means of production, personnel, facilities with certain characteristics and other resources, then the potential of the enterprise as an economic system is able to meet the ever-changing needs of potential consumers.

The most common are three groups of potential assessment methods: productive (income) – estimates the value of the object on the basis of the net flow of positive results from its use; cost – determines the value of the object by the amount of costs for its creation and use; comparative (market) – determines the value based on comparison with the analogue. It should be noted that each of these

approaches is implemented using specific methods that depend on the object of valuation.

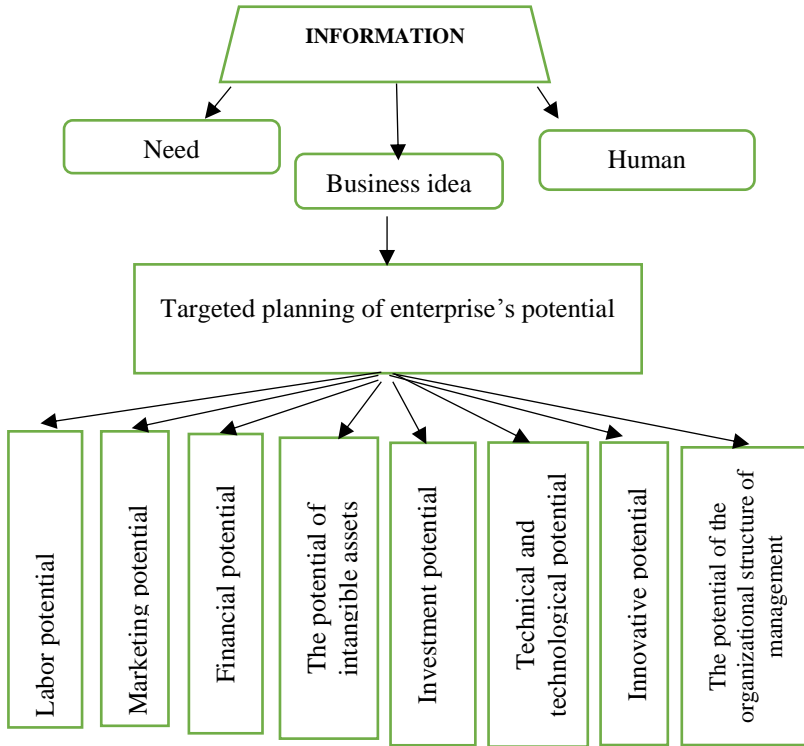


Fig. 3.6. General theoretical model of enterprise's potential formation

Assessment of the enterprise potential is the basis for the development of a competitiveness strategy. In our opinion, the approaches to change management, formed by D. Cohen, are appropriate: “analyze – think – change”. After making a decision on the need for changes in the enterprise, the management begins to form a change management team.

Naturally, in order to solve the problem of ensuring the competitiveness of the enterprise, analytical information should be summarized that will characterize the practice of managing the resource potential of the enterprise. Accordingly, ensuring

competitiveness involves improving the efficiency of resource potential. When developing plans, economists should use new methods and approaches in diagnostics, take into account the depth and specificity of the industry, as well as the potential capabilities of the enterprise, competition and the state of the economy.

At the present stage, a necessary element of the effective functioning of the resource potential management system of agricultural enterprises is the availability of the main condition for the realization of this potential – a significant, still insufficiently creditworthy, the internal market of agricultural products and dynamically developing market infrastructure. In general, the state stimulation of the agricultural enterprises development of Ukraine in the long term should provide for both stimulating the development of agricultural export potential of Ukraine and meeting the needs of the national market in agricultural products based on the expansion of internal demand of the state, business entities and the population. Therefore, in order to improve the efficiency of the resource potential management system of agricultural enterprises, it is necessary to analyze a set of factors of economic growth, among which may be those agricultural enterprises that produce goods and services that have consumption markets and they are able to activate a significant range of related industries.

Economic analysis deals with the specific knowledge of economic processes, therefore, it can connect the formal scheme of decision-making theory with the specific essence of the problem being solved. In order to make the right managerial decision, its analytical justification is necessary (Mulyk, Tomchuk, Fedoryshyna, 2019). The place of analysis in the management process can be characterized by the tasks facing it. There is a need to combine quantitative and qualitative analysis of management processes, as well as to improve the analytical support of the decision-making process.

When summarizing the results of the organization's activities for reporting period and developing a strategy to increase its resource potential, it is important to evaluate in a complex the use effectiveness of all its resources based on the study of a set of indicators that reflect certain aspects of economic processes. One of the directions for comprehensive assessment of the enterprise's activity effectiveness is the analysis of extension and intensification of aggregate resources

use. The generalized indicators of the extension and intensification of resource use are shown in Table 3.7.

Table 3.7

Main indicators of the enterprise's production resources usage

Type of resources	Indicators	
	Quantitative (extensive)	Qualitative (intensive)
Staff (personnel)	Average number of staff on the list	Labor productivity Labor intensity of production
	Labor costs, contributions to social activities	Salary return
Fixed assets (means of labour)	Average annual cost of fixed assets; Amount of accrued depreciation	Return on fixed assets (return on funds) Depreciation return
	Production area	Product output per 1 m ² of production area
	The cost of intangible assets	Return on intangible assets
Material resources	The cost of inventory	Inventory turnover
	Costs of raw materials and supplies	Material effectiveness
Financial	Own capital	Turnover of own capital
	Debt for loans	Turnover of loan debt
	Payables	Accounts payable turnover

Analytical procedures in the process of assessing the expansion and intensification of resource potential use are proposed to be carried out in the following sequence (Fig. 3.7).

At the first stage, the return on each type of resource for the reporting and base periods is calculated using the formula:

Such indicators usually include: material return, return on fixed capital (return on capital), labor productivity (or inverse efficiency indicators – material intensity, depreciation intensity, labor intensity, and others).

The next step is to calculate the growth rate (t_{growth}) and increase (t_{increase}) of each type of resource (extensive indicators).

At the third stage, a comprehensive assessment of the dynamics of

qualitative (intensive) indicators of resource efficiency is carried out using the arithmetic mean formula.

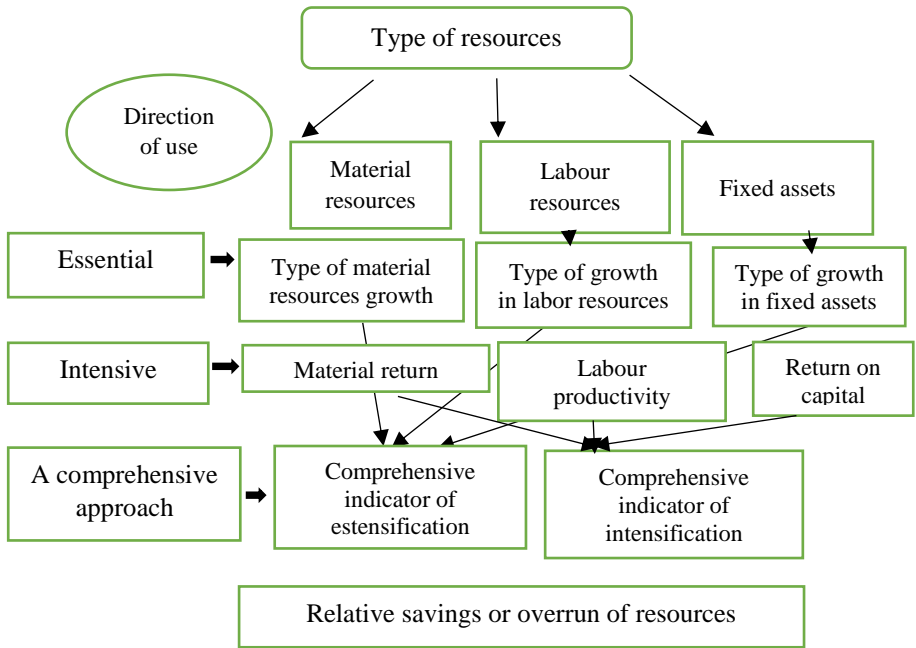


Fig. 3.7. A comprehensive approach to the analysis of the usage effectiveness of the enterprise's resource potential

The fourth stage of the analysis involves calculating the indicators of extensification (K_{ext}) and intensification (K_{int}) of increasing income from the sale of products for each type of resources according.

At the fifth stage, comprehensive indicators of the impact of intensification (K_{int}) and extensification (K_{ext}) of the aggregate use of resources with an increase in income from the sale of products are calculated according.

Where n is the number of indicators of intensive and extensive use of resources included in the calculation of the comprehensive assessment.

At the final stage, the relative savings (ΔE_{res}) or overspending of resources ($\Delta_{ovspend}$) are calculated according to the formula:

$$\Delta E_{res} \text{ or } \Delta \text{ovspend} = P_{i1} - P_{i0} \times t_d, \quad (3.3)$$

where: P_i^1 , P_i^0 is the average value of the volume of the i -th resource in the reporting and base period; t_d – rate of growth of income from product sales for the period.

If in the reporting period there was an increase in the return on a certain type of resource, it means that the enterprise is increasing sales revenue at a faster rate than the growth rate of the resource itself (Parasii-Vergunenko, 2017). And vice versa, if the growth rate of the resource is ahead the growth rate of income from sales, there is an additional diversion of funds invested in this resource, which does not bring the desired return.

The methodology of comprehensive analysis of resource usage effectiveness is presented in Table 3.8.

Table 3.8

Comprehensive analysis of the usage effectiveness of the enterprise's resource potential

Indicators	Last year	Reporting year	Growth rate	Rate of increase	Indicators		Relative savings (overspending) of the resource
					Extent use of resources (K_{est})	Intensification of resources (K_{int})	
Extensification indicators							
1. Average number of staff, persons	200	175	0,875	-0,125	-0,931	x	-51,8
2. Staff salary costs, thousand UAH	14400	14700	1,021	+0,021	0,155	x	-4898,4
3. Average annual value of fixed assets, thousand UAH	27800	28300	1,018	+0,018	0,134	x	-59825,2
4. Accrued depreciation, thousand UAH	2502	2830	1,131	+0,131	0,976	x	-1629,6
5. Expenses for materials, thousand UAH	28300	32800	1,159	+0,159	1,184	x	+707,8

continuation table 3.8

1	2	3	4	5	6	7	8
6. Average annual cost of inventories, thousand UAH	9000	12250	1,361	+0,361	2,690	x	+2044
7. Revenue from sales of products, thousand UAH	54000	61250	1,134	+0,134	X	x	X
8. Comprehensive indicator of extensive use of resources	X	X	1,094	0,094	0,701	x	X
Intensification indicators							
9. Labor productivity (annual), thousand UAH	270,0	350,0	1,296	+0,296	x	1,931	X
10. Coefficient of salary return	3,75	4,17	1,112	+0,112	x	0,845	X
11. Return on fixed assets (return on capital)	1,94	2,16	1,113	+0,113	x	0,866	x
12. Depreciation return	21,58	21,64	1,003	+0,003	x	0,024	x
13. Material effectiveness	1,91	1,87	0,979	-0,021	x	-0,184	x
14. Turnover of material reserves	6	5	0,833	-0,167	x	-1,690	x
15. Comprehensive indicator of intensive use of resources			1,056	+0,056	x	0,299	x

The comprehensive assessment showed that the use of resource potential at the enterprise is carried out both in an extensive (costly) and intensive way.

The average growth rate of extensive indicators (the volume of all resources involved in the production process) increased by 9.4%, and intensive indicators characterizing the return of resources increased by 5.6%, which is positive. However, the dynamics of the return on resources was somewhat behind the dynamics of their growth. This is confirmed by comprehensive indicators of expansion and

intensification of the use of aggregate resources. Thus, the growth of the company's income was provided by 70% of the extensive component and only 30% of the intensification of resource use (increase in their return). The company's income was negatively affected by a decrease in material income and a slowdown in the turnover of material stocks, which indicates the need to adjust the policy of managing warehouse material stocks.

According to the analysis, almost all types of resources, except for material ones, experienced a relative saving. Thus, the relative savings on salaries caused by the increase in labor productivity amounted to UAH 4898.4 thousand. Efficient use of human resources brought the company a relative saving of the average number of staff in the amount of 25 people. There is a significant saving of funds invested in fixed assets, which amounted to UAH 59825.2 thousand. Accordingly, the increase in depreciation return contributed to the release of UAH 1629.6 thousand. However, there was a decrease for such type of resources as material resources in the effectiveness of their use (decreased material efficiency), which led to relative overspending of resources in the amount of UAH 707.8 thousand. Some attention should also be paid to the excess of inventories in the warehouse and the decrease in their turnover, which caused additional relative overspending in the amount of UAH 2044 thousand.

References to section 3.2

Gavva V. (2011). Enterprise potential: formation and evaluation: textbook / Gavva V. Kyiv: Center of educational literature. 224 p. [in Ukrainian].

Krasnokutska N. (2008). Enterprise Potential: Formation and Evaluation: textbook. Kyiv: CNL. 352 p. [in Ukrainian].

Ivanov G., Levina A., Mykhalskaya K. and others (2003). Production potential: renovation and use. Kyiv: Naukova Dumka. 2003. 254 p.

Zin E. Planning of the enterprise activity: textbook (2012). Zin E., Turchenyuk M. Kyiv: TSUL. 400 p.

Gorodnya T. (2011). Economics and financial diagnostics: textbook. Lviv: "Magnolia 2000". 282 p.

Honcharuk I., Plakhtiy T. & Starosud V. (2017). The system of accounting and taxation at the experimental breeding station of the

IBK and Central Bank of NAAS of Ukraine: state and directions of improvement. [The system of accounting and taxation at the experimental breeding station of IBK and CB of NAAS of Ukraine: the state and directions of improvement] *Economics, Finance, Management: actual problems of science and practice*. № 11. pp. 17-30. [edited by O. Kuzmenko].

Kaletnik G., Tsykhanovska, V., Varchenko O. and Danilenko A. (2013) *Financial Management*. Vinnytsia: Hi-Tech Press [and others].

Kaletnik, G.M., & Shynkovych, A.V. (2020). Otsinka orhanizatsiynoinformatsiynoho zabezpechennya antykrizovoho upravlinnya ahroformuvan [Assessment of organizational and information support of anti-crisis management of agricultural formations]. *Ekonomika, finansy, menedzhment: aktualni pytannya nauky i praktyky. Economy, finances, management: topical issues of science and practical activity*, № 1 (51). pp. 7-23. [in Ukrainian]

Marmul, L. O. & Petrenko, V. S. (2017). Stratehichne pozytsionuvannya pidpryyemstv z inozemnymy investytsiyamy v ahraryni sferi ekonomiky [Strategic positioning of enterprises with foreign investments in the agrarian sector of the economy]. *Visnyk Berdyanskoho universytetu menedzhmentu i biznesu*. № 4 (40), pp. 43–48 [in Ukrainian].

Mulyk T., Tomchuk O., Fedoryshyna L. (2019) Management analysis: essence and significance in decision-making. *Economics, finance, management: topical issues of science and practice*. № 4. pp. 144-154 [in Ukrainian].

Mulyk T., Tomchuk O., Fedoryshyna L. (2020) Analysis of financial stability of the enterprise. *The scientific heritage*. № 43. pp. 46-55 [in Ukrainian].

Parasiy-Vergunenko I. (2017). Operational analysis of the usage effectiveness of resource potential: an integrated approach. *Scientific notes of the National University of Ostroh Academy. Series "Economics": scientific journal*. № 4(32). pp. 207-212.

Fedoryshyna L., Tsurkan A. (2018). Organization and methodology of economic analysis of the agricultural enterprises efficiency. *Business navigator - Business navigator*, № 2 (2), pp. 137-139.

Fedoryshyna L. (2016) Origins of economic analysis development. *Black Sea Economic Studies. Scientific journal*. Issue № 11. pp. 234-

239.

Fedoryshyna L. (2021). Methodical aspects of analysis of enterprise financial security management. *Economics, finance, management: topical issues of science and practice*. № 4(59). pp.178-193.

Dmytriiev I., Britchenko I., Levchenko Ya., Shershenyuk O., Bezpartochnyi M. (2020). *Economic Theory*. Sofia: Professor Marin Drinov Publishing House of BAS. 218 p.

Britchenko I., Bezpartochnyi M. (2020). Optimization of commodity stocks the enterprise by means of HML-FMR clustering. *Financial and credit activities: problems of theory and practice*. Iss. № 3 (34). pp. 259-269.

Lošonczi P., Vacková M., Nečas P. (2019). Сигурността на WI-FI мрежите в университетска сред. The Security of the WI-FI Networks in University Environment In *Dilemas contemporáneos - educación, política y valorep*. Toluka : Asesoria and tutorias investigacion cientifica educacion. ISSN 2007-7890. Vol. 7, №1 (2019), pp. 1-12.

Blišťanová M., Blišťan P., Lošonczi P. Possibilities of Application of Geographic Information Systems to Security Education. In: *Procedia - Social and Behavioral Sciencep.* ; Oxford: Elsevier, 2015. ISSN 1877-0428. pp. 744-748.

Lošonczi P. Възможности за приложение на географските информационни системи в образованието по сигурността. Public wi-fi networks in the global environment and their security. In *Globalization and its socio-economic consequences (Part V. : Digital Single Market)*. Žilina: University of Žilina, 2018. ISBN 978-80-8154-249-7. ISSN 2454-0943. pp. 2206-2213

Gutsalenko L.V., Derii V. A. and Kotsupatrii M. M. (2009) *State financial control: education. Manual*. K.: TsUL. 424 p.

Tomashuk, I.V. (2019). Assessment of the influence of organizational and economic factors on increasing the efficiency of the use of the resource potential of the Vinnytsia region. *Scientific Notes of Taurida V.I. Vernadsky University. Series: Economics and management*. Vol. 30(69). №. 2. P. 192-200.

3.3. Directions of strengthening and increasing the efficiency of using the resource potential of enterprises ¹⁰

Trends in the development of management science require increasing the level of efficiency of the enterprise, strengthening its competitiveness. At the same time, the priority for the enterprise is the problem of effective resource management in conditions of their limitations. increasing the usefulness of the resources used, their return – this is one of the main conditions that ensures the development of the enterprise, contributes to increasing competitiveness.

All this allows us to talk about the need for a comprehensive study of approaches and indicators for assessing the effectiveness of managing the resource potential of an enterprise.

Such an assessment of the resource potential is necessary because, acting as a prerequisite for responsible decisions, it allows you to influence the current state and trends in the development of the enterprise, establish directions for change, identify more significant factors for such growth, make forecasts and plans for further improvement of the processes of reproduction and use of enterprise resources (Arefieva, 2008).

The basis of the socio-economic development of any enterprise is its resource potential, the quantitative and qualitative characteristics of which reflect an ordered set of resources, including financial, production, labor and information resources. The natural result of using the resource potential of the enterprise is primarily the production of high quality products, which makes it possible to obtain high returns.

The resource potential of the enterprise should be considered, on the one hand, as a specific economic category, which is a consequence of the interaction of all resources of the enterprise, not only available, but also hidden, and on the other hand, as the economic basis of the enterprise, characterized by a system of indicators that reflect not only the available resources, but also their reserves, which can be used under certain conditions.

O. Kuzmenko in his writings also singles out the following components of the resource potential of the enterprise: production,

¹⁰ Mashevska A.A.

labor, financial and information potentials. According to the scientist, they allow us to provide the necessary resource potential for the implementation of the strategy, based on a comprehensive analysis of the market situation, which becomes the basis for determining a strategic set of decisions for further development. (Kuzmenko, 2014).

In modern conditions of development of the Ukrainian economy, the issues of ensuring competitiveness and sustainable development of the enterprise deserve increased attention. The implementation and implementation of such tasks in production practice is possible only due to the effective use of the resource potential of the enterprise – the base through which enterprises operate.

Given this, in conditions of limited resources, the primary task for the enterprise is to develop ways to effectively use the internal resource base. The need for a comprehensive study of approaches and indicators for assessing the effectiveness of the use of the resource potential of an enterprise contributes to positive trends in its development.

Resources are the factors of production by which the company operates. However, resources themselves do not produce products, and their simple accumulation does not ensure success. Requires the development of enterprise abilities in the form of the potential of resources for the implementation of a certain type of activity (Neurotsky, 2017).

The word «resource» comes from the French “resource”, which means “auxiliary tool”. From an economic point of view, the resources of the enterprise are the source and means of ensuring the production process (Mocherny, 2002).

However, this does not mean that the available resources of the enterprise will unambiguously guarantee expanded reproduction. This suggests that resources have the ability to ensure the development of entrepreneurship, although it is achieved under the condition of skillful effective management activities.

Resource potential plays an important role for the effective operation of the enterprise, since it is a means to maximize profits and increase competitiveness. In the etymological sense, the term “potential” is the means, stocks, sources that are available and can be mobilized, brought to movement, used to achieve certain goals, implement a plan, solve a problem, the capabilities of an individual,

society, state in a certain area (Vvedensky, 1975).

Potential in the general sense is the possibility of realizing something, so it can be accumulated, measured its value as a degree of accumulation, realized. In turn, an opportunity is a means, a condition, a circumstance that is necessary for the implementation of something. An important sign of potential is its ability to reproduce. Formation of the potential of the enterprise is the process of implementing measures to ensure the market opportunities of the enterprise by changing its characteristics and properties to the required level, in accordance with the goals set (Gavva 2004).

In his research, Stets I. I. notes that to have sufficient resources for the enterprise means to have the necessary opportunities and certain conditions for its development and normal functioning in accordance with the goals set (Stets 2010).

Among the existing approaches to assessing the effectiveness of resource potential management, the most common is the method of diagnosing resource potential, which should be carried out in the form of a comprehensive, phased and element-by-element study. (Arefieva, 2005).

Thus, with a comprehensive form of resource potential assessment, all the resources of the enterprise are investigated, integrated into a single indicator. The main methods of integrating indicators are expert and rating.

Using a phased assessment, attention is most often focused on the main criteria that determine the ability of an enterprise to solve its main tasks. In this case, the problem boils down to detailing the main criteria that ensure a comprehensive assessment.

The condition for the development of the resource potential of the enterprise is not only an absolute increase in its level, but also ensuring its effective use, taking into account the quality characteristics of the resource potential.

Quantitative characteristics are designed to estimate the volume and speed of reproduction of individual resources and the resource potential as a whole, and qualitative characteristic, in turn, are the basis for determining the efficiency of resource use.

The use of quantitative and qualitative characteristics of the resource potential of the enterprise allows:

- ✓ to analyze the initial level of development of the resource potential;

- ✓ identify the existing disproportions between the resources of the enterprise;
- ✓ identify priority areas for the development of resources;
- ✓ determine, based on the achieved level and directions of development of the enterprise, the permissible production, social and economic loads (Krasnokutskaya, 2005).

A characteristic feature of effective resource potential management is, first of all, the assessment of the effectiveness of the use of enterprise resources, where the useful result of the enterprise is compared with the cost of obtaining this useful result. The useful result is considered as an effect that can be economic, in the form of profit of the enterprise, and social, in the form of ensuring the formation of a better standard of living for a person (Myagkykh, 2009).

In addition, the assessment of the effectiveness of resource potential management is necessary to ensure a more complete and rational use of enterprise resources. It is important to characterize not only the available, but also the actual amount of resources used.

Therefore, the system of indicators for assessing resource potential management should include indicators characterizing the availability, composition, state of resources and indicators of resource efficiency.

When assessing the resource potential and efficiency of its use, it is necessary to clearly understand the structure of the potential, the main characteristics of the constituent elements, their ratio and use in the production process. It is important to understand the place and role of material elements of resource potential, their connection with other components.

Fig. 3.8 defines a system of key indicators characterizing the effectiveness of managing the resource potential of an enterprise and is summarized as follows:

Separately, it should be noted what are the material resources, financial resources, labor and information resources.

- material resources, the assessment of which includes an analysis of the potential capabilities of objects and means of labor, technical and technological resources of the enterprise;
- financial resources, the assessment of which consists in the analysis of financial indicators, indicators of profitability, liquidity and solvency;
- labor resources, the assessment of which includes an analysis of

staff turnover indicators, the level of labor productivity of labor resources;

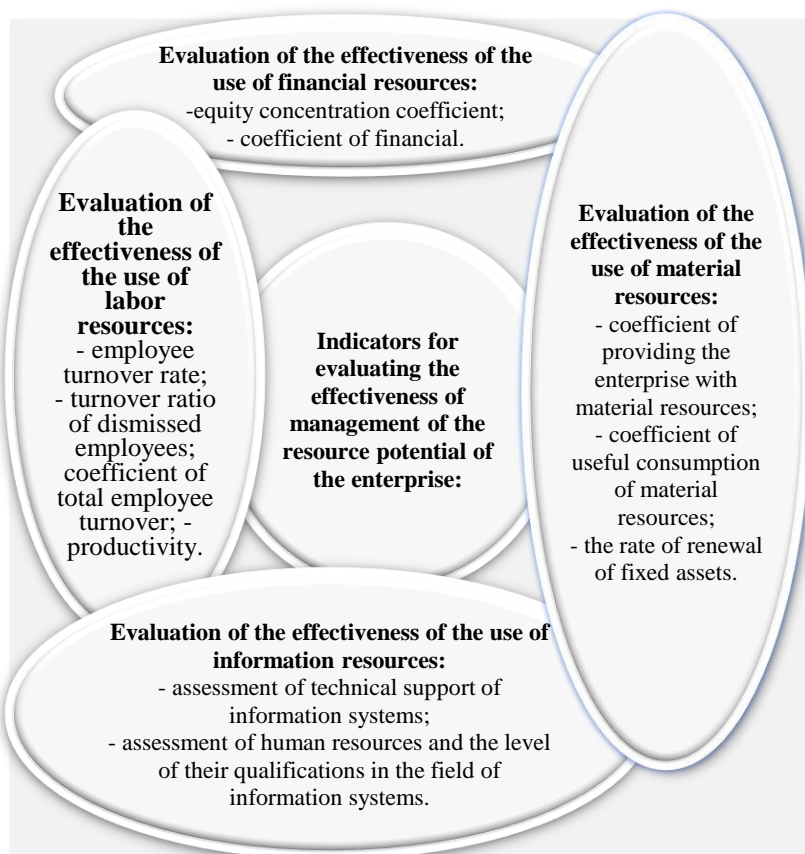


Fig. 3.8. The system for evaluating the effectiveness of resource potential management of the enterprise

Source: (Shamanskaya, 2013)

– information resources, the assessment of which includes the analysis of technical support by information systems and analysis of staffing and their level of qualification in the field of information systems.

The main problem in the study of the resource potential of an enterprise is that all its elements function simultaneously and in aggregate.

In other words, the resource potential is a dynamic, complex system, the elements of which, interacting with each other, thereby change the components of the resource potential, modify its properties and contribute to the transition of the potential as a whole to a higher level.

According to the methodology and tools of the system approach, using the features and patterns of functioning of individual elements, it is impossible to derive rules, directions, and, accordingly, the laws of the functioning of the entire system. In some situations, the influence of the external environment prevails over the internal (Chernyshova, 2019).

For an enterprise, it means that the potential capabilities of a particular structural unit can only be realized when potential opportunities are adequately used, supported by the relevant resources of other departments of the enterprise. The presence in the technological, technical, raw materials, labor, etc. production chain of a separate unit that has fewer opportunities than others reduces their potential.

The resource potential is a system of interdependent elements, in connection with which it can be argued that it has all the properties of the system, which can be formulated in the form of principles (Table 3.9).

Table 3.9

Principles of effective use of resource potential of enterprises

Principle	The essence of the principle
Consistency	The use of all resources of enterprises is balanced, to prevent significant deviations in the technological chain, in terms of capacity, taking into account the influence of factors of the external and internal environment
Structurality	The structural characteristics include the integrity of the resource potential, in accordance with which all elements perform a common target function facing the system. The interrelation and interaction of elements of resource potential, as a necessary condition for ensuring its systemic integrity, ensure consistency in functioning and allows you to achieve new qualities that are not characteristic of the elements before the start of their interaction
Target orientation	The actions of all structural units must be coordinated, obey the established strategy and tactics
Economic self-sufficiency	To ensure the competitiveness of products and services, enterprises must jointly form an action plan for the near future and for the future of all departments

continuation of the table 3.9

1	2
Consistency	Among the structural divisions of the enterprise should be consistency in technology, marketing research, movement of financial resources. In the external environment, it is advisable for enterprises to coordinate joint actions regarding taxation, customs quotas, railway tariffs, profitability, etc.
Adequacy	The actions of structural units should adequately respond to the influence of factors of the external and internal environment and form the optimal directions of action
Social Justice	In the current conditions of effective use of resource potential, the use of labor potential is of great importance, therefore, owners and managers of enterprises need to humanely approach the functioning of this type of resource. These can be coordinated actions of the administration and the work collective regarding the mode of work and rest, the level of remuneration, social guarantees and other motivational factors

Source: (Rybicka, 2020).

The main directions of increasing the efficiency of using the resource potential of the enterprise are shown in Fig. 3.9.

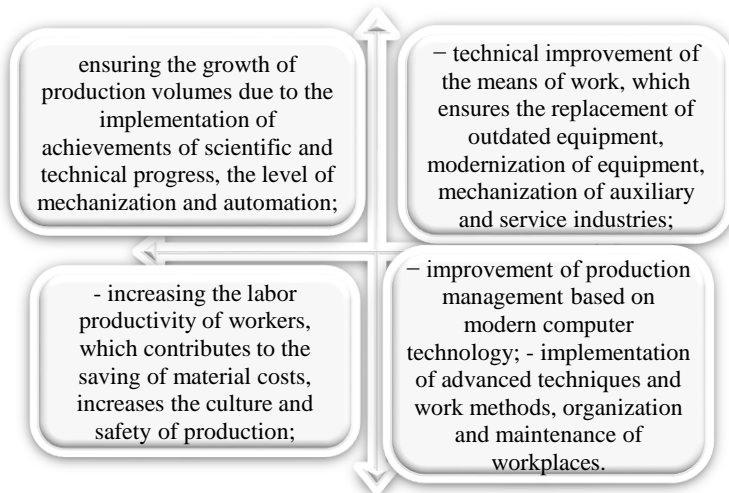


Fig. 3.9. The main directions of increasing the efficiency of using the resource potential of the enterprise

Source: (Latysheva 2018).

As you know, the potential of any level arises as a result of the interaction of resources and competencies that provide it, and therefore the increase in resource potential is to improve the state of use of these resources.

In the process of functioning of the enterprise, structural units experience permanent influences of factors of the external and internal environment.

Fig. 3.10 shows the qualities that are inherent in the increased professional qualification level of employees and recruitment.



Fig. 3.10. Qualities that are inherent in the increased professional qualification level of employees and recruitment

Source: grouped by the author based on literary sources

The main types of resources used by the enterprise to form ways to increase the efficiency of its use are proposed to allocate the following (Table 3.10).

Table 3.10

Types of enterprise resources for the formation of ways to improve efficiency

No.	Types of resources	Characteristic
1	Technical	These are, first of all, fixed assets: equipment, equipment, buildings, structures, production areas, inventory. For the potential of the enterprise, in addition to the amount of technical resources, their condition, structure, features of use and maintenance are important.
2	Technological	These are the technologies used and features of the organization of the production process, the dynamism of technological changes, innovations, the presence of competitive ideas and scientific developments.
3	Material	These are raw materials, materials, features of their use, processing, enrichment, disposal. These are objects of labor that, as a result of their use with the use of other types of resources in the process of labor, are transformed into finished products that can meet the needs of consumers.
4	Labor	People capable of labor constitute the main element of the productive forces of society, since it is they who combine the means and objects of labor, and as a result of labor efforts, finished products are created. Of great importance are mental activity, knowledge, skills, qualifications, demographic and age composition of employees, their attitude to work, labor discipline, ability to realize the goals and objectives of the enterprise.
5	Financial	The acquisition of technical and material resources and labor cannot be carried out without an important element of financial resources – cash. The funds that are at the disposal of the enterprise are intended for making current payments, for the costs of expanded reproduction of production, for payments on all obligations, for stimulating employees.
6	Intangible	They provide economic benefits for a long period, but do not have a material basis for generating income. Intangible resources include: industrial property; objects protected by copyright and related rights; non-traditional objects of intellectual property.

continuation of the table 3.10

7	Spatial	This is the nature of the production premises and the territory of the enterprise, the presence and condition of communications, the possibility of their expansion, the location and location of the enterprise, the distance from suppliers and consumers, proximity to transport routes.
8	Information	It is impossible to manage the enterprise without having information about the internal and external situation. Equally important are the nature of the information, access to it, the possibility of expanding information and increasing its likelihood, and so on.
9	Time	It is a specific and, unlike others, not a renewable resource. And the use of this resource depends on the effectiveness of the use of potential.
10	Resources of the organizational structure of management	The nature and flexibility of the governing system, methods of subordination, the scope of powers and responsibilities, the speed of passage of leadership influences. Important for the effective operation of the enterprise are its reputation, experience of business relations, prestige of trademarks, marketing positions in the market, became a clientele, relations with suppliers and partners.

Source: (Shargorodskaya, 2015)

Recently, the composition of resources also include the ability to entrepreneurial activity, the enterprisingness of business entities. Although this factor is not predetermined and quantified, it is he who plays a decisive role in the success of the enterprise and determines the effectiveness of the use of its material and financial resources. (Andrushkiv, 2012).

The resource potential of the enterprise is characterized by a set of qualities of the system of interrelated resources and their mobilization in conditions of development, the achievement of competitive advantages, taking into account the influence of the external environment (Stets, 2010).

He participates in the creation of products, which is the main result of the production activities of the enterprise, and its implementation provides profit as the ultimate goal of the enterprise. Pursuing the goal of finding ways to increase the efficiency of the use of resource potential, the enterprise must achieve the optimal structure of all means of labor, achieving proportionality between labor and the corresponding types of machinery and equipment.

This is undoubtedly due to the increase in the share of progressive new equipment, the improvement of the organization of the functioning of the production infrastructure, which will ensure the improvement of maintenance of the main divisions of the enterprise, the redistribution of workers within its borders, the release of workers in auxiliary 48 industries and their involvement after appropriate preparation for work in the main workshops (Dunda, 2013).

So, the potential of the enterprise is a prerequisite for accelerating scientific and technological progress, as well as the socio-economic development of the country.

Structurally, the potential of the enterprise can be divided into objective and subjective components. Improving the use of all components of the potential contributes to the growth of investment resources and production, and its quality characteristics determine the degree of satisfaction of the material and spiritual needs of society, as well as the quality of economic and social growth (Shargorodskaya, 2015).

As noted earlier, for each enterprise the structure of the resource potential is individual. It is determined by the specifics of the industry, the level of economic development of the enterprise, as well as the strategy of its development.

For example, the specifics of agriculture, for the most part, is associated with biological and natural processes.

The industry is directly dependent on climatic factors, the involvement in the production of man, land, plants, animals, diverse in composition and purpose of fixed and working capital and is a very complex form of economic activity.

A distinctive feature of agricultural production, as the most important sector of the national economy, designed to meet the needs of the population of the country in food, and industry – in raw materials, is that the main means of production here is land and functions simultaneously as a subject and as a means of labor, and the results of production in agriculture largely depend on how rationally land resources are used.

Land resources should be used comprehensively and be interconnected with the rational use of other elements of resource potential – material, technical, labor. The level of land use and

agricultural production depends on how rationally they are used, in what optimal combination they are (Puchkova, 2021).

The peculiarity of the use of labor in agricultural production lies in its seasonality, which is the result of a discrepancy between the production period and the working period.

This applies primarily to the field of crop production. Seasonality here is expressed in an increase in the need for labor in spring, summer, autumn and in reducing it in the winter.

The components and structure of the resource potential of an agricultural enterprise are not constant, since the modernization of technologies, the introduction of innovations, the transformation of economic relations act as a vector of directions, forms and scales of use of the resource potential of the agricultural sector.

To ensure the effective use of resources of an agricultural enterprise and determine promising directions for its development, it is necessary to analyze the economic and legal factors that determine the possibilities of rational use of enterprise resources (Puchkova, 2021).

One of the problems of agricultural production is the lack of resource potential to ensure innovative development. Many agricultural enterprises use outdated technologies and plant varieties, inefficient methods and methods of production.

This leads to an increase in cost, a low level of competitiveness of products, a decrease in the pace of development of enterprises. One of the methods for solving these problems is the application and development of the practice of agricultural notes.

In many cases, it is difficult for small Ukrainian agricultural producers to access traditional lending instruments due to the lack of assets for acceptable collateral.

Crop receipts solve the problem and allow producers to use the future harvest as collateral in order to attract financing in a timely manner and invest in production (Puchkova, 2021).

The study of modern publications on the assessment, formation and use of resource potential makes it possible to conclude what is the resource potential of the enterprise (Fig. 3.11).

Resource potential is a complex system of production resources that are interrelated and interdependent. Therefore, it has inherent features inherent in any system.

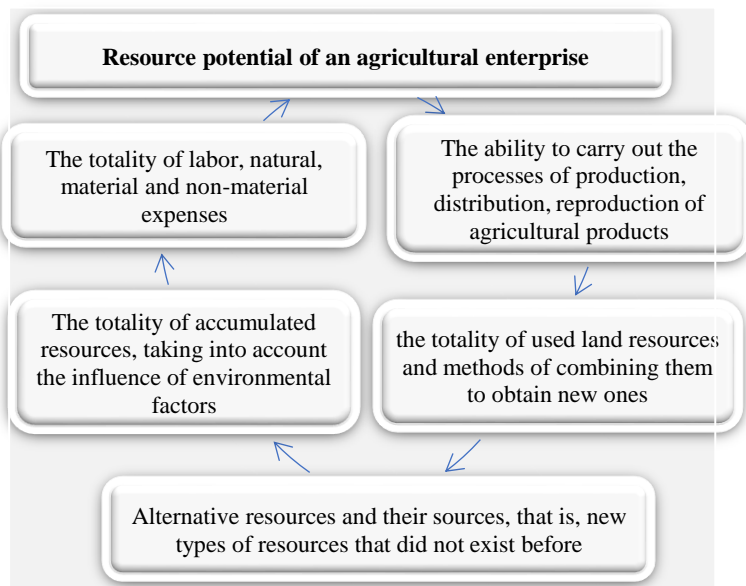


Fig. 3.11. Scheme of functional dependence of the resource potential of an agricultural enterprise

Source: (summarized by the author)

The first of these is integrity, which means that all elements of potential serve the overall purpose that the system faces.

The second distinguishing feature of resource potential is complexity. It manifests itself in the presence of several constituent elements, each of which is a set of individual parts that include smaller parts of the potential.

The use in the process of planning and reproduction of such system features of the resource potential as the interchangeability of its individual elements and a balanced optimal ratio between them opens up the possibility of creating an economic system characterized by maximum productivity (Davydkina, 2009).

Therefore, the resource potential is considered as a multi-level structure, characterized by a set of resources of various kinds available for use of a certain type, each element of which is a complex whole, a system of interdependent and interacting parts with each other, having relative independence and multifunctionality.

One of the constituent elements of the resource potential system is land. It actively influences the production process, is its most important constituent element, the basis for the organic combination of other production resources.

The level of resource potential depends not only on the size and structure of agricultural land, but also to a large extent on the economic fertility of the land involved in the production process.

At the same time, it requires a special approach to the organization of its use, since, having limited dimensions, it is the subject of competition for various sectors of the economic complex.

The main factor in the development of productive forces are investments, which are a source of reproduction of fixed assets.

Despite the presence of generally accepted advantages, agriculture in Ukraine turned out to be one of the least investment-attractive sectors of the economy.

One of the reserves for increasing labor productivity is the improvement of the economic mechanism and the system of material incentives, which would combine in-kind and monetary payment, put in direct dependence on the final results of management.

As a result, high labor and technological discipline would be achieved, which is the basis for increasing labor productivity.

Thus, insufficient attention from state bodies to the development of rural areas is a significant reason for the aging of the village's labor resources and insufficient use of the entire resource potential of agriculture. It is well known that resource efficiency depends on a number of factors, the main of which are (Vishnevska, 2007).

- rational ratio of elements in the structure of resource potential;
- production management system;
- introduction of resource-saving technologies;
- taking into account the natural and climatic conditions.

Therefore, during the formation of the resource potential of agricultural enterprises, it is necessary to pay more attention not to its quantitative increase, but to its qualitative improvement and observance of rational proportions between individual components.

Features of the formation of resource potential in the conditions of the information society for the most part are reduced to determining the role of information in its formation and use.

The growing role of the information factor is becoming a general global trend, which, on the one hand, contributes to the improvement of the qualitative characteristics of the resource potential of the population, enhances the effect of organizational, technical, innovation and technological factors, on the other hand, leads to a deepening of the differentiation of social levels and qualifications of the population of different regions depending on their coverage by the processes of computerization and informatization (Lapin, 2002).

The main task of the development of the information society is to promote on the basis of the widespread use of modern information and communication technological capabilities for the creation of information and knowledge, the use and exchange of them, the production of goods and the provision of services, the realization of its full potential, improving the quality of its life and sustainable development of the country (Kostyna, 2009).

Resource potential and information society are extremely important economic categories.

Their close causal relationship is manifested in different directions of influence.

Thus, the influence of the formation of the information society on the formation of the resource potential of agricultural enterprises is also quite multifaceted and ambiguous.

Conventionally, it can be distributed in the context of the main features of the information society (Table 3.11).

On the other hand, the influence of resource potential on the development of the information society is reflected by such trends as:

- change in the vectors of human development;
- further evolution of social, in particular socio-economic, relations;
- identification of new ways to solve global problems of mankind;
- distribution of nanotechnologies, in particular energy-saving;
- creation of new products through the differentiation of innovative approaches.

Therefore, in order to ensure the effective process of forming the resource potential during its organization, it is necessary to take into account a set of factors affecting it and at the same time determine its effectiveness.

Table 3.11

The main directions of influence of the information society on the formation of the resource potential of agricultural enterprises

Sign of the information society	Impact on the resource potential of agricultural enterprises
The growing role of information and knowledge	<ul style="list-style-type: none"> ✓ increasing the importance of the level of resource potential for the effective development of agricultural enterprises; ✓ increasing the requirements for the personal qualification characteristics of the economically active rural population
Dissemination of information technology	<ul style="list-style-type: none"> ✓ the spread of new forms of competition among the subjects of the agro-industrial complex; ✓ reducing the need for labor in quantitative terms through the automation of agricultural production; ✓ computerization of education, distance learning of the rural population
Formation of a global information space	Formation of information mobility of the population
Increase in the share of information products and services in gross domestic product	<ul style="list-style-type: none"> ✓ the predominance in the sectoral structure of intangible forms of agricultural production; ✓ the emergence of new types of economic activity of agricultural enterprises
Computerization, informatization through the use of telephone, Internet, television, etc.	<ul style="list-style-type: none"> ✓ creation of more favorable conditions for the realization of the economic potential of agricultural enterprises; creating more favorable conditions for socio-economic growth through freer access to information resources

Source: (Zgurska 2016).

The main such aspects are environmental, social, economic, industrial and financial, acting as integral elements of the system for increasing the efficiency of resource potential use (Zgurska 2016).

The stable development of any enterprise depends on the efficiency of the use of all its resources. The presence of certain amounts of resources is the most important condition for the effective conduct of economic activity and, in general, the implementation of the production process.

The resource potential serves as the material basis for the production capabilities of enterprises, which is why the study of directions for strengthening and increasing the efficiency of its use is quite relevant.

That is why the resource potential of enterprises reflects all available resources or those that need to be attracted in accordance with the set tactical or strategic goals, and all the opportunities that an enterprise can receive from the effective use of the resource base. Elements of resource potential form its structure, taking into account the specific features of the activity. The resource base is formed from labor, financial, tangible, intangible and informational.

Also, it must be recognized that the categories of resource potential and the information society today are the basic criteria for effective economic development and functioning of various enterprises.

In addition, there is an extremely close relationship between them, which is expressed in the mutual influences of the information society on the peculiarities of the formation (preservation, reproduction, accumulation or, conversely, loss) of the resource potential of enterprises, and the resource potential – on the specifics of the formation and development of the agro-industrial complex of the country.

Improving the economic situation and ensuring the maximum use of its resources are possible only if the potential is rationally used in the conditions of the formation of the information society based on their proportionality and balance.

So, firstly, to increase the efficiency of using the resource potential of the enterprise, first of all, it is necessary to ensure high efficiency of functioning due to the full and rational use of all its resources.

Secondly, the assessment of the management of the resource potential of the enterprise should be comprehensive, that is, it can be obtained as a systematization of the results of a comprehensive economic analysis. Such an assessment should contain generalized conclusions on the use of enterprise resources based on the principle of consistency. The evaluation process must also take place in a certain sequence and need a clear organization.

That is, the assessment is the result of determining and analyzing the qualitative and quantitative characteristics of the enterprise. And it is precisely, when evaluating the results; we will have the opportunity to establish how the resource potential functions, whether the goals are achieved, how changes and improvements in management affect the completeness of the use of enterprise resources and the effectiveness of its management.

Reference to section 3.3

Andrushkiv B., Melnyk L., Pohaydak O. (2012). Ways to increase the efficiency of using the resource potential of the enterprise. *Formation of a market economy in Ukraine*. Issue. 27. PP. 3-7.

Arefieva O.V., Kharchuk T.V. (2008). Economic principles of formation of the potential of the enterprise. *Actual problems of the economy*. №7 (85). pp. 71–76.

Chernyshova L.I., Beskubaska A.S., Prokofyeva V.K. (2019). Management of the process of formation of resource potential as a prerequisite for competitive strategic development of a manufacturing enterprise. *Eastern Europe: Economics, Business and Management*. № 23. pp. 432–438.

Dunda S.P. (2013). Increasing the potential of using the resource potential as a direction of enterprise development. *Collection of scientific works of Tavria State Agrotechnological University (economic sciences)*. № 2(2). pp. 83-89.

Gavva V.N. (2004). Assessment of the potential of the enterprise and the industry. *NAU "KHAI"*. Kharkov. 2004. 287 p.

Kostyna A.V. (2009). Tendency of development of culture of information society: analysis of modern information and post-industrial concepts. *Knowledge. Ponymanie. Umenie. Electronic magazine*. № 4. URL: <http://zpu-journal.ru/ezpu/2009/4/Kostina>.

Krasnokutskaya N.S. (2005). Enterprise potential: formation and evaluation. Training. manual. *Center for Educational Literature*. 352 p.

Kuzmenko O.V. (2014). Substantiation of methodological approaches to assessing the resource potential of the enterprise. *Economic Nobel Herald*. No 1 (7). pp. 280-286.

Lapin E.V. (2002). Economic potential predpriyatiya. [monography]. *Sumy. ITD "University Book"*. 310 p.

Latysheva O.V. (2018). Resource potential of the enterprise: the essence, components and features of management of elements of ensuring sustainable development. *Economic Bulletin of Donbass*. № 3 (53). pp. 126-130.

Mocherny S.V. (2002). Economic Encyclopedia. *In three volumes*. Vol. 3. Edcol. K. Publishing Center "Academy". 952 p.

Myagkykh I.M. (2009). Analysis and evaluation of the use of resource potential in the system of consumer cooperation. *Actual problems of the economy*. № 1(91). pp. 136–142.

Neurotsky N. O. (2017). Evaluation of the effectiveness of the use of the resource potential of the enterprise. *Internauca*. № 1 (23). Vol. 2. pp. 97–101.

Puchkova S.I., Kulaksiz A.M. (2021). Economic and legal factors for increasing the efficiency of using the resource potential of agricultural enterprises. *Bulletin of KhNAU them. V.V. Dokuchaeva. Series “Economic Sciences”*. No. 2, Vol. 3. 2021. P-50-63.

Rybicka L., G. (2020). Macedonian. Improving the efficiency of using the resource potential of the enterprise. *Innovative development and safety of enterprises in a neo-industrial society*. P. 704-706.

Shamanska O.I. (2013). Modern approaches to evaluating the effectiveness of management of the enterprise’s resource potential. *Efficient economy*. № 3. URL: <http://www.economy.nayka.com.ua/?op=1&z=1860>

Shargorodskaya Y. S., Bogatskaya N. M. (2015). Main directions of increasing the efficiency of the resource potential of the enterprise. *Science and innovation as key factors of competitive leadership in the global economy: a collection of abstracts of scientific works of the participants of the International Scientific and Practical Conference for Students, Postgraduates and Young Scientists* (Kyiv, October 16-17, 2015). K. Analytical Center “New Economy”. 136. pp. 46-48.

Mesároš M., Ďurica T., Lošonczi P., Blišťanová M. Възможности за защита на критична инфраструктура преди геопасности. Possibilities for Protection of Critical Infrastructure Prior to Geohazards. In: *Ecology, Economics, Education and Legislation*, Vol. 5. International Multidisciplinary Scientific GeoConference-SGEM, 2015. p. 663-668. ISSN: 1314-2704. ISBN: 978-619-7105-39-1

Lošonczi P., Mesároš M. Управлението на кризи като важна отправна точка за предотвратяване на пандемия. Crisis management as an important starting point of preventing pandemic. In: *Annals of Burns and Fire Disaster*. Palermo, Italy: Euro-

Mediterranean Council for Burns and Fire Disasterp. Vol. 35, №5.
link:

http://www.medbc.com/annals/review/vol_35/num_1/v35n1content.htm, ISSN: 1592-9566

Kováčová L., Drotárová J., Lošonczi P. Сравнение на подготовката на избрана целева група в областта на противопожарната защита в страните от V4. Comparison of preparation of selected target group in the field of fire protection in V4 countries. In: *Annals of Burns and Fire Disasterp.* Palermo : Euro-Mediterranean Council for Burns and Fire Disasterp. ISSN 1592-9558. ISSN (online) 1592-9566. Vol. 33, №2 (2020), p. 162-170

Kováčová L., Kavan Š., Mesároš M., Lošonczi P. Образование и обучение на служители по управление на кризи и гражданска защита в Словашката република. Education and training of crisis management and civil protection workers in the Slovak Republic. In: *SGEM 2018 conference proceedings (5.4. Ecology, economics, education and legislation : environmental legislation, multilateral relations and funding opportunities)*. Sofia: STEF92 Technology, 2018. ISSN 1314-2704, ISBN 978-619-7408-49-2. Vol. 18. p. 59-66.

Kováčová L., Lošonczi P., Reitšpís J. Сравнение на професионалната подготовка за управление на кризи в Словакия и Чехия. Comparison of Professional Preparation of Crisis Management in Slovak and Czech republic. In *19th International Multidisciplinary Scientific Geoconference SGEM 2019 Conference Proceedings*. Albena, Bulgaria: STEF92, 2019. ISBN 978-619-7408-87-4, Vol. 19, №19. p. 71-78.

Stets I.I. (2010). Potential and development of the enterprise. *Tutorial. Ternopil. Economic thought*. 674 p.

Vishnevskia O.M. (2007). Formation and assessment of resource potential of agricultural enterprises. *Bulletin of KhNAU*. № 3. pp. 27–32.

Vvedensky B.A. (1975). Big Soviet Encyclopedia. Vol. 34. M. Soviet Encyclopedia. 656 p.

Zgurska O.M. (2016). Features of the formation of the resource potential of agricultural enterprises in the conditions of the information society. *Economy and society. Issue*. No7. P.329-334.

CONCLUSIONS TO PART 3

The resource potential of agriculture is considered as a set of interconnected resources used in agricultural production: natural, labor, financial, material and technical, information and intangible assets. Material and technical potential is a combination of technical, spatial and material and raw materials. Information potential is formed from information and business resources. Other types of potentials are monolithic.

The classification of assessment methods is carried out accordingly with different features depending on the types of resources, processes and the results obtained. As a classification, gradation is usually used, which characterizes the relationships of a person with the key characteristics of processes and work. Methodological approaches used to assess the resource potential and the efficiency of its use are resource-based, cost-effective, complex and effective. Taken separately, one method of assessing the increase in the use of resource potential cannot fully provide and satisfy all the tasks originally assigned to the method. The methodical approach to the comprehensive assessment of the economic potential of the enterprise is based on available public reporting data, is universal, and allows obtaining quantitative assessments.

So, the proposed method makes it possible to comprehensively approach the problem of analyzing the efficiency of the use of the enterprise's resource potential and to identify problem areas for its improvement. The given system of extensive and intensive analytical indicators and the method of their generalization makes it possible to obtain the most complete description of the usage effectiveness of individual components of the enterprise's resource potential and helps to identify reserves for their more complete use, taking into account external factors, to develop an optimal strategy for strengthening its competitive advantages based on the internal capabilities of the enterprise.

Ensuring competitiveness involves increasing the efficiency of the use of resource potential, the availability of consolidated and analytical information that will characterize the practice of managing the enterprise's resource potential.

Taking into account resource opportunities, choosing the right direction of specialization of the enterprise allows you to maximize the use of resource potential for the implementation of socio-economic development goals. Thus, the resource potential accumulates a significant share of the potential of an industrial enterprise, its main importance is to create new value in the production process, which ensures economic growth.

4. ENERGY AUDIT IN ENSURING ENERGY INDEPENDENCE OF THE REGIONS OF UKRAINE

4.1. Necessity of implementing an energy audit in Ukraine and its regulatory support ¹¹

Conducting an energy audit involves the use of calculation methods that should take into account the requirements of new regulations in the field of energy saving, features of technological processes, new methodological developments, etc. Existing general-purpose methods are used to conduct energy audits of agricultural lighting systems, but they need to be improved due to some comments and the need to take into account the peculiarities of agricultural production.

It is known that irrational consumption of energy resources is primarily associated with the operation of outdated or faulty equipment at energy generating and production enterprises. A significant part of losses also occurs during energy transmission, both from producer to consumer, and during the passage of energy within the facility (Radomska, 2013). Energy end-consumers, which are not part of the production facilities that is administrative sector, utilities, organizations and individual customers, can also contribute to the dissipation of valuable energy resources in the environment due to the use of imperfect technical means, violation of technical regulations and rules of equipment operation, low level of awareness concerning principles of energy conservation and saving.

From this point of view, the dissemination of information about energy saving in everyday life is a key condition for the successful implementation of its programs in the state. At the same time, in recent years there has been an increase in the interest of individual consumers and organizations in reducing their utility costs, as well as increasing the efficiency of using the received energy volumes.

That's why there is a need to estimate energy consumption and losses, and based on this, to determine the energy-saving potential of any objects that are in operation and those that are only being prepared

¹¹ Zdyrko N.G.

for delivery or are temporarily withdrawn from economic circulation. The complex of procedures designed to perform these tasks is united under the name of energy audit.

Energy audit is an effective and universally recognized tool for energy consumption analysis. Based on its results, the basic criteria of energy consumption are determined, in relation to which further accounting of energy savings is carried out. Given the wide application of this tool, its quality is the key to the success of almost all energy efficiency improvement policies.

In order to implement national action plans on energy efficiency and energy policy, state authorities (the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, the President of Ukraine, the State Agency for Energy Efficiency and Energy Saving of Ukraine (hereinafter – State Energy Efficiency), as well as the National Commission for State Regulation in the Energy Sector and municipal services (hereinafter – the national commission)) exercise their powers (Fig. 4.1).

In addition to the listed state bodies that regulate the energy sector, there are Ministries.

The Ministry of Energy and Environmental Protection of Resources of Ukraine is the main body in the system of central executive bodies that ensures the formation and implementation of state policy in the field of environmental protection and ecological safety. In accordance with the assigned tasks, the Ministry of Energy, within the limits of its powers, has the opportunity to influence energy efficiency processing of legal regulation in the field of air protection and climate change, particularly, in terms of creating and organizing the functioning of the national greenhouse gas emissions trading system (Green Paper, 2019).

Since September 2019, the Ministry of Economy and Energy is also the main body in the system of central executive bodies, which ensures the formation and implementation of state policy in the fuel and energy complex. In accordance with the assigned tasks, the Ministry of Energy, within the limits of the powers, has the opportunity to influence energy efficiency for industry in the process of forming the regulatory framework in the relevant fuel and energy markets and ensuring the implementation of the Energy Strategy of Ukraine for the period until 2035 (Green Paper, 2019).

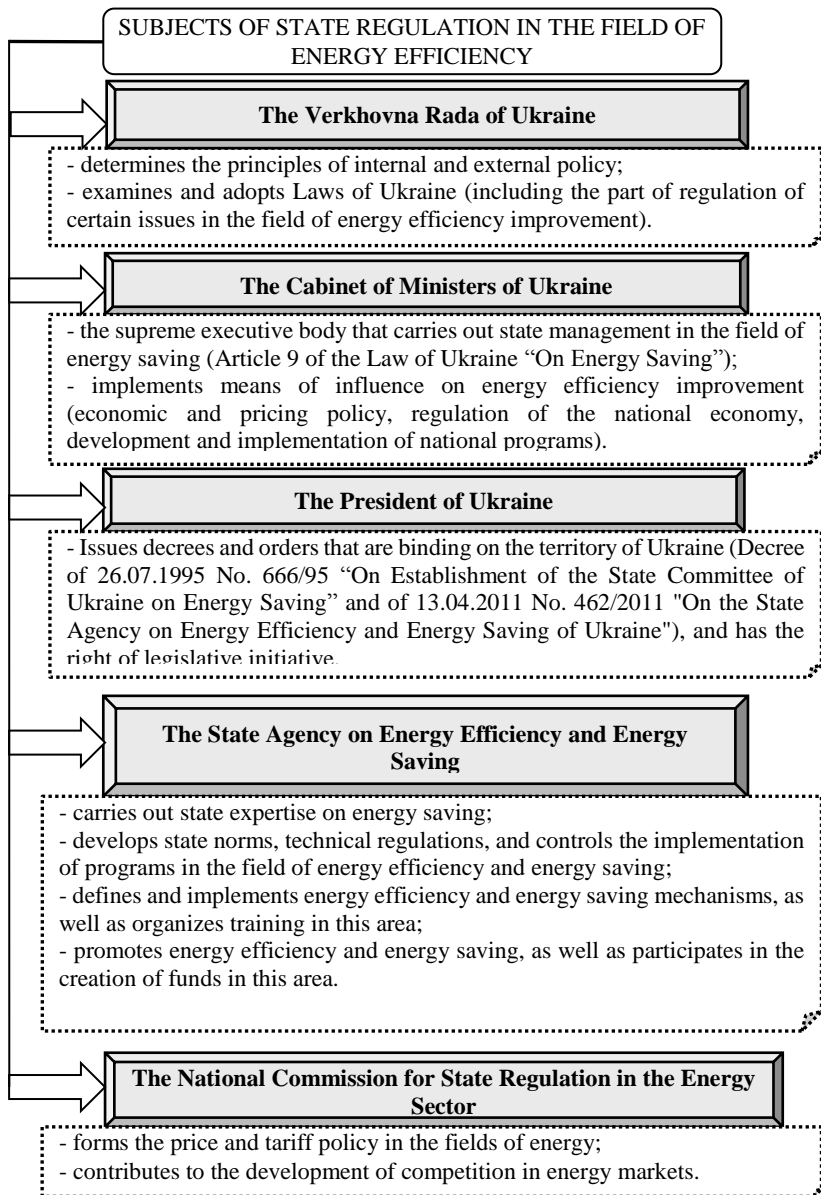


Fig. 4.1. Powers of state regulatory bodies in the field of energy efficiency

Source: generalized by the author

It should be noted that the European Directive on Energy Efficiency 2012/27/EU (Directive 2012/27/EU) provides requirements for the introduction of energy audits, however, today, most of them require more active implementation and enforcement (Table 4.1).

Table 4.1

Requirements of the European Energy Efficiency Directive 2012/27/EU on compliance with energy audit obligations

No.	Obligations for energy audit	Content of the requirements
1	2	3
1	Promote the availability of high-quality and cost-effective energy audits for all end users	Audits must meet the minimum criteria in accordance with Annex VI of the Directive and must be carried out by qualified and/or certified experts or supervised by independent bodies. Energy audits can be conducted by the organization's own experts or energy auditors, on condition that there is a scheme that ensures and checks their quality.
2	Establish transparent and non-discriminatory minimum criteria for energy audits	Establish minimum criteria for energy audits in terms of quality of data used, level of detail, proportionality and representativeness, inclusion of life cycle cost analysis and reliability of potential savings calculations.
3	Establish requirements for energy auditors and supervision carried out by national bodies in national legislation	Member States should encourage the creation of training programs to ensure the certification of energy auditors in order to facilitate the availability of a sufficient number of experts. This obligation is related to Article 16 of the Directive to the extent that it requires attestation, accreditation and certification schemes for energy audit service providers.
4	Ensure independent and cost-effective conduct of mandatory and regular audits of large enterprises	The first audit of such enterprises should be conducted within the period from the date of entry into force of the EED. Subsequent audits should be conducted at maximum 4-year intervals. Large enterprises that have implemented energy or environmental management systems are free from the requirement to conduct energy audits every 4 years, on condition that the management system provides an energy audit that meets the minimum criteria.

continuation of table 4.1

1	2	3
5	Ensure the development of programs to encourage small and medium-sized enterprises (SMEs) to undergo energy audits and implement the recommendations of these audits	This could include support schemes to cover the costs of energy audits and to implement the most cost-effective audit recommendation if the proposed measures are implemented. Specific examples of how energy management systems can help SMEs should be brought to the attention of small and medium-sized enterprises.
6	Ensure the development of programs to raise awareness of households about the benefits of energy audits	The state should conduct explanatory work on the feasibility and benefits of energy audits for households, as well as their promotion.

Source: Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 "On energy efficiency"

The problems of low energy saving and energy efficiency in Ukraine encourage the search for the best world practices in the energy sector. That is why, in order to provide recommendations for improving energy efficiency in Ukraine through the use of energy audit, we consider it necessary to review the best practices of its application in foreign countries.

Let's consider the main aspects of the EU Energy Efficiency Directive 2012/27/EU implementation in such countries as Bulgaria, Germany, Slovakia, Sweden and the Czech Republic (Table 4.2).

In the above examples of states, energy audits are mandatory and conducted on a regular basis for large enterprises. We believe that in order to classify enterprises as those that are subject to mandatory energy audits, it is necessary to be guided not by their classification according to size, but by the sources of funds (own, budget), since it is their use (according to legal requirements) that should be subject to transparent coverage.

Large enterprises that are the objects of an energy audit are responsible for not ensuring compliance. In case of violations and abuses, fines are paid in different amounts: in Bulgaria – from 10,000 to 30,000 leva; in Germany – up to 50,000 euros; in Slovakia – from 5.0 to 30.0 thousand euros; in Sweden – is not fixed, but is calculated on the basis of the company's total turnover, the degree of non-compliance and the economic condition of the company; in the Czech Republic – EUR 185,000 for failure to conduct an audit, EUR 7,400

for failure to provide information on a completed audit to the Ministry of Industry and Trade.

Table 4.2

Legislative regulation of the EU Directive implementation on energy audit in certain foreign countries

Bulgaria	Germany	Slovakia	Sweden	Czech Republic
Legislation				
<ul style="list-style-type: none"> - New law on energy efficiency; - Resolution on energy consumption, energy efficiency and energy audits of industrial systems; - Resolution on energy auditors 	<ul style="list-style-type: none"> - Law on energy services and energy efficiency measures; - Guidelines for the interpretation of the Federal Administration of Economy and Export Control; - National action plan. 	<ul style="list-style-type: none"> - New law on energy efficiency; - Resolution on energy audits; - Resolution on assessment, method of calculating the efficiency of energy sources and distribution; - Resolution on the monitoring system, method and rules of monitoring and data processing. 	<ul style="list-style-type: none"> - Law on energy audit at large enterprises; - Regulation on energy audit in large companies; - Instructions of the Swedish Energy Agency; - Swedish Energy Agency FAQ document. 	<ul style="list-style-type: none"> - Amendment 103/2015 to the Law on Energy Efficiency - Resolution on energy audit and assessment; - Resolution on energy specialists.
Supervision				
Agency for Sustainable Energy Development (ASED)	Federal Office for Energy Efficiency (FOEE)	Ministry of Economy / Slovak Innovative Energy Agency (SIEA), State Inspectorate	Swedish Energy Agency	Ministry of Industry and Trade, State Energy Inspection

Source: USAID project «Municipal energy reform in Ukraine»

Thus, we see that almost all countries have adopted the Law (Resolution) on energy audit and the range of legislative regulation of energy audit is quite wide. State supervision in the energy sector is also carried out by specially created Agencies, Inspections, Departments.

It is worth noting that in foreign countries, unlike Ukraine, there are special regulatory requirements for energy auditors – the Resolution on Energy Auditors (Bulgaria), the Resolution on Energy Specialists (Czech Republic). Implementation practices of the EU

Directive on energy audit in some foreign countries in terms of requirements for energy auditors are shown in the Table 4.3.

The data in the table indicate high qualification requirements for energy auditors. Thus, in Bulgaria, energy auditors must have the necessary technical equipment and personnel; there are special requirements for personnel regarding completed higher education and work experience in the relevant position; there is a mandatory requirement for a qualification certificate after the exam; must be included in the public register by the ASED Agency; annual reporting to the ASED.

Table 4.3

Implementation practices of the EU Directive on energy audit in some foreign countries in terms of requirements for energy auditors

Bulgaria	Germany	Slovakia	Sweden	Czech Republic
1	2	3	4	5
<i>Requirements for energy auditors</i>				
<ul style="list-style-type: none"> - Legal entities that have the necessary technical equipment and personnel; - Special requirements for personnel regarding completed higher education and work experience in the relevant position; - Certification scheme; - Qualification certificate after the exam; - Registration in the public register by the ASED Agency; - Annual reporting to ASED 	<ul style="list-style-type: none"> - Special requirements for experience gained as a result of professional training, or professional qualifications and practical experience; - There is no special certification scheme; - The BAFA office maintains a register of energy auditors. 	<ul style="list-style-type: none"> - Specific requirements regarding the minimum required level of education and work experience; - Certification scheme under the auspices of SIEA, including professional training and examination; - Certified auditors are registered by the Ministry of Economy and SIEA in the database of energy auditors; - Qualification improvement of auditors every 3 years. 	<ul style="list-style-type: none"> - Certification is provided based on the level of education and work experience; - Certification is granted after passing the test, which includes written and practical parts; - Certification of energy auditors is valid for a period of 5 years 	<ul style="list-style-type: none"> - There is a qualification scheme for an energy specialist - a license is granted to specialists after passing an exam (oral and written); - Special requirements regarding the minimum required level of education and relevant experience; - Database of energy specialists.

continuation of table 4.3

1	2	3	4	5
Opportunities for internal auditors				
If they have not participated in the design, construction and/or operation and implementation of energy saving measures in the industrial system.	Internal auditors are allowed if they were not directly involved in the activities that are subject to energy audit.	Internal auditors are allowed if they are listed in the register maintained by the Ministry of Economy.	Internal auditors are allowed if they were not directly involved in the activities to be audited.	Energy audits can be conducted by an internal auditor who has been professionally trained and passed an exam in an accredited institution.

Source: USAID project “Municipal energy reform in Ukraine”

In Germany, there are special requirements for energy auditors regarding experience gained as a result of professional training, or professional qualifications and practical experience; and there is also a leading Register of energy auditors, which is maintained by the BAFA Office.

In Slovakia, energy auditors must have the required level of education and work experience; there is a certification scheme under the auspices of SIEA, including professional training and examination; Certified auditors are registered by the Ministry of Economy and SIEA in the database of energy auditors; introduced mandatory training of auditors every 3 years.

Certification to energy auditors in Sweden is granted based on the level of education and work experience only after passing a test that includes written and practical parts and it is valid for up to 5 years.

In the Czech Republic, there is a qualification scheme for an energy specialist – a license is granted to specialists after passing an exam (oral and written), there are special requirements regarding the minimum necessary level of education and relevant experience, and a database of energy specialists also operates.

Therefore, analyzing foreign experience, we believe that in order to increase the level of energy efficiency of any subjects (including households) at the legislative level, it is necessary, first, to define general requirements for the qualification, education and work experience of energy auditors; secondly, to introduce a mandatory

public Register of energy auditors with information access to potential energy audit customers; third, the introduction of mandatory certification and professional development, at least every 3 years.

Thus, the experience of European countries shows that the auditor should be certified and/or accredited expert for the purposes of effective and independent energy audit.

Currently, awareness of the importance of implementing energy-saving measures in all spheres of life is growing in Ukraine. The problem of increasing energy efficiency is particularly acute in industry. The energy intensity of GDP is almost three times higher than the European level. In addition to the financial burden on the company's budget, the increased consumption of primary energy sources negatively affects the ecological state of the environment. A complex of technical, economic and organizational measures called "energy audit" is used to investigate ways to reduce energy resources in industry and the utility sector, their economic justification and implementation. Currently, the development of the energy audit system of industrial enterprises in Ukraine is at the level of slow formation and establishment, although the need for such inspections is great (Dzhedzhula, 2013).

For enterprises that are being designed, it is extremely important to conduct an energy audit of design solutions and investment proposals. Unfortunately, the practice of formal compliance by project organizations with the requirements specified in the regulations is not unique.

Other energy-saving aspects that require detailed justification and development are not considered in the projects. After conducting an energy audit at the enterprise, there is a need to create an energy management system – an organizational structure that would control the level of energy consumption and observe energy-saving measures. This organizational structure should be independent from the leaders of the audited units. After a certain period of time it is necessary to conduct a periodic audit, based on the results of which it is possible to draw conclusions about the effectiveness of the energy management system and the level of implementation of energy efficient solutions.

The need to conduct an extraordinary audit arises in cases where the regimes and technologies of the enterprise, production volumes and types of energy carriers change. At the first and second stages of

the audit, the executors and customers discuss the scope and types of work, deadlines and report forms in detail, and it is also mandatory to specify in the contract the points on the responsibilities of the parties. In the case when after the implementation of the energy saving measures given in the report the declared efficiency is not obtained, it is necessary to provide for the amount of fines and other penalties against the contractor. At the same time, the contractor is not responsible for the results of implementation if the customer does not comply with all its recommendations. Even at the stage of signing the contract, a number of problems arise that have not yet been resolved. The first problem is the amount of payment to the contractor for the audit. In European practice, it is customary to take a certain percentage of the annual funds saved by conducting an energy audit. Usually the value of this percentage does not exceed 10%. In Ukraine, it is possible to pay for man-hours or by agreement. The second problem is the level of research depth, the economic justification of analysis results and the limits of the scope of measurements. There is no clear line between an express audit and a full audit. It is also difficult to separate the boundaries of the object under investigation from other objects of production during a local investigation.

Energy consumption rationing is a separate problem. The Soviet norms of specific energy consumption for the production of a unit of production are not relevant now. The development of new norms requires significant amounts of research and cannot be performed within the scope of an express audit. In itself, the concept of “energy consumption standards” is rather ambiguous, and choosing them as a criterion for energy efficiency, in our opinion, is inappropriate under the conditions of an unstable production regime. To solve this problem, an approach regarding the maximum use of energy saving potential is proposed. The determination of this value is one of the priority tasks of the energy audit.

When justifying the economic feasibility of implementing a certain set of energy-saving measures, it is necessary to take into account the financial condition of the enterprise, the economic, technical, environmental, production and organizational consequences of investing in energy saving. Such a large set of factors, which have both quantitative and qualitative characteristics, can be taken into account only when using modern mathematical theories and directions related

to artificial intelligence within the scope of an extended study, which the author proposed to call “economic and energy survey of an industrial enterprise”. We suggest using the theory of fuzzy logic and the linguistic variable, which will allow combining qualitative and quantitative criteria when justifying the investment attractiveness of energy-saving measures (Dzhedzhula, 2013).

For the purpose of proper information provision, we believe that a publicly accessible database should be created to conduct an independent energy audit, which would contain the Directory of certified auditors, as well as the list of services they would provide. Since this array of information must be clearly controlled and accurate, we believe that a state body (the Ministry of Energy of Ukraine or the State Agency for Energy Efficiency and Energy Saving of Ukraine) should be responsible for its formation.

Information tools are used to provide information on the energy consumption of entities and reveal potential opportunities to improve their energy efficiency.

There are a number of good practices of state support for educational and advisory activities (USAID project “Municipal energy reform in Ukraine”, 2012). It is worth mentioning the advisory and consulting services provided to households in Germany by 670 consumer centres across the country. Advisory centres have also been established in Slovakia. Energy advisors in all 290 municipalities in Sweden also provide advice and guidance on energy efficiency, energy consumption and climate impact. A large number of investment projects with the support of state funding in the Member States also demonstrated the goals and results of energy audits to the general public. Good examples here are the Czech “Green Savings” program and the Bulgarian National Energy Efficiency Program for multi-apartment buildings.

Information platforms should also provide the opportunity to present the best examples of energy saving and energy efficiency, as well as the exchange of experience. Thus, educational, information and communication measures should become tools that would be used to implement effective energy reforms while simultaneously ensuring the protection of the natural environment.

Today, the government of Ukraine pays great attention to the solutions of the high-energy production system in the country. One of

the main reasons for the low efficiency of state and regional energy saving programs is the lack of approved standards and algorithms in the field of energy audit. Practice shows that the range of technical and economic parameters of an energy audit varies widely, which is not only due to the different complexity of the audit, but also to the immaturity of the energy market itself.

The population of Ukraine has not yet perceived energy efficiency as a social value, so a small proportion of consumers (individuals and legal entities) are interested in investing in improving the energy efficiency of their facilities and, therefore, using energy audit algorithms.

We believe that conducting independent energy audits for small and medium-sized businesses, as well as households, should be accompanied by state support.

The Bulgarian Fund for Energy Efficiency and Renewable Energy Sources proved to be a successful mechanism for financing energy efficiency projects at enterprises and municipalities (USAID project “Municipal energy reform in Ukraine”, 2012). A good example of subsidy support for SMEs is the German program “Energy Consulting for SMEs”, which provides funds for energy consulting to SMEs that meet the requirements of energy audits under the EU Energy Efficiency Directive. In Sweden, the energy audit support scheme for SMEs has been in place since 2010 and has been amended to provide support for the implementation of Article 8 of the EED. This support is provided in the form of so-called “energy audits”.

A factor in the success of programs supporting small and medium-sized enterprises, as well as households, is the state’s involvement of public organizations in conducting explanatory and informational events to promote energy audits.

References to section 4.1

Abasov V. (2017). Management of audit efficiency of state budget expenditures in the energy sector. *Intelligence XXI*. №6. P. 24-28

Consulting enterprises on energy efficiency. Energy audit manual, 2020, Publisher: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, URL: <https://uamap.org.ua/storage> (access date 06/27/2022)

Directive 2012/27/EU of the European Parliament and of the

Council of October 25, 2012 “On energy efficiency”, amending Directives 2009/125/EU and 2010/30/EU and repealing Directives 2004/8/EU and 2006/32/EU

Dmytriev M., Hameliak I., Popelysh I., Kots I. (2015). Methodology of energy audit of road enterprises by thermal imaging method. *Modern technologies, materials and structures in construction*. № 1. P. 137-144.

Dzhedzhula V. (2013). Energy audit as a means of ensuring the efficiency of energy consumption of industrial enterprises. *Bulletin of the Odesa National University. Economics*. Vol. 18, Issue 3(1). P. 123-125

Energy Audit. Requirements and guidelines for use: ISO 50002. URL: <https://www.iso.org/obp/ui/#iso:std:iso:50002> (accessed 26.08.2021)

Energy audits. Requirements and setting for their implementation: DSTU ISO 50002:2016. URL: http://normativ.info/list_files.php?put=excel_base/norms/dstuiso.csv&n=157 (access date 06/23/2022).

Green Paper “Stimulating industrial enterprises to energy efficiency and climate protection”. BRDO Better Regulation Delivery Office. 2019. URL: <https://regulation.gov.ua/book/134-stimuluvanna-promislovih-pidpriemstv-do-energoefektivnosti-ta-zahistu-klimatu>

Guilhorme T., Gordeeva-Gerasimova L., Mikhalochkina M. (2017). Improving the methodology of energy audit of business entities. *Economy. Finance. Law*. № 6. P. 42-44

In 2019-2020, the State Energy Supervision did not exercise control in the electricity and heat supply sectors. URL: <https://rp.gov.ua/News/?id=1093>

Official website of the State Statistics Service of Ukraine. URL: <http://www.ukrstat.gov.ua>. (application date 09/15/2021).

On the approval of the Standard Methodology «General requirements for the organization and conduct of an energy audit»: Order of the National Agency of Ukraine on Ensuring the Effective Use of Energy Resources dated 05/20/2010 No. 56. URL: <https://zakon.rada.gov.ua/rada/show/v0056656-10#Text> (access date 06/27/2022).

Pakholyuk O., Shymkiv T. (2016). Determination of problems and features of the use of renewable energy sources identified as a result

of energy audit of buildings in the regions of Ukraine. *Modern technologies and methods of calculations in construction*. Issue 5. P. 358-365

Public analytics module BI.Prozorro. URL: <https://bi.prozorro.org/> (access date 01/20/2020).

Radko I., Nalyvaiko V., Okushko O., Mishchenko A., Antipov E. (2018). Methods and equipment for conducting an energy audit. *Energy and automation..* № 1. P. 123-134

Radomska M. (2013). Energy audit as a basis for improving the energy efficiency of industrial and residential facilities. *Bulletin of the Lviv State University of Life Safety*. №8. P. 172-178. [Electronic resource]. – Access mode: http://nbuv.gov.ua/UJRN/Vldubzh_2013_8_27

Report of the Accounting Chamber for 2020. URL: <https://rp.gov.ua/FinControl/FinReports/?id=851> (date of application 08/12/2021).

Report on the results of the audit effectiveness of the use of state budget funds allocated to the State Energy Supervision Inspectorate of Ukraine. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/5-3_2021/Zvit_5-3_2021.pdf

Report on the results of the financial audit of the National Commission for State Regulation in the Energy and Utilities Sectors for 2020. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/15-3_2021/Zvit_15-3_2021.pdf

Report on the results of the financial audit of the State Agency on Energy Efficiency and Energy Saving of Ukraine for 2021. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2022/11-1_2022/Zvit_11-1_2022.pdf

The State Energy Efficiency Agency is working on the development of legislation in the field of energy audit. URL: <https://www.kmu.gov.ua/news/derzhenergoefektivnosti-pracyuye-nad-rozvitkom-zakonodavstva-u-sferi-energoaudit> (date of application 06/29/2022)

USAID project “Municipal energy reform in Ukraine” implementation practices of EU Directive 2012/27 on energy management and energy audit systems in Ukraine: Overview report. URL: <https://saee.gov.ua/sites/default/files/MERP%20Study%20EA%20an>

d%20EM_Ukr.pdf (date of application 06/21/2022)

Yakobchuk V., Tyshchenko S., Yarosh S. (2016). Theoretical and methodological foundations of energy audit. *Agrosvit*. № 7. P. 51-56.

Zamulko A., Veremiychuk Y., Matviyчук M. (2016). Analysis of the inspection results of business entities by supervisory authorities - the basis for the implementation of energy audit. *Energy: economics, technology, ecology*. № 4. P. 32-37.

Britchenko I., Savchenko L., Naida I., Tregubov O. (2020). Areas and Means of Formation of Transport Regional Complexes and Mechanisms for Managing their Competitiveness in Ukraine. *Списание "Икономически изследвания (Economic Studies)"*. *Институт за икономически изследвания при БАН, София (България)*. № 3. Volume 32, Issue 3. P. 61-82. ISSN 02053292. <https://www.iki.bas.bg/spisanie-ikonomicheski-izsledvaniia>

Britchenko I., Bezpartochnyi M. (2020). Pandemic economic crisis: essence, reasons, comparative characteristics, opportunities. New trends in the economic systems management in the context of modern global challenges: collective monograph / scientific edited by M. Bezpartochnyi. *VUZF University of Finance, Business and Entrepreneurship. Sofia: VUZF Publishing House "St. Grigorii Bogoslov"*. p. 8-19. ISBN 978-954-8590-85-3

Britchenko I., Bezpartochnyi M. (2020). Global pandemic economic crisis : consequences and opportunities for Ukraine. *Pandemic Economic Crisis : Changes and New Challenges to Society : sci. monograph / ed. by M. Bezpartochnyi. VUZF University of Finance, Business and Entrepreneurship. Sofia: St. Grigorii Bogoslov*, P. 8-21

Mešároš M., Ďurica T., Lošonczy P., Blišťanová M. Възможности за защита на критична инфраструктура преди геопасности. Possibilities for protection of critical infrastructure prior to geohazards. In: *Ecology, Economics, Education and Legislation: Conference proceedings: Volume I*. Sofia: STEF92 Technology, 2015. ISBN 978-619-7105-39-1. ISSN 1314-2704. p. 617-624.

Pozdnyakov Yu., Skybinska Z., Gryniv T., Britchenko I., Lošonczy P., Magopets O., Skybinskyi O., Hryniv N. (2021). Сравнителен анализ на модели за процедура на корекция в независима оценка на стойността на активите чрез сравнителен подход. Comparative analysis of models for adjustment procedure in assets value

independent evaluation performed by comparative approach In: *Transfer of technologies: industry, energy, nanotechnology. Eastern-European Journal of Enterprise Technologies*, 6/13 (114) p. 80-93. DOI: 10.15587/1729-4061.2021.248011 ISSN: 1729-3774

Ostapenko T., Britchenko I., Lošonczi P., Matveiev S. (2022). Идентифициране на закономерностите в развитието на бебешката икономика като компонент на нанонивото на икономическата система. Identification of regularities in the development of the baby economy as a component of the nanolevel of economic system. In: *Eastern-European Journal of Enterprise Technologies*, Vol 1/13 (115). Pages: 92-102. DOI: <https://doi.org/10.15587/1729-4061.2022.252334> ISSN: 1729-3774

Брітченко І.Г., Товстик В.А. (1999). Реальний капітал в сучасних умовах. *Схід*. № 3(27). С. 17-23.

Брітченко І.Г. Маркетинг у банках: навч. посіб. / Брітченко І.Г., Белявцев М.І., Тягунова Н.М. Полтава: РВЦ ПУСКУ, 2008. 345 с.

Брітченко І.Г., Брітченко Г.И. MARKETING MANAGEMENT ОРГАНІЗАЦІИ: потенціал и система. Донецк: ДонНУ, 2001. 279 с.

Kunitsyna N., Britchenko I., Kunitsyn I. Reputation risks, value of losses and financial sustainability of commercial banks. *Entrepreneurship and Sustainability Issues*. 5(4): 943-955. [https://doi.org/10.9770/jesi.2018.5.4\(17\)](https://doi.org/10.9770/jesi.2018.5.4(17)) ISSN 2345-0282.

4.2. Arrangement and methodology of independent energy audit in Ukraine¹²

The International Organization for Standardization (ISO) approved the international standard ISO:50002 “Energy audit. Requirements and guidelines for application” (Energy Audit. Requirements and guidelines for use: ISO 50002). In order to ensure unification and coordination with international standards, on the basis of ISO 50002, DSTU ISO 50002:2016 “Energy audits” was adopted at the national level. Requirements and guidelines for their implementation (Energy audits. Requirements and setting for their implementation: DSTU ISO

¹² Zdyrko N.G.

50002:2016). According to the above international and national standard, energy audit is a systematic analysis of energy use and consumption within the specified scope of energy audit in order to identify, quantify and present in the reporting materials opportunities for improving energy performance.

Energy audit is the study and analysis of energy flows entering and leaving a building or a separate room in order to identify and eliminate sources of losses without reducing the amount and quality of useful work performed by this energy. In the West there are many procedures for assessing the energy performance of buildings and for conducting energy audits (Radomska, 2013).

According to the Directive, the energy audit must meet certain criteria (Fig. 4.2).

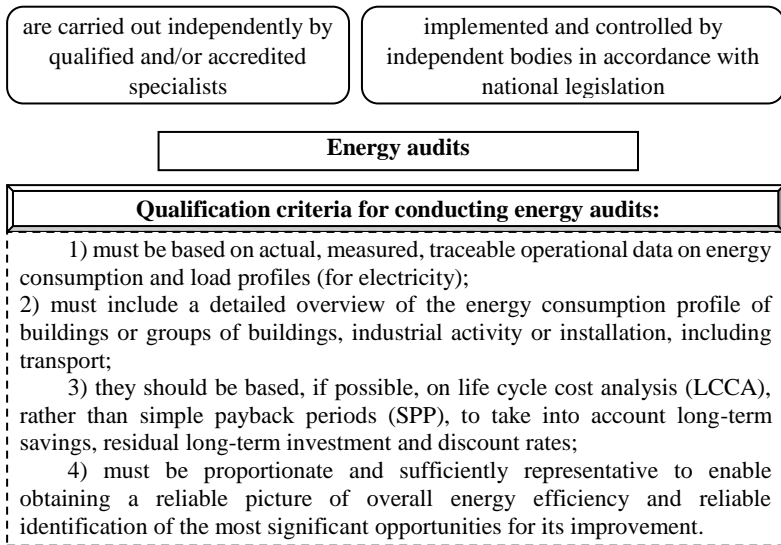


Fig. 4.2. Minimum qualification criteria for energy audits

Source: built by the authors according to Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 “On energy efficiency”

The scope of the energy audit is the area of energy use and related processes to be included in the energy audit, as defined by the organization with the participation of the energy auditor (Energy Audit. Requirements and guidelines for use: ISO 50002).

One of the regulatory documents that govern the implementation of energy audit is the Standard Methodology “General Requirements for the Organization and Conduct of Energy Audit”, approved by the National Agency of Ukraine on Ensuring Efficient Use of Energy Resources (Order No. 56 of 20.05.2010), (hereinafter – the Methodology) (On approval of the Standard Methodology “General Requirements for Organization and Conduct of Energy Audit”).

According to the approved Methodology, an energy audit is one of the forms of implementation of the state policy on energy conservation, which consists in providing assistance in increasing the level of efficiency in the use of fuel and energy resources (hereinafter – FER).

There are many factors determinating the importance and expediency of an energy audit and explain why an energy user can trust its results. In particular, the energy user receives an energy audit report and can independently solve such problems (Radko, 2018):

- to determine how energy is consumed inside the facility, formulate priorities in the list of energy-saving recommendations.

- to compare the energy consumption at one object with the values of energy consumption at other similar objects, thereby defining the object as a “bad” or “good” energy consumer.

- to show the need for investments for the acquisition and development of new, more economical equipment.

- justify the proposed project, which would not have been approved without the support of an external consultant.

The development of a typical Methodology regarding the general requirements for the organization and conduct of energy audits of objects that consume FER covers a wide range of issues related to the organization of energy audits of objects that consume FER, electricity, heat, water systems, cooling supply, sewerage, heating, lighting, ventilation, air heating and air conditioning, compressed air supply, accounting and control of energy consumption, energy management, as well as determining the priority of implementing energy-saving measures and assessing their impact on the environment (On the approval of the Standard Methodology “General requirements for the organization and conduct of an energy audit”).

The purpose of the energy audit is:

- identification of sources of irrational energy consumption and unjustified energy losses
- determination of energy efficiency indicators
- determination of energy saving potential and energy efficiency improvement
- development of a targeted, comprehensive energy saving program (Pakholyuk, 2016).

The key organisational tasks of the performance audit at all its stages are the determination of the purpose and criteria of the audit to assess the performance of the energy sector as an object of verification, to collect the evidence necessary to assess the performance in relation to the criteria, to prepare a report on positive and negative results and to make it public to all users, including the public, parliament, government (Abasov, 2017).

The Methodology defines the main purpose, tasks, objects and subjects of the energy audit (Figs. 4.3 and 4.4).

Modern energy audit involves a comprehensive survey of enterprises, organizations, buildings and individual industries on their initiative in order to identify opportunities to save energy consumption and help the company to make savings in practice through the introduction of energy efficiency mechanisms, as well as to implement an energy management system (Yakobchuk, 2016).

In our opinion, the order of energy audit classification should have the following form (Fig. 4.5).

When conducting an independent energy audit, payment for its conduct is made by customers, when it is conducted by the state, it is state expenses for the maintenance of state control bodies.

In order to organize, unify and harmonize the energy audit classification, we consider providing for its equal division in the Directive and the Methodology according to the following classification features:

- 1) according to legislative requirements: independent (performed by the subject of audit activity for the amount specified in the contract) and state (performed by state control bodies);
- 2) according to the order of appointment: primary (carried out at the pre-commissioning and pre-operational stages of the object's operation) and repeated (carried out by the customer during specified periods);

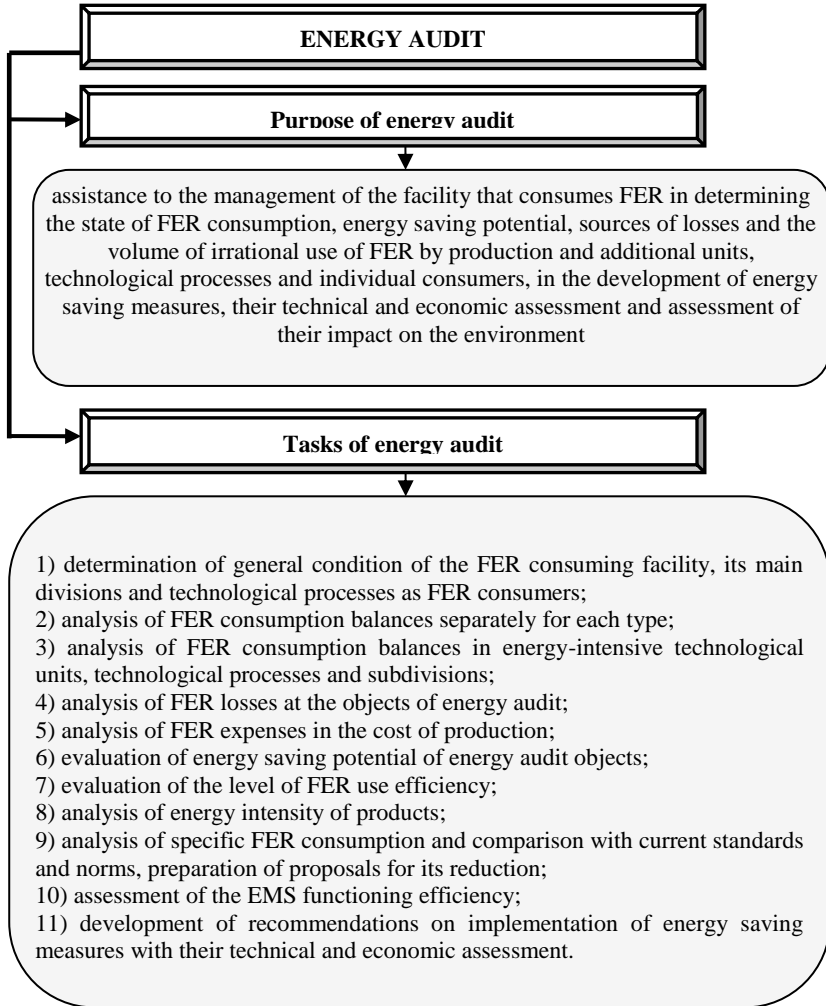


Fig. 4.3. Existing definitions of the purpose and objectives of energy audit

Source: generalized by the authors according to 247On approval of the Standard Methodology "General Requirements for Organization and Conduct of Energy Audit"

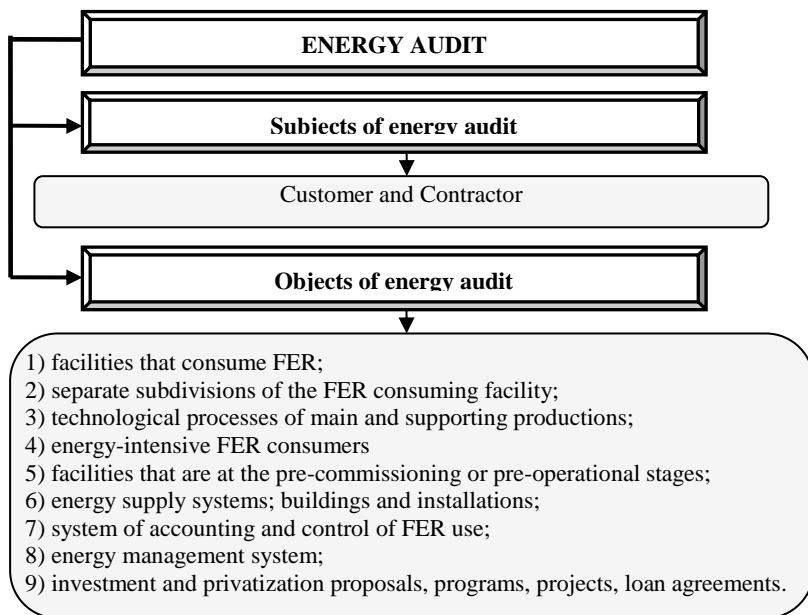


Fig. 4.4. Existing definitions of the purpose, objectives, objects and subjects of energy audit

Source: generalized by the authors according to 247 On approval of the Standard Methodology "General Requirements for Organization and Conduct of Energy Audit"

3) by the scope of coverage: continuous (all objects and processes are audited) and selective (audit of individual processes, lines, equipment);

4) in relation to the subject: internal (position of energy auditor, department) and external (independent, state);

5) by time of carrying out: preliminary (before the launch of equipment, line, processes), current (during the operation of the entity in real time) and subsequent (after the completion of work and stopping of processes (for example, seasonal, experimental, etc.));

6) according to the method of organization: planned (predicted by the entity's plan (applies only to an independent energy audit)) and sudden (related to the existence of a probability or signals regarding a deliberate violation (applies only to a state energy audit)) (Fig. 4.6).

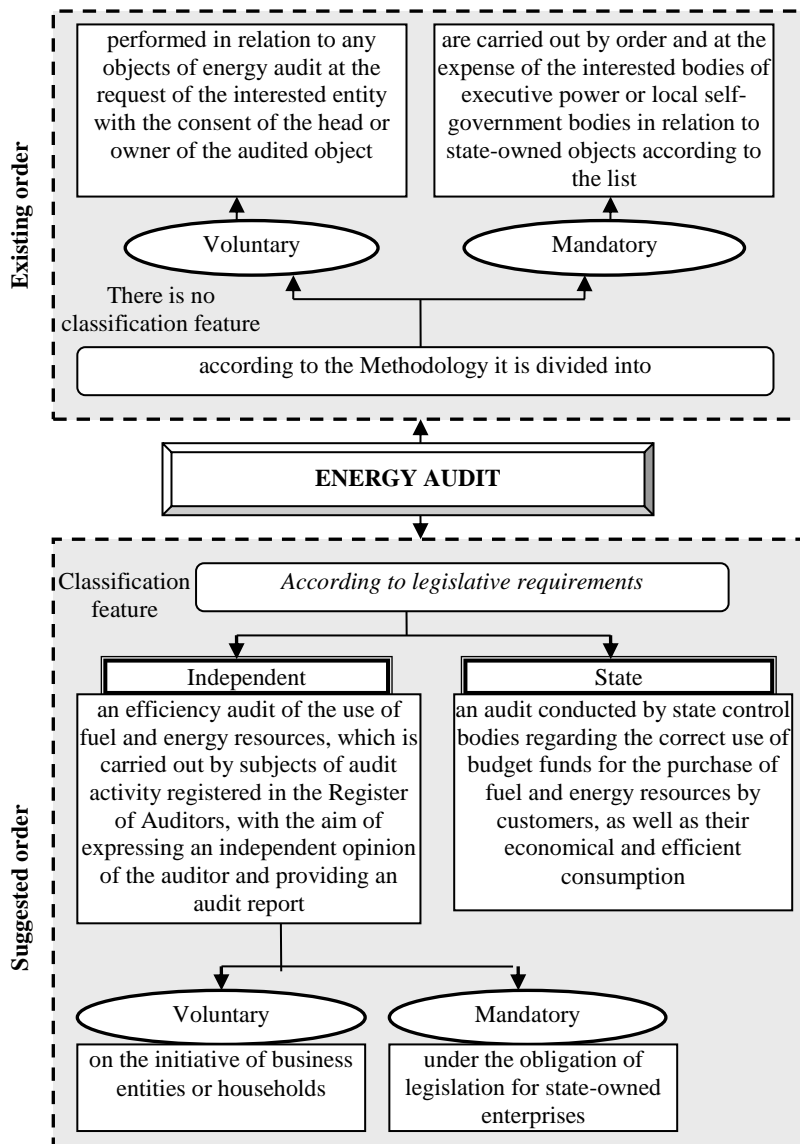


Fig. 4.5. Existing and proposed energy audit classification procedure (according to legislative requirements)

Source: suggested by the author

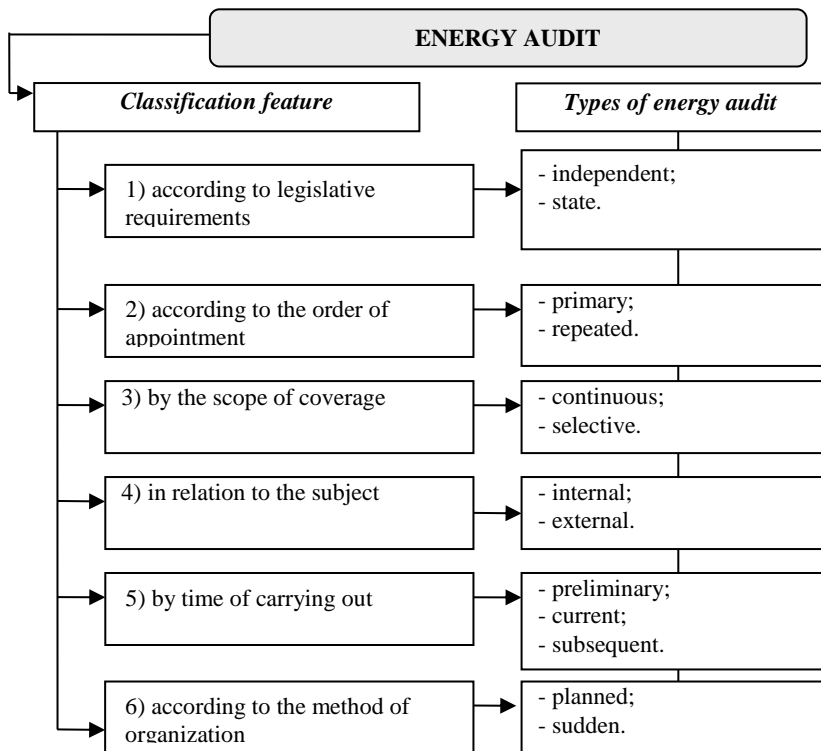


Fig. 4.6. Approaches to deepening the classification of energy audit in Ukraine

Source: suggested by the author

Therefore, an energy audit is an inspection of a business entity with the aim of determining the efficiency, economy and preservation of fuel and energy resources, as well as funds for their purchase. It is proposed to classify the energy audit according to the following characteristics: according to legislative requirements, according to the order of appointment, by the scope of coverage, in relation to the subject, according to the time of implementation, according to the method of organization, which will contribute to the deepening of the theoretical aspects of the energy audit and the formation of the necessary analytical sections.

The development of a typical Methodology regarding the general requirements for the organization and conduct of energy audits of objects that consume FER covers a wide range of issues related to the organization of energy audits of objects that consume FER, electricity, heat, water systems, cooling supply, sewerage, heating, lighting, ventilation, air heating and air conditioning, compressed air supply, accounting and control of energy consumption, energy management, as well as determining the priority of implementing energy-saving measures and assessing their impact on the environment (On approval of the Standard Methodology “General Requirements for Organization and Conduct of Energy Audit”).

However, we believe that the issue of energy audit today needs to be revised and improved in terms of updating its goals, objectives, stages, organization and generalization, which will contribute to saving energy resources and introducing energy-saving technologies.

Basically, an energy audit necessarily includes (Radomska, 2013):

- analysis of physical parameters of protective structures and structural elements of buildings;
- study of technical and operational parameters of equipment that consumes energy;
- determination of patterns, regimes or schemes of energy consumption;
- establishment of climatic and production factors that affect energy consumption;
- calculation of the level of efficiency of energy use (for example, in relation to the volume of produced products, ensuring the necessary parameters of life activities, etc.);
- identification of the main causes and points of energy loss, if any;
- establishment of possible means of reducing energy consumption or losses - assessment of energy-saving potential;
- formation of a list of recommendations and a plan of measures that will ensure the realization of energy-saving potential;
- calculation of the economic efficiency of the proposed means of reducing energy consumption and losses;
- ranking of measures according to the effectiveness and importance of the contribution to energy saving and according to the amount of necessary investments;
- selection of optimal and most cost-effective opportunities, means

and measures for energy saving.

These elements are integral components of energy audit, but their practical implementation, i.e. specific methodology, depends on the object for which the energy audit is conducted. Thus, when studying the energy characteristics of production, the main stages will be the study of the technological structure and the construction of energy balances for all elements of the production process. The end result of this procedure will be a reduction in the cost of production due to the energy component.

In terms of conducting an independent energy audit, it is worth noting that the national standard of Ukraine DSTU IBO 50002:2016 defines that organizations should be aware that the nature and scope of energy audit work and the requirements for analysis can have a significant impact on the cost of the audit.

The factors that may affect the cost of an audit include:

- 1) the level of uncertainty/accuracy;
- 2) the extent to which longer payback periods are explored;
- 3) the nature and scope of the work/boundaries of the audit;
- 4) availability of data: data on the level of achieved/attainable energy efficiency and data on equipment;
- 5) availability of reports on the results of previous energy audits/studies;
- 6) complexity of the facility and whether processes and equipment are non-standard or specially designed (Energy audits. Requirements and setting for their implementation: DSTU ISO 50002:2016).

The energy audit Methodology includes the definition of the main stages and procedures of its implementation. There are different views on the sequence of energy audits.

Thus, a group of authors (Radko, 2018) distinguishes the following stages of a comprehensive energy audit:

I stage. Obtaining detailed information about the energy audit object.

– Collection of primary data on the consumption of fuel, water and electricity for the previous and current years (this makes it possible to judge the directions in the use of fuel and energy, to determine trends in the use of fuel and energy resources, which is the basis for determining the technical and economic performance of the facility as a whole).

- Analysis of energy consumption structure (allows to determine the structure of energy use at the facility and formulate an energy use strategy for the future).

- Analysis of the energy costs structure (analyzing the share of costs of different types of energy in total costs allows to outline the preliminary direction of the energy audit, paying attention to the types of energy with the largest share of costs).

- Determining the consumption of energy carriers per unit of products manufactured by the enterprise and individual divisions (this allows to estimate the specific energy consumption of the main and additional productions per unit of products produced, in comparison with similar advanced industries, allows to estimate the share of energy costs in the cost of production).

II stage. Study of fuel and energy flows at the facility as a whole and in individual units.

- Study of the technological scheme of the main production (the scheme includes a sequence of individual technological operations, their interconnection to obtain the main and additional products. The scheme is necessary for further energy accounting and assessment of the correctness of the adopted technological operations).

- Drawing up a scheme of energy consumption by the facility (places of consumption and transfer of fuel and energy resources are plotted on the technological scheme).

- Mapping the use of energy resources (the map of the use of energy resources is the level of consumption of various types of energy by individual divisions drawn on the plan of the facility at an appropriate scale. This allows you to evaluate the transport flows of various types of energy and determine the most energy-intensive divisions).

- Drawing up a balance of the enterprise for individual types of energy resources (the balance sheet from individual energy resources of the object allows to evaluate the effectiveness of the use of various energy carriers in general, to pay attention to individual energy consumers for their in-depth study).

- Compilation of the fuel and energy balance of the enterprise (the fuel and energy balance of the object is the basis for assessing the correctness of the choice of energy carriers and predictive assessment of their consumption).

– Identification of the most energy-intensive consumers and collection of data on them (determination of the most energy-intensive consumers of the object, for which the initial data of a catalog nature, energy consumption patterns are established, as well as the mode parameters of their operation are determined by means of appropriate measurements for further assessment of energy efficiency).

– Determination of specific norms of energy consumption by individual consumers (Specific norms of energy consumption by individual consumers and the object as a whole provide an opportunity to compare with similar norms of high-performance industries, as well as to identify individual consumers with low norms for further examination).

– Drawing up an energy balance for individual energy-intensive consumers (the energy balance of individual energy-intensive consumers allows to assess the efficiency of using different types of energy, to identify areas of its irrational use, to outline ways to save).

III stage. Analysis of the efficiency of fuel and energy resources use by the facility.

– Analysis of the use effectiveness of individual technological processes (on the basis of the analysis, a conclusion is made about the correctness of certain technological decisions adopted in the conditions of the existing object or about the replacement some of them with progressive ones, at the same time, the costs of changing the technology are determined and the conclusion about the feasibility of investments is substantiated).

– Analysis of the use effectiveness of fuel and energy resources by the facility's subdivisions (on the basis of the analysis, a conclusion is drawn about the feasibility of using one or another energy carrier at different levels of the technological process in the facility's subdivisions. In the case of replacing the energy carrier, the appropriate technical and economic justification is given. Special attention should be devoted to the transportation issues of energy carriers in the conditions of the facility. This applies primarily to the heat supply network and the pneumatic network. Attention should also be paid to specific issues, for example, the justification of the use of one or another tariff for electricity in the conditions of the facility).

– Analysis of energy use by individual consumers (this subsection has a significant volume, therefore most organizations that conduct

energy audits are limited to only considering this issue. As a result, it is not considered comprehensively, and during the limited time of the energy audit, only those energy consumers that give an obvious effect).

- Determination of technologically acceptable losses of fuel and energy.

- Determining priorities for an in-depth energy audit (in some facilities there are specific energy consumers, the efficiency of which is difficult to determine without an additional energy audit. An additional energy audit includes special surveys using special measuring equipment or conducting scientific research. Specific energy consumers include refrigerators, compressor units, electric heating furnaces, etc. Research developments are carried out before solving specific issues specified in the energy audit contract).

IV stage. In-depth energy audit of individual technological processes and energy consumers.

- Carrying out additional measurements of intermediate parameters and determining operating modes.

- Identification of the work efficiency of the consumers.

- Solving specific issues (as agreed with management).

V stage. Summary of energy audit results (Radko, 2018).

- Development of energy-saving measures.

- Technical and economic analysis of the effectiveness of the implementation measures

- Comparative analysis of the obtained results.

- Selection of new priorities and setting tasks for further reduction of energy intensity of products and consumption of energy resources.

- Compilation of an energy audit report.

Yakobchuk V., Tyshchenko S. and Yarosh S. distinguish the following procedure for conducting an energy audit:

- determining the type of energy audit;

- establishing the procedure for conducting an energy audit;

- determining the cost of conducting an energy audit;

- analysis of energy consumption indicators;

- drawing up an energy passport of the building and an energy audit report;

- assessment of economic effect (Yakobchuk, 2016).

Scientists Dmitriev M., Gamelyak I., Popelysh I., Kots I. propose

to divide the methodology of energy audit of the enterprise into six stages of conducting and implementing (Dmytriev, 2015): obtaining information about the object of energy audit; studying fuel and energy flows at the facility as a whole and in individual units; analysis of the use efficiency of fuel and energy resources by the facility; in-depth energy audit of individual technological processes and energy supply; summarizing the results of the energy audit; implementation of energy audit recommendations through the energy management system. We believe that these stages should be supplemented. Firstly, it is necessary to investigate and, if necessary, improve the mechanism of motivating personnel to implement energy-saving measures – to determine the degree of innovative receptivity and resistance to organizational changes based on the construction of motivators and demotivators maps. Secondly, the definition of the system of risks of the introduction of energy-saving measures will allow to build strategies for leveling these risks.

Radomska M. analyzes the levels of energy audit (Radomska, 2013):

0 level “Energy rationing”,

1 level “Overview energy audit”,

Level 2 “Professional Energy Audit”,

Level 3 “Investment energy audit”.

At the same time, the scientist emphasizes that at each level of energy audit, it is necessary to provide a conclusion on the feasibility of conducting an energy audit of the next, higher level.

The stages of the energy audit are shown in Fig. 4.7.

At the planning stage, the auditor together with the customer determines the scope, limits and goals of the audit. The ISO 50001 or ISO 50002 standards do not provide criteria for determining the “substantial” volume of consumption, but existing practices recommend considering all consumers whose total consumption of a certain type of energy is at least 80% of the total volume (Consulting enterprises on energy efficiency. Energy audit manual, 2020).

At the planning stage, the auditor together with the customer determines the scope, limits and goals of the audit. The ISO 50001 or ISO 50002 standards do not provide criteria for determining the “substantial” volume of consumption, but existing practices recommend considering all consumers whose total consumption of a

certain type of energy is at least 80% of the total volume (Consulting enterprises on energy efficiency. Energy audit manual, 2020).

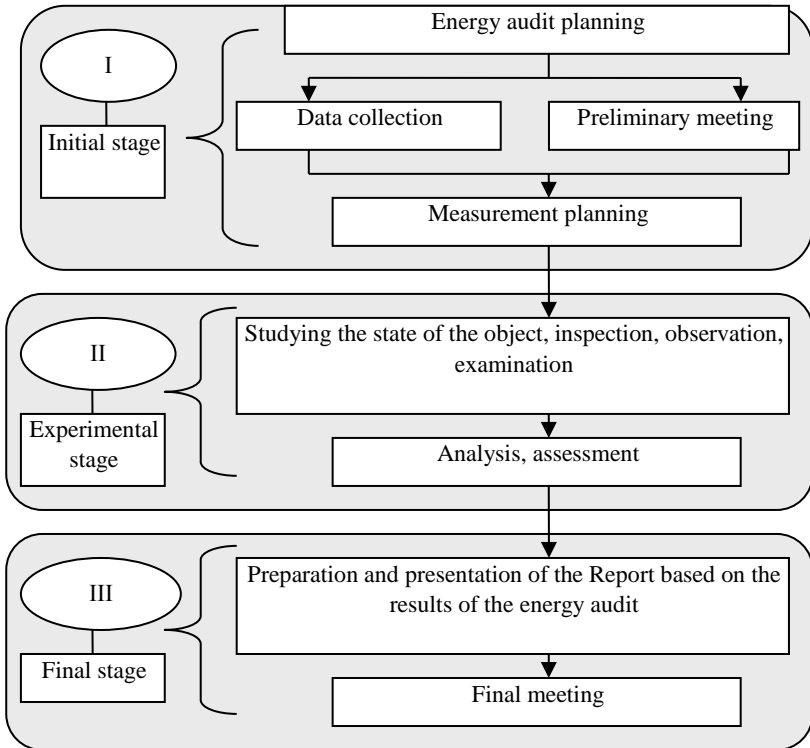


Fig. 4.7. The main stages of an energy audit

Source: summarized by the author

Regarding the scope of the audit, it should be noted that it can be carried out at all facilities and sites of the enterprise, at one location, within one workshop or even one production process, that is, the scope of the energy audit is determined by the customer.

Before visiting the energy audit object, the auditor conducts a preliminary collection of important information, which may include a list of the main energy consumers; information on the main production processes; a list of points where measurements are made; data on previous consumption; energy consumption schedules; building plans; bills from utility providers; reports of previous energy audits;

equipment manuals and other technical documents; information on planned optimization measures and changes in production processes (Consulting enterprises on energy efficiency. Energy audit manual, 2020).

A preliminary meeting is held to discuss and inform all parties about the scope, timeframe and basic requirements of the auditor regarding the data required by the responsible person of the customer. Due to the need to determine energy flows, the energy auditor should have appropriate reliable and certified equipment. Indicators to be measured and evaluated include:

1) based on parameters of alternating current and direct current systems: voltage (V), current (A), power factor, active power (kW), total power (kV·A), reactive power (kV·Ar), consumption electricity (kWh), frequency (Hz);

2) additional parameters: temperature, amount of heat flow, air and gas flows, volumes of liquid flows, rotation frequency (rpm), air movement speed, noise and vibration, dust concentration, content of solid dissolved substances, pH (hydrogen indicator), moisture content, relative humidity, analysis of exhaust gases – content of CO₂, O₂, CO, SO_x, NO_x, completeness of fuel combustion.

Careful measurement of the above indicators is the key to an accurate determination of energy saving potential. The measuring devices used by the energy auditor are listed in Table 4.4.

It is important for the energy auditor to obtain data on previous consumption, where the source of information is commercial energy bills, meter readings and technical data recording systems.

During the energy audit, the auditor collects information about the facility (year of construction, type of ownership, repairs, types of products, annual and daily work schedule), energy bills for the last 2-3 years, monthly data on production volumes for the last 2-3 years of products, divided by type; archives of measurements carried out by existing equipment; plans of buildings and equipment; information on the installed metering systems for various energy flows; reports of previous energy audits.

Thus, analyzing foreign experience, we believe that in order to increase the level of energy efficiency of any entities (including households) at the legislative level, it is necessary, firstly, to determine

Table 4.4

Measuring tools of the energy auditor when assessing the energy saving potential

No.	Equipment	Functions	Purpose of use
1	2	3	4
1	Wattmeter based on the true root mean square value (True RMS)	Measurement of active power (kW), total power (kV A), power factor, current, voltage, resistance, frequency	Measurement of electrical characteristics of equipment and determination of energy balance
2	Lux meter	Measurement of illumination	Comparison of the actual illumination level flow with the normative values
3	Digital thermometer	Temperature measurement	Determination of thermal energy balance
4	Infrared thermometer	Measuring the temperature of surfaces in hard-to-reach places	Determination of thermal energy balance
5	Measuring clamps based on the true RMS	Measurement of current and voltage in a specific area	Quick determination of current and voltage in cables
6	Temperature and humidity recorder	Measuring temperature and humidity	Registration of environmental conditions
7	Gas analyzer	Determination of CO ₂ , O ₂ , CO, SO _x , NO _x content; completeness of gas combustion (%), determination of boiler efficiency	Assessment of boilers' efficiency and/or furnaces
8	Anemometer	Determination of the average speed of air movement over a period of time and at different points	Checking the movement of air in the ventilation system
9	Flow meter for liquids	Measurement of volume flow of liquids	Analysis of the operation of frequency-regulated drives in water supply systems
10	Tachometer	Measuring the rotation speed of a motor, pump or fan	Determining the operating mode of the system within its operating range

continuation of table 4.4

1	2	3	4
11	Thermal infrared imager	Measurement of surface and environmental temperature	Determination of heat loss points in buildings and in heat pipes

Source: formed based on (Consulting enterprises on energy efficiency. Energy audit manual, 2020)

the general requirements for qualifications, education and work experience of energy auditors; secondly, to introduce a mandatory public register of energy auditors with information access to potential customers of energy audits; thirdly, to introduce mandatory certification and advanced training, at least every 3 years.

So, the experience of European countries shows that the auditor must be certified and/or accredited expert for the purposes of effective and independent energy audit. Taking into account the requirements of the Law of Ukraine “On Energy Efficiency”, the State Agency on Energy Efficiency and Energy Saving of Ukraine should work on the development of a number of draft acts to improve the field of energy audit, in particular:

- on approval of the procedure for confirming the qualifications of persons who intend to carry out activities on energy audits of processes, transport, and qualification requirements for energy auditors;
- on approval of the procedure for maintaining and publishing the database of energy auditors;
- on approval of the procedure for maintaining and publishing a database of extracts from energy audit reports, independent monitoring of extracts from energy audit reports, independent verification of energy audit reports;
- establishing the fee for independent verification of energy audit reports at the request of the energy audit customer.

The creation of such a legal framework will facilitate transparent certification of energy auditors in accordance with the requirements of the legislation, improve the quality and transparency of energy audits, as well as independent verification of energy audit reports.

References to section 4.2

Abasov V. (2017). Management of audit efficiency of state budget expenditures in the energy sector. *Intelligence XXI*. №6. P. 24-28

Consulting enterprises on energy efficiency. Energy audit manual, 2020, Publisher: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, URL: <https://uamap.org.ua/storage> (access date 06/27/2022)

Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 “On energy efficiency”, amending Directives 2009/125/EU and 2010/30/EU and repealing Directives 2004/8/EU and 2006/32/EU

Dmytriev M., Hameliak I., Popelysh I., Kots I. (2015). Methodology of energy audit of road enterprises by thermal imaging method. *Modern technologies, materials and structures in construction*. № 1. P. 137-144.

Dzhedzhula V. (2013). Energy audit as a means of ensuring the efficiency of energy consumption of industrial enterprises. *Bulletin of the Odesa National University. Economics*. Vol. 18, Issue 3(1). P. 123-125

Energy Audit. Requirements and guidelines for use: ISO 50002. URL: <https://www.iso.org/obp/ui/#iso:std:iso:50002> (accessed 26.08.2021)

Energy audits. Requirements and setting for their implementation: DSTU ISO 50002:2016. URL: http://normativ.info/list_files.php?put=excel_base/norms/dstuiso.csv&n=157 (access date 06/23/2022).

Green Paper “Stimulating industrial enterprises to energy efficiency and climate protection”. BRDO Better Regulation Delivery Office. 2019. URL: <https://regulation.gov.ua/book/134-stimuluvanna-promislovih-pidpriemstv-do-energoefektivnosti-ta-zahistu-klimatu>

Guilhorme T., Gordeeva-Gerasimova L., Mikhalochkina M. (2017). Improving the methodology of energy audit of business entities. *Economy. Finance. Law*. № 6. P. 42-44

In 2019-2020, the State Energy Supervision did not exercise control in the electricity and heat supply sectors. URL: <https://rp.gov.ua/News/?id=1093>

Official website of the State Statistics Service of Ukraine. URL: <https://www.ukrstat.gov.ua>. (application date 09/15/2021).

On the approval of the Standard Methodology “General requirements for the organization and conduct of an energy audit”: Order of the National Agency of Ukraine on Ensuring the Effective Use of Energy Resources dated 05/20/2010 No. 56. URL: <https://zakon.rada.gov.ua/rada/show/v0056656-10#Text> (access date 06/27/2022).

Pakholyuk O., Shymkiv T. (2016). Determination of problems and features of the use of renewable energy sources identified as a result of energy audit of buildings in the regions of Ukraine. *Modern technologies and methods of calculations in construction*. Issue 5. P. 358-365

Public analytics module BI.Prozorro. URL: <https://bi.prozorro.org/> (access date 01/20/2020).

Radko I., Nalyvaiko V., Okushko O., Mishchenko A., Antipov E. (2018). Methods and equipment for conducting an energy audit. *Energy and automation*. № 1. P. 123-134

Radomska M. (2013). Energy audit as a basis for improving the energy efficiency of industrial and residential facilities. *Bulletin of the Lviv State University of Life Safety*. №8. P. 172-178. [Electronic resource]. — Access mode: http://nbuv.gov.ua/UJRN/Vldubzh_2013_8_27

Report of the Accounting Chamber for 2020. URL: <https://rp.gov.ua/FinControl/FinReports/?id=851> (date of application 08/12/2021).

Report on the results of the audit effectiveness of the use of state budget funds allocated to the State Energy Supervision Inspectorate of Ukraine. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/5-3_2021/Zvit_5-3_2021.pdf

Report on the results of the financial audit of the National Commission for State Regulation in the Energy and Utilities Sectors for 2020. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/15-3_2021/Zvit_15-3_2021.pdf

Report on the results of the financial audit of the State Agency on Energy Efficiency and Energy Saving of Ukraine for 2021. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2022/11-1_2022/Zvit_11-1_2022.pdf

The State Energy Efficiency Agency is working on the development of legislation in the field of energy audit. URL:

<https://www.kmu.gov.ua/news/derzhenergoefektivnosti-pracyuye-nad-rozvitkom-zakonodavstva-u-sferi-energoaudit> (date of application 06/29/2022)

USAID project “Municipal energy reform in Ukraine” implementation practices of EU Directive 2012/27 on energy management and energy audit systems in Ukraine: Overview report. URL:

https://sae.gov.ua/sites/default/files/MERP%20Study%20EA%20and%20EM_Ukr.pdf (date of application 06/21/2022)

Yakobchuk V., Tyshchenko S., Yarosh S. (2016). Theoretical and methodological foundations of energy audit. *Agrosvit*. № 7. P. 51-56.

Zamulko A., Veremiychuk Y., Matviyichuk M. (2016). Analysis of the inspection results of business entities by supervisory authorities - the basis for the implementation of energy audit. *Energy: economics, technology, ecology*. № 4. P. 32-37.

Britchenko I., Kraus N., Kraus K. (2019). University innovative hubs as points of growth of industrial parks of Ukraine. *Financial and credit activity: problems of theory and practice*. Volume 4, №31. P. 448-456. ISS (print) 2306-4994, ISSN (on-line) 2310-8770 <http://fkd.org.ua/article/view/190996>

Serskykh N., Britchenko I. (2019). Consulting Services in Agriculture. *Modern Development Paths of Agricultural Production*. Springer International Publishing. P. 217-223. (<https://www.springer.com/gp/book/>) ISBN 978-3-030-14917-8, eBook ISBN 978-3-030-14918-5 DOI https://doi.org/10.1007/978-3-030-14918-5_23

Britchenko I., Bezpartochnyi M., Levchenko Ya. (2020). Development of methodology of alternative rationale for financial ensuring of bridges building. *VUZF review. VUZF, Sofia (Bulgaria)*. №5(1). P. 43-49.

Lavrentieva O., Pererva V., Krupskiy O., Britchenko I., Shabanov S. (2020). Issues of shaping the students’ professional and terminological competence in science area of expertise in the sustainable development era. *E3S Web of Conferences. FDP Sciences, France*. Volume 166, 10031. eISSN 2267-1242. 9 pages. DOI <https://doi.org/10.1051/e3sconf/202016610031>

4.3. Some aspects of state energy audit in Ukraine ¹³

Ukraine has a developed energy sector, the purpose of which is to meet the needs of society and the economy with fuel and energy resources in a technically reliable and safe way. Stable functioning and development of the energy sector is the key to economic and energy security of the state. At the same time, the technical level of the unified energy system of the country is extremely low. Physical and moral deterioration of fixed assets of the electricity and heat supply sectors at some facilities reaches a critical level.

Conducting energy audits as an incentive for business entities to reduce unproductive energy consumption requires the study of all energy supply systems. Taking into account the limited time for conducting energy audits, as well as the need to take into account all the important problems of energy consumption for the consumer when developing energy saving measures, it is advisable to ensure the optimal use of the results of inspections of state executive authorities. In order to optimize the costs of the audit, one of the priority tasks can be considered the use of the developments or results of inspections of the business entity by the state supervisory authorities. It should be considered that the proposed measures by the state supervisory authorities are the starting (zero) level of energy efficiency improvement, and the number of implemented measures is the level of achievement of the starting point.

According to the articles of the standards, which determine the minimum set of requirements that contribute to the identification of opportunities for increasing the level of energy efficiency, the energy auditor needs:

- knowledge of relevant legislative and other requirements;
- documents on design, operation and maintenance;
- results of previous energy audits or studies related to energy efficiency;
- to consider any regulatory and other agreed schemes or restrictions that could affect the possibilities of increasing the level of energy efficiency (Zamulko, 2016).

We consider it necessary to disclose the necessity and features of the state energy audit. It is important that today, control measures are

¹³ Zdyrko N.G.

still being taken to check individual objects of the energy sector. Thus, according to the Report of the Accounting Chamber for 2020, state control was carried out in the energy sector, however, the information is presented in a continuous section “Measures in the field of security, communications, state defense and the fuel and energy complex”, which does not allow to separate control data in the energy sector. Nevertheless, it is noted that in 2020, 7 measures of external state financial control (audit) were carried out, including five performance audits and 2 financial audits, with two control measures being classified as “Top Secret” and one as “Secret” (Report of the Accounting Chamber, 2020).

According to the results of these measures, violations and deficiencies were found for the total amount of UAH 5.5 billion, which is 21% of the total amount of violations and deficiencies detected by the Accounting Chamber in the reporting year (Fig. 4.8).

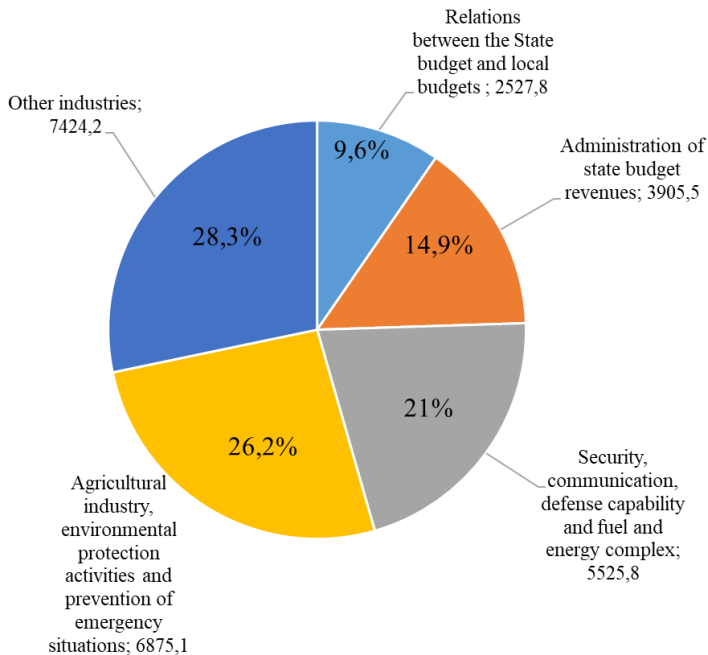


Fig. 4.8. The structure of violations and deficiencies identified by the Accounting Chamber in 2020 by areas, UAH million

Source: built according to the Report of the Accounting Chamber, 2020

Thus, the data in the figure indicate negative trends, as 21% of violations (UAH 5525.8 million) were established in the sphere of security, communications, defense of the state and the fuel and energy complex. In the Report for 2019, violations of this combined group of industries were distributed as follows

1) violations in the field of state security and state defense – UAH 5,390.2 million (90.5%);

2) violations in the fuel and energy sector – UAH 565.4 million (9.5%).

The disadvantage of the Accounting Chamber Report for 2020 is the consolidation of violations of these areas into one group, which makes it impossible to provide an objective assessment of the efficiency of the energy sector.

According to the Accounting Chamber of Ukraine, during 2019-2020, the State Energy Supervision Inspectorate of Ukraine did not carry out supervision (control) measures in the fields of electricity and heat supply, as evidenced by the results of the audit of the effective usage of state budget funds allocated to the State Energy Supervision Inspectorate of Ukraine.

Over two years, the State Energy Supervision Service has used a total of UAH 226.6 million (95.1% of the approved budget allocations) for management and administration in the field of energy supervision. At the same time, due to inefficient management, UAH 11.5 million remained unused, and another UAH 25 million were used in violation of the requirements of the current legislation and inefficiently. In addition, state property worth more than UAH 5 million was used inefficiently due to improper acceptance and transfer from the balance of the private joint-stock company National Energy Company “Ukrenergo”.

In Ukraine, almost 60 thousand entities are subject to state energy supervision (control). The lack of inspections has affected the sustainable functioning of the country’s unified energy system and the heat supply sector, as the technical condition of the equipment used by these entities is approaching critical due to the high degree of wear and tear and is a source of increased danger. As a result, there are constant unscheduled disconnections of consumers from electricity and heat supply for repair works.

In particular, 95% of electricity distribution networks that directly

supply consumers are in unsatisfactory condition. Due to technological violations of these networks, consumers did not receive 39.5 million kWh of electricity in 2019, and 53 million kWh in 2020. The design life of the equipment of most power plants is exhausted. The 13% increase in the number of technological violations in 2020 led to forced downtime (from 409 in 2019 to 461 in 2020). The number of technological violations during the heating period of 2019-2020 increased by 3.7 times compared to 2016-2017.

We believe that the state energy audit must be legally approved and conducted in the direction of using budget funds for the purchase of fuel and energy resources, as well as the efficiency of using the resources themselves as procurement items.

Thus, according to the results of the analytical module of BI.Prozorro (Public analytics module BI.Prozorro), the savings of customers' funds through the purchase of petroleum products, fuel, electricity and other energy sources in 2020 ranked second in the overall structure and amounted to UAH 13305.7 million.

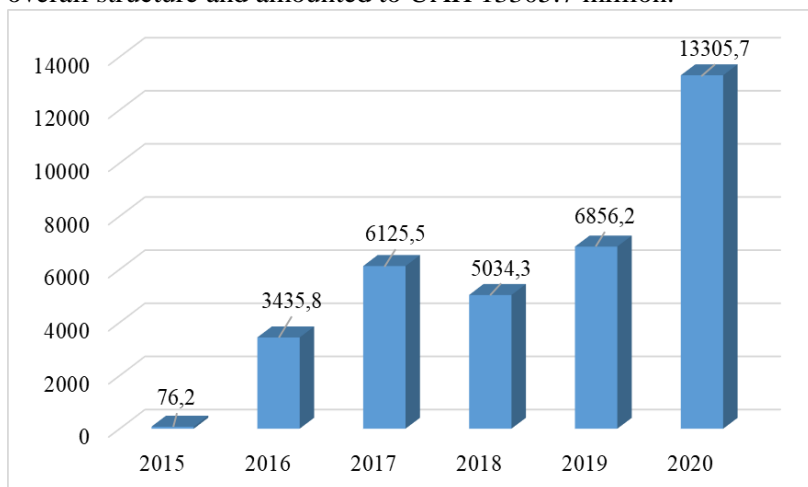


Fig. 4.9. Savings by public procuring entities when purchasing oil products, fuel, electricity and other energy sources, 2020, UAH million

Source: based on data from the public module of BI.Prozorro

It is interesting that the largest share of savings (67.3%) in 2020 was provided through the purchase of fuel by enterprises, institutions,

organizations, 31.9% – electricity, heat, solar and nuclear energy, the rest, 0.8% – oil, coal and petroleum products (Fig. 4.10).

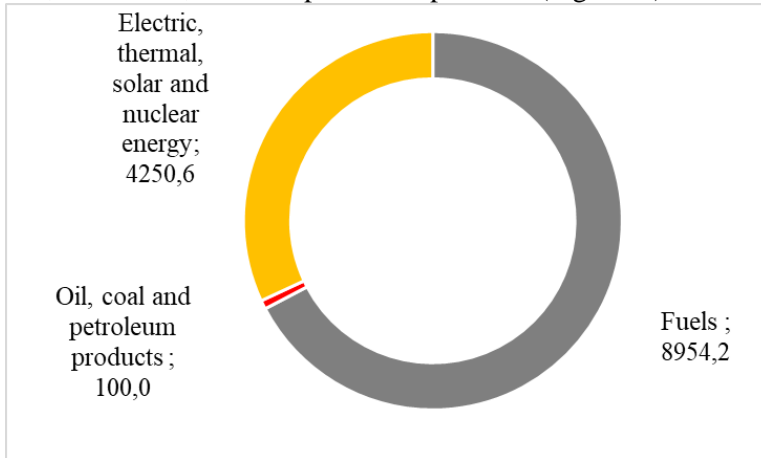


Fig. 4.10. Structure of savings from the procurement of fuel and energy resources, 2020, UAH million

Source: based on data from the public module of BI.Prozorro

However, despite the cost savings and taking into account previous studies, it is worth noting that the analytical module of BI.Prozorro does not distinguish between commercial and public procurement, and therefore, the digital data relate to all contracting authorities of all organizational and legal forms.

It should be noted that the number of public procurements of fuel and energy resources is increasing every year (Fig. 4.11).

Thus, if in 2015 there were 595 tenders for the purchase of fuel, in 2020 – 71603 public procurement procedures. As for the procurement of electricity, heat, solar and nuclear energy, 178 procedures were held in 2015, and 65116 tenders in 2020. The situation is similar with the purchase of oil, coal and petroleum products: in 2015 – 21 procurement procedures, in 2020 – 25354 tenders.

These trends indicate a dramatic increase in the volume of the public procurement market, the vast majority of funds on which are used by state customers, that, according to the legislatively approved transparency and publicity, should be subject to inspections by regulatory authorities in the form of a state energy audit.

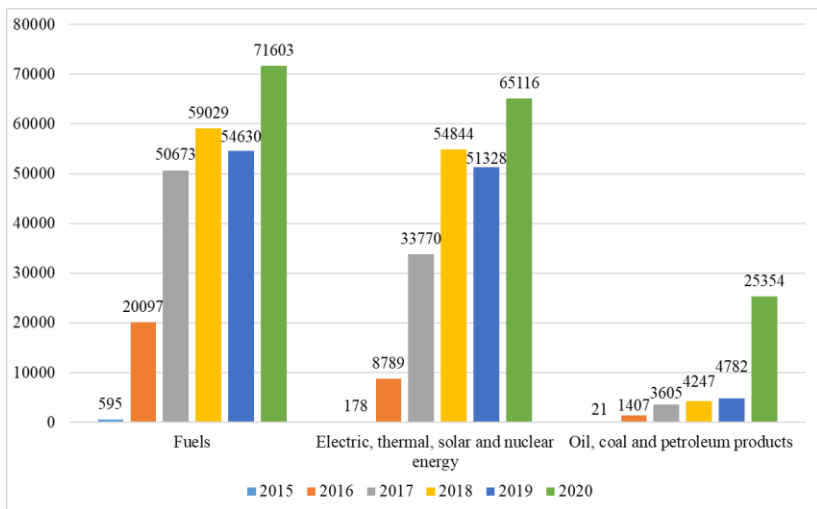


Fig. 4.11. Number of tenders for the purchase of fuel and energy resources, 2015-2020, units

Source: based on data from the public module of BI.Prozorro

We believe that it is necessary to consider the Top 20 tenderers that concluded contracts for the largest amounts in 2020, and which, in our opinion, must be subject to a state audit for the legitimacy of their offer as the most advantageous and lack of agreement with customers (Table 4.5).

Table 4.5

Public procurement market participants with the highest value of contracts for the sale of fuel and energy resources, 2020

No.	Participant	The amount of contracts, UAH thousand
1	2	3
1	“ANVITRADE” LTD	2435152,8
2	“ALLIANCE ENERGY TRADE” LTD	2343302,9
3	PC «OKKO CONTRACT”	1396185,3
4	“TEK” LTD	1135052,4
5	“VOG CARD” LTD	944974,0
6	“KYIVTEPLOENERGO” ME	856374,8
7	TRADING HOUSE SOCAR UKRAINE LTD	753403,1
8	“LUX COUNTRY” LTD	695418,4
9	Gas Supply Company “Naftogaz Trading” LTD	677158,5

continuation of table 4.5

1	2	3
10	“EK ENOLL” LTD	671466,5
11	“GLUSKO UKRAINE” LTD	604802,7
12	“DNIPRO ENERGY SERVICES” LTD	488417,4
13	“ENERGO ZBUT TRANS” LTD	474064,6
14	UKR GAS RESOURCE LTD	437590,8
15	“UNITED ENERGY” LTD	434028,5
16	“FIDEA» COMPANY LTD	417101,1
17	“NEW STREAM ENERGY” LTD	400536,4
18	ENERGY COMPANY “UKRENERGOVUGILLYA” LTD	400126,8
19	“LEVINE TRADE” LTD	394225,6
20	MUNICIPAL ENTERPRISE “TEPLOENERGO” OF THE DNIPRO CITY COUNCIL	393631,5

Source: based on data from the public module of BI.Prozorro

The table indicates that the largest tenderers have concluded contracts ranging from UAH 393.6 thousand (ME “Teploenergo”) to UAH 2.4 billion (ANVITRADE LTD).

The statistics regarding the Top-20 buyers in the fuel and energy resources market with the highest value of contracts in 2020 is interesting (Table 4.6).

Table 4.6

Customers of fuel and energy resources with the highest value of contracts for the sale of fuel and energy resources, 2020

No.	Participant	The amount of contracts, UAH thousand
1	2	3
1	The Ministry of Infrastructure	5762023,0
2	The Ministry of Defense of Ukraine	5499341,3
3	The Ministry of Economic Development and Trade	1930360,0
4	The Ministry of Internal Affairs of Ukraine	1702441,4
5	The Ministry of Energy and Coal Industry	1573462,8
6	KCSA	1569725,4
7	Dnipro City Council	1156300,8
8	JSC «VINNYTSIAOBLENERGO»	563470,6
9	Odesa City Council	386268,4
10	The Ministry of Education	381767,6
11	The State Enterprise “Mine named after M.S. Surgai”	335490,1

continuation of table 4.6

12	JSC “SUMYOBLENERGO”	320472,4
13	Kharkiv City Council	284318,4
14	Kherson Regional Water Resources Administration	275436,9
15	Mykolaiv City Council	239511,1
16	The State Agency of Water Resources of Ukraine	235557,3
17	Mariupol City Council	209450,2
18	The Ministry of Ecology and Natural Resources of Ukraine	207715,6
19	The Ministry of Health of Ukraine	188548,4
20	Zaporizhzhia City Council	153157,2

Source: based on data from the public module of BI.Prozorro

So, according to the data in the table, we see that the largest amount of budget funds is directed by individual ministries: the Ministry of Infrastructure – 5.76 billion UAH, the Ministry of Defense of Ukraine – 5.49 billion UAH, the Ministry of Economic Development and Trade - 1.93 billion UAH, The Ministry of Internal Affairs of Ukraine – 1.7 billion UAH, the Ministry of Energy and Coal Industry – 1.57 billion UAH, the Ministry of Education and Science – 0.38 billion UAH, the Ministry of Ecology and Natural Resources – 0.21 billion UAH, by the Ministry of Health - UAH 0.19 billion. and city councils: KCSA – UAH 1.57 billion, Odesa City Council – UAH 0.38 billion, Kharkiv City Council – UAH 0.28 billion. etc.

The main objects of the state energy audit are budget funds aimed at the purchase of fuel and energy resources, as well as, in fact, the same resources themselves as subjects of public procurement for the purpose of their efficient and economical use.

General approaches to the organization and methods of checking the above-mentioned objects as part of public resources are given in the previous sections of the work.

Thus, energy efficiency management, development of energy saving measures, assessment of energy potential of any facility and Ukraine as a whole requires complete, reliable and objective information that can be provided by energy audits. The country's energy policy should contribute to reducing asymmetry of information and knowledge gaps through transparency of energy consumption data at micro, meso and macro levels.

Ensuring control over the quality and safety of products and all types of services and works is the responsibility of the state. In the

fields of electricity and heat supply, the control over the technical condition of facilities (in particular, all thermal power plants, combined heat and power plants, nuclear power plants, hydropower facilities (HPPs and PSPPs), the electricity transmission system operator, etc.) quality of electricity and heat, compliance with safety requirements is carried out by the State Energy Supervision Inspectorate of Ukraine (hereinafter – the SESI).

The proper organization of the State Energy Supervision, its effective work and achievement of the tasks defined by law ensure the sustainable functioning of the country's unified energy system and heat supply, energy security of the country, therefore, the audit is relevant and important.

That is why the Report of the Accounting Chamber of Ukraine on the results of audit use effectiveness of the state budget funds allocated to the State Energy Supervision Inspection of Ukraine is interesting.

The tasks of the State Energy Supervision are:

- implementation of the state policy in the sphere of supervision (control) in the fields of electricity and heat supply;
- submission of proposals to the Minister of Energy to ensure the formation of the state policy in the field of supervision (control) in the fields of electricity and heat supply;
- organization and implementation of the state policy in the sphere of supervision (control) in the fields of electricity and heat supply.

The powers of the State Energy Inspectorate Authority include:

- participation in the work of commissions investigating the causes and consequences of accidents and fires on electrical network equipment of participants in the electricity market and subjects of relations in the field of heat supply, which led to violations of the work regimes of other participants in the electricity market, subjects of relations in the field of heat supply;
- participation in the monitoring of the safety electric energy supply on behalf of the Ministry of Energy;
- participation in the work of the commission on the preparation of expediency conclusion of providing temporary support to manufacturers carrying out the combined production of electricity and thermal energy at thermal power plants;
- monitoring the fulfillment of producers' obligations that perform combined production of electricity and heat at combined heat and

power plants regarding the reconstruction and/or modernization of the combined heat and power plant, including the deadlines for the stages implementation of the reconstruction and/or modernization project;

- consideration of citizens’ appeals;
- submitting conclusions to the Ministry of Energy on the priority of technical solutions for the development of the transmission system and distribution systems provided for draft investment programs of the transmission system operator and distribution system operators, as well as the results of inspections of the reconstruction and modernization of power plant equipment by electricity market participants;
- summarizing the practices of applying legislation on issues within its competence;
- developing proposals for improving legislative acts, acts of the President of Ukraine and the Government, regulations of ministries and submitting them to the Minister of Energy in accordance with the established procedure.
- implementation of state energy supervision over electrical installations and networks of market participants (except consumers), heat, heat-using installations and networks of subjects of relations in the field of heat supply regarding their compliance with the requirements of rules and other regulatory legal acts.

State supervision in the electric power industry is carried out by the State Inspectorate for the Operation of Electric Power Plants and Networks and the State Inspectorate for Energy Supervision of Electric and Thermal Energy Consumption Regimes.

The audit showed: The Cabinet of Ministers of Ukraine has not ensured proper conditions for the effective implementation of the state policy in the sphere of supervision (control) in the spheres of electricity and heat supply (Report of the State Energy Supervision, 2021).

The audit results showed that the management of the Ministry of Energy did not ensure proper direction and coordination of the State Energy Supervision activities. Certain powers of the Minister regarding such activities were exercised either untimely or not at all.

It was found that the State Energy Supervision did not define priority areas of work, as well as ways to fulfill the assigned tasks. The work plans of the State Energy Supervision were not approved by the

heads of the Ministries. Thus, the work plan for 2019 was not developed by the State Energy Supervision Service at all, and the Ministries did not take measures to control its development.

The current legislation does not ensure comprehensive regulation of state supervision (control) in the electricity and heat sectors. There is no programmatic basis for the development of the electricity and heat sectors and, accordingly, for the improvement of state supervision (control) in these sectors.

The Cabinet of Ministers of Ukraine has not ensured proper conditions for the effective implementation of the state policy in the sphere of supervision (control) in the fields of electricity and heat supply.

Constant changes in the system of central executive authorities, which repeatedly provided for their reorganization, had a negative impact on the organization of the State Energy Inspectorate.

During the analysis of the inspection reports of the State Inspectorate for Energy Supervision of a certain state institution, the attached information letter provides the following information:

- description of the situation observed during previous years (increased number of accidents and failures in heating systems);
- a list of reasons that led to this situation (failure to test networks for density and strength, failure to fully perform scheduled preventive repairs, non-working temperature and pressure regulators);
- a list of recommendations to eliminate such a situation for the next period (repair of equipment of electrical installations, equipment of thermal installations and networks; bring power supply circuits to normal operation mode provided by design solutions; check the protection system of electricity and heat metering devices in low temperatures).

The inspection report includes consideration of the following issues:

- characteristics of the power equipment in operation (specified: supply voltage level, installed capacity, permitted capacity for use, category of reliability of power supply, description of the power supply scheme; list of meters used for electricity metering and the place of installation of the meter; list of ATS, their installation locations and power supply; annual, average monthly and daily consumption of electricity);

– availability of technical documentation (log of accounting for electric energy consumption, half-hourly load measurements during peak hours of the power transmission organization; log of readings of control and measuring devices and electric meters; single-line power supply scheme of individual shops and sections; operational scheme or mock-up scheme);

– a detailed description of the detected violation (equipment needs to be cleaned from dust and dirt; single-line diagrams of electrical connections of all voltage classes for each electrical installation need clarification and re-approval; periodic equipment tests are not performed, etc.).

According to the list formed by the State Energy Inspectorate, the total number of economic entities that are subject to state energy supervision (control) in the fields of electricity and heat supply, over which it carries out state supervision (control), amounts to almost 60,000. At the same time, the majority of such entities belong to the field of heat supply – 98.3 percent, the share of entities operating in the field of electricity is 1.7 percent.

Information on the number of economic entities that are subject to state energy supervision (control), by industry and degree of risk as of 31/12/2020, is given in Table 4.7.

Table 4.7

Number of economic entities that are subject to state energy supervision (control) by sectors and risk levels (as of 31.12.2020)

The name of the sectors	High degree of risk	Medium degree of risk	Low degree of risk	Total
Electric power industry	75	7	931	1013
Heat supply (unit).	671	13625	44256	58552
Total (units)	746	13632	45187	59565

Source: Report of the State Energy Supervision, 2021

The data of the State Energy Supervision Agency indicate that the technical condition of the equipment used by business entities that are subject to state energy supervision (control) in the fields of electricity and heat supply is approaching critical due to the high degree of wear and tear and is a source of increased danger, leading to the need for unscheduled disconnections of consumers from electricity and heat

supply for repair works. In particular, at most power plants, the design life of the equipment has been exhausted. The number of technological violations in their work, which led to forced downtime, increased by 13 percent in 2020 alone. (from 409 in 2019 to 461 in 2020).

Out of 75 power units of thermal power plants, 68 are operated beyond the design term. Compared to the heating period of 2016/2017, the number of technological violations in the heating period of 2019/2020 increased by 3.7 times (from 1353 to 4969).

The formation of the personnel potential of the State Energy Inspectorate began in April 2019 and was not completed at the time of the audit. By the end of 2020, only 324 vacant positions (68.1 percent of the staff of territorial bodies) will be filled. As a result, more than a third of the total number of positions in territorial bodies are vacant (as of 12/31/2019, 192 employees (76.8% of the staff) were appointed; as of 12/31/2020 – 324 employees (68.1% of the staff)).

In 2019, state energy supervision by the State Energy Inspectorate was made impossible due to understaffing.

Information on planned and actual indicators of the general fund expenditures under CPCI 1103010 (2403010) in 2019-2020 is presented in Table 4.8.

The data in Table 4.8 show that in 2019-2020, the State Energy Inspectorate used UAH 226,631.8 thousand, or 95.1 percent, under the budget program “Leadership and management in the field of energy supervision” approved, with changes, budget appointments. Despite the decrease in expenditures during 2019-2020 compared to the initially approved annual volumes, 11,541.6 thousand UAH of open appropriations, or 5 percent, were not used by the State Energy Inspectorate of approved appointments (2019 – 3,669.7 thousand hryvnias; 2020 – 7,871.9 thousand hryvnias).

Therefore, due to the lack of proper control of the Ministry over the timely implementation of the planned tasks of the budget program, the State Energy Inspectorate, as the administrator of lower-level budget funds, did not ensure effective management of state budget funds in the total amount of UAH 11541.6 thousand during 2019-2020.

In 2019, due to ineffective management decisions of the Ministry, open appropriations under the budget program were distributed irregularly and without observing the approved monthly

appropriations schedule of the general fund from the state budget.

The audit showed that the Ministry and the State Energy Inspectorate did not ensure proper internal control and internal audit.

As a result, the planning of the state budget expenditures under the budget program “Leadership and management in the field of energy supervision” by the Ministry and the State Energy Inspectorate is imperfect, inconsistent and insufficiently justified. Due to improper control of the Ministry and miscalculations in planning during 2019-2020, effective management of budget allocations totaling UAH 11541.6 thousand was not ensured.

Table 4.8

Planned and actual expenditures of the general fund under the budget program “Leadership and management in the field of energy supervision” in 2019-2020, thousand UAH

Year	Need for budget request	Approved by the law on the state budget	Approved with changes	Appropriations are open	Unallocated appropriations	Cash expenditures	Appropriations have not been used
2019	13613,4	55613,4	37313,4	37249,4	64,0	33579,7	3669,7
2020	205495,3	205495,3	200924,0	200924,0	-	193052,1	7871,9
Totally	219108,7	261108,7	238237,4	238173,4	64,0	226631,8	11541,6

Source: Report of the State Energy Supervision, 2021

The financial statements of the State Energy Supervision Service for 2019-2020 show that the budget funds were allocated mainly for salaries, while material and technical support was not actually financed. The state of internal control of the Ministry over the activities of the State Energy Supervision is unsatisfactory. An effective internal control system has not been created in the State Energy Supervision.

According to the state auditors, a complete system of regulatory and legal regulation of issues of state supervision (control) in the fields of electricity and heat supply has not been created. Strategic documents and state target programs do not define issues of control over the technical condition of facilities, energy consumption regimes, compliance with safety requirements, which is carried out by the State Energy Inspectorate. Therefore, no systematized and agreed measures

for improving the efficiency of state supervision (control) in the fields of electric power and heat supply have been determined by the terms of implementation and expected results (Report of the State Energy Inspectorate, 2021).

The Accounting Chamber also conducted a financial audit of the State Agency on Energy Efficiency and Energy Saving of Ukraine (hereinafter – SAEE) for 2021, which resulted in the Report (Report of the State Agency, 2021).

The audit revealed cases of violations by the State Agency on Energy Efficiency and Energy Saving of the requirements of current legislation due to failure to ensure proper internal control, in particular

- in March 2021, employees of the State Agency on Energy Efficiency and Energy Saving received untimely salaries in the amount of UAH 1160910 01;

- working time was recorded without applying the minimum number of indicators required to fill in the state statistical observation form;

- material values of international technical assistance from the German Society for International Cooperation in the amount of UAH 126690 28 were untimely credited to the balance sheet.

In 2021, the State Energy Efficiency Agency improperly ensured compliance with the provisions of the Budget Code of Ukraine regarding the organization of internal control. No internal document was developed or approved that would regulate risk management activities.

The system of internal control in the State Energy Efficiency Agency is represented only by separate elements of the internal environment in the approved internal documents, the accounting policy, the record keeping instructions, regulations on structural units, and job instructions.

In 2021, the sector of control of executive discipline and the sector of internal audit were created in the structure of the State Energy Efficiency Agency. Supervision of internal control at the State Energy Efficiency Agency is not provided. The implementation of such functions is expected to be carried out by the internal audit sector created at the end of 2021 (after conducting competitions and appointing managers and specialists). The project of the Procedure for the organization and implementation of internal control in the State

Energy Efficiency is at the development stage.

In addition, significant differences were found between the approved maximum number of employees (from 217 in January to 195 in December 2021) and the actual number of employees (from 120 in January to 114 in December 2021), which makes it impossible for the State Agency on Energy Efficiency to operate effectively.

The audit also found ineffective internal controls in terms of implementing access restrictions and properly authorizing access to software used for accounting and reporting.

The Regulation on accounting policy does not indicate the need for an inventory, only the determination of the value of assets during their inventory.

It was concluded that the internal control system of the State Energy Efficiency Agency is weak. The detected shortcoming is assessed as having a high risk and deserves the attention of the management. It is recommended to ensure the creation and operation of an internal control system capable of assessing the correctness of budget and financial reporting before submitting it to the relevant state bodies. It is also recommended to provide an internal audit of the correctness of accounting and the reliability of financial and budget reporting, to improve the organizational structure to ensure the performance of functions and tasks defined by legislative acts and international obligations of Ukraine.

Also in 2021, the Accounting Chamber conducted a financial audit of the National Commission, that carries out state regulation in the fields of energy and utilities (hereinafter – the National Commission), the results of which are summarized in the Report for 2020 (Report of the National Commission, 2020).

The audit has revealed cases of violations of the current legislation, which are significant:

- The National Commission violated the requirements for compliance with the terms of salary payment;
- violated the requirements for payment of all amounts due to the employee upon dismissal (payments should be made on the day of dismissal);
- The Regulation on the Accounting Policy of the National Commission does not correspond to the actual state of accounting of fixed assets and needs to be supplemented in terms of determining the

actual subgroups of fixed assets in accordance with the terms of their useful life;

– The Accounting Chamber notes that in 2020, the National Commission did not establish an internal control system at the proper level and in the manner prescribed by law;

– Internal audit in 2020 did not provide an objective assessment of the functioning of internal control and its elements. Four internal audit measures were carried out, the conclusions of which do not reflect the real state and shortcomings of the internal control system.

Energy efficiency management, development of energy saving measures, assessment of energy potential of any facility and Ukraine as a whole requires complete, reliable and objective information, which can be provided by energy audits. The country's energy policy should contribute to the reduction of information asymmetry and knowledge gaps through the transparency of energy consumption data at micro-, meso- and macro-levels. The developed theoretical and methodological aspects of energy auditing in Ukraine will help to bring it closer to the best international practices and will ensure the increase of energy efficiency, energy saving and energy conservation to achieve the goals of the Energy Strategy of Ukraine.

References to section 4.3

Directive 2012/27/EU of the European Parliament and of the Council of October 25, 2012 “On energy efficiency”, amending Directives 2009/125/EU and 2010/30/EU and repealing Directives 2004/8/EU and 2006/32/EU

Energy Audit. Requirements and guidelines for use: ISO 50002. URL: <https://www.iso.org/obp/ui/#iso:std:iso:50002> (accessed 26.08.2021)

Energy audits. Requirements and setting for their implementation: DSTU ISO 50002:2016. URL: http://normativ.info/list_files.php?put=excel_base/norms/dstuiso.csv&n=157 (access date 06/23/2022).

Green Paper “Stimulating industrial enterprises to energy efficiency and climate protection”. BRDO Better Regulation Delivery Office. 2019. URL: <https://regulation.gov.ua/book/134-stimuluvanna-promislovih-pidpriemstv-do-energoefektivnosti-ta-zahistu-klimatu>

In 2019-2020, the State Energy Supervision did not exercise control in the electricity and heat supply sectors. URL: <https://rp.gov.ua/News/?id=1093>

Official website of the State Statistics Service of Ukraine. URL: <http://www.ukrstat.gov.ua>. (application date 09/15/2021).

On the approval of the Standard Methodology “General requirements for the organization and conduct of an energy audit”: Order of the National Agency of Ukraine on Ensuring the Effective Use of Energy Resources dated 05/20/2010 No. 56. URL: <https://zakon.rada.gov.ua/rada/show/v0056656-10#Text> (access date 06/27/2022).

Public analytics module BI.Prozorro. URL: <https://bi.prozorro.org/> (access date 01/20/2020).

Report of the Accounting Chamber for 2020. URL: <https://rp.gov.ua/FinControl/FinReports/?id=851> (date of application 08/12/2021).

Report on the results of the audit effectiveness of the use of state budget funds allocated to the State Energy Supervision Inspectorate of Ukraine. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/5-3_2021/Zvit_5-3_2021.pdf

Report on the results of the financial audit of the National Commission for State Regulation in the Energy and Utilities Sectors for 2020. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2021/15-3_2021/Zvit_15-3_2021.pdf

Report on the results of the financial audit of the State Agency on Energy Efficiency and Energy Saving of Ukraine for 2021. URL: https://rp.gov.ua/upload-files/Activity/Collegium/2022/11-1_2022/Zvit_11-1_2022.pdf

Бритченко И.Г., Саенко В.Г. (2016). Организационные основы взаимодействия спортивного бизнеса: постановка и последовательное движение к инновационному управлению в Украине. *Електронний науковий журнал ВСУ ім. Черноризец Храбр (Варна, Болгарія)*. № 9. 32 с. (ISSN 1313-7514). URL: <http://ejournal.vfu.bg>.

Бритченко И.Г. (2015). Підвищення конкурентоспроможності банків на ринку банківських послуг України. *Науковий вісник УжНУ (Серія економіка)*. Випуск 1 (45). Том. 1/. С. 176-180. (ISSN: 2409-6857)

Брітченко І.Г. (2010). Вплив малого бізнесу на регіональний розвиток. *Науковий вісник ПУЕТ*. № 4 (43). Полтава: ПУСКУ. 2010. С. 15 - 19.

Ножова Г.В., Брітченко І.Г. (2011). Інноваційна діяльність в контексті стратегічного управління. *Науковий вісник ПУЕТ*. № 6 (51). 2011. Частина 1. Полтава: ПУЕТ. С. 34-39.

Брітченко І.Г., Гаврилко П.П., Завадяк Р.І. (2012). Стратегічне управління інноваційною діяльністю як основа конкурентоспроможності. *Науковий вісник УжНУ. Ужгород: УжНУ*, № 35/2012. Частина 1. С. 27-32.

Князевич А.О., Брітченко І.Г. (2013). Сутність та специфіка формування соціально-орієнтованої інноваційної інфраструктури. *Науковий журнал "Менеджер". Вісник донецького державного університету управління*. Донецьк: ДонДУУ. №3 (65). С. 68-73.

Кужелев М.О., Брітченко І.Г. (2014). Корпоративний контроль інсайдерської ренти. *Науковий вісник ПУЕТ*. Полтава: ПУЕТ. №1 (56). С. 281-285.

Князевич А.А., Брітченко І.Г. (2014). Организационно-правовые основы регулирования деятельности субъектов инновационной инфраструктуры Украины. *Новая экономика*. Минск (Беларусь). №1(63). С. 137-142.

The State Energy Efficiency Agency is working on the development of legislation in the field of energy audit. URL: <https://www.kmu.gov.ua/news/derzhenergoefektivnosti-pracyuye-nad-rozvitkom-zakonodavstva-u-sferi-energoauditu> (date of application 06/29/2022)

USAID project "Municipal energy reform in Ukraine" implementation practices of EU Directive 2012/27 on energy management and energy audit systems in Ukraine: Overview report. URL: https://saee.gov.ua/sites/default/files/MERP%20Study%20EA%20and%20EM_Ukr.pdf (date of application 06/21/2022)

Yakobchuk V., Tyshchenko S., Yarosh S. (2016). Theoretical and methodological foundations of energy audit. *Agrosvit*. № 7. P. 51-56.

Zamulko A., Veremiychuk Y., Matviychuk M. (2016). Analysis of the inspection results of business entities by supervisory authorities - the basis for the implementation of energy audit. *Energy: economics, technology, ecology*. № 4. P. 32-37.

CONCLUSIONS TO PART 4

Energy audit – a systematic procedure to obtain proper knowledge of the current energy performance of a building or a group of buildings, industrial or commercial activities, installations, private or public services by identifying and quantifying the cost-effective possibilities for energy conservation and providing a report on the results obtained.

Energy audits should be able to make detailed and verified calculations of the implemented measures to provide clear information on the potential costs, which can be carried out by in-house experts or energy auditors. The data used in energy audits should be kept for statistical analysis and performance monitoring.

The energy audit must be accessible to all end-users and meet certain criteria: must be based on current, measured, tested operational data on energy consumption and load profile (for electricity); must include a detailed review of the energy use profile of the buildings or groups of buildings, industrial activity or installation, including transport; they should be based, if possible, on life cycle cost analysis rather than simple payback periods to take into account long term costs, the remaining balances of long term investments and discount rates; must be proportionate and sufficiently representative to enable a true picture of the overall energy efficiency and to reliably identify the most significant opportunities for improving it.

To increase the level of energy efficiency of any entities (including households) at the legislative level it is necessary, first, to determine the general requirements for qualifications, education and experience of energy auditors; secondly, to introduce a mandatory public Register of energy auditors with information access to potential customers of energy audits; third, the introduction of mandatory certification and advanced training at least every 3 years.

**FINANCIAL CONTROL, ANALYSIS AND AUDIT AS
TOOLS OF AN EFFECTIVE MANAGEMENT SYSTEM:
STATE, PROBLEMS, PROSPECTS**

Collective monograph

Format 60x84/16
Circulation: 100 copies
17,21 p.s.

Vysoká škola bezpečnostného manažérstva v Košiciach

Košťova 1, 04001, Košice, Slovensko
2022

ISBN 978-80-8185-051-6